UNIVERSITY OF SOUTHAMPTON

FACULTY OF BUSINESS, LAW & ART

Management

Students' Perceptions of Graduate Employability:

A Sequential Explanatory Approach

By

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BSc (Hons) MSc FLPI AFHEA MBCS

Thesis for the degree of Doctor of Philosophy

November 2017

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

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Students' perceptions of graduate employability are not well known. This research contributes a new model of graduate employability, which constructs an emergent identity, underpinned by a human capital and contemporary career theory framework. An extensive literature review generated the conceptual model, validated by a pragmatic, sequential explanatory approach through a two-wave quantitative study of 387 participants (2015/2016 and 2016/2017), followed by interviews of 38 participants (2016/2017) across 21 degree subjects. Moderators of gender, degree subject, and year of study further advanced career theory. Human capital incorporated factors of social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills. The contemporary career theory framework underpinned careers advice, career ownership via a protean career orientation, and career mobility via a boundaryless career orientation. This research validated protean and boundaryless career measures in an undergraduate population, contributing twenty dimensions of international, national, and local mobility, and a two-dimensional model of personal factors and market factors. Tuition fee increases, interest rate increases, and modest salary expectations meant that the majority of students did not believe they would repay their university debt in full. Whilst students perceived the benefits of higher education to outweigh the associated costs, the gap is narrowing. Prospective students need a clear reason for pursuing higher education, validating the conservation of resources theory. The practical contribution of this research is to offer ways to prepare students for the graduate labour market, helping to enhance national competitiveness through making undergraduates more employable, and providing guidance to policy makers. The validated model of graduate employability offers a mechanism for further collaboration between all stakeholders.

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Academic Thesis: Declaration of Authorship

I, William Edward Donald declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

STUDENTS' PERCEPTIONS OF GRADUATE EMPLOYABILITY: A SEQUENTIAL EXPLANATORY APPROACH

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;

2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;

3. Where I have consulted the published work of others, this is always clearly attributed;

4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;

5. I have acknowledged all main sources of help;

6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;

7. Parts of this work have been published before submission as detailed in the Publication of Thesis Content.

Signed: …………*W. E. Donald*…………………………………………………

Date: …………6th November 2017…………………………………………………

Publication of Thesis Content

Journal Articles (Including In-Review)

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (2017). The undergraduate self-perception of employability: Human capital, careers advice and career ownership. *Studies in Higher Education*, DOI: 10.1080.03075079.2017.1387107. Award: Southampton Business School Postgraduate Publication Award of £650.

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (In-Review). Sustainability through employability and competitive advantage: Individual and organizational perspectives. *Journal of Vocational Behaviour (Special Issue)*.

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (In-Review). Students' perceptions of education and employability: Facilitating career transition from higher education into the labour market. *Career Development International*.

Book Chapter

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (2017). *Boundaryless and protean career orientation: A multitude of pathways to graduate employability.* In: M. Tomlinson, & L. Holmes (Eds.). *Graduate Employability in Context: Theory, Research and Debate*, 129-150. London: Palgrave Macmillan.

Conference Papers

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (2017). *The Good Organization and Sustainable Careers: Validation of a Conceptual Model of Graduate Employability.* European Group for Organizational Studies 2017 Conference, Copenhagen, Denmark.

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (2016). *Students' perceptions of their future employability: Development of a conceptual model for evaluation of influential factors.* British Academy of Management 2016 Conference, Newcastle, UK.

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (2016). *Student perceptions of UK graduate employability: conceptual paper.* Southampton Business School Conference 2016, Southampton, UK. Award: Best Paper in the 'Relational Leadership and Change' Stream.

Conference Papers (Continued)

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (2016). *Collaborative delivery of the OECD higher education employability agenda: Development of a framework and conceptual model for exploring student perceptions of graduate employability.* European Academy of Management 2016 Conference, Paris, France.

PhD Symposium Paper

Donald, W. E., Baruch, Y. & Ashleigh, M. J. (2015). *The impact of higher education on self-perceived employability: standing out from the crowd in a highly competitive, globalised, graduate labour market.* PhD Symposium, British Academy of Management Conference 2015, Portsmouth, UK.

Miscellaneous Publications

Gowar, A. & Donald, W. E. (2015). *Cross Faculty Work Placement Audit*. Southampton, UK: University of Southampton.

Stakeholder Engagement

Donald, W. E. (2017). *Progress Update to the Director of Southampton University Careers and Employability Service, and the Director of Southampton University Student Services.* Southampton, UK: University of Southampton.

Donald, W. E. (2016). *Meeting with the Director of Southampton University Careers and Employability Service, and the Director of Southampton University Student Services.* Southampton, UK: University of Southampton.

Donald, W. E. (2015). *Presentation to the Southampton University Careers and Employability Service.* Southampton, UK: University of Southampton.

Donald, W. E. (2015). *Meeting with the Director of Southampton University Careers and Employability Service.* Southampton, UK: University of Southampton.

Acknowledgements

I would like to thank everyone who has contributed to the work described in this thesis. Firstly, I would like to thank my academic supervision team of Professor Yehuda Baruch (University of Southampton, UK) and Associate Professor Melanie Ashleigh (University of Southampton, UK). I have been extremely lucky to work with two leading academics who have given me intellectual freedom and provided invaluable guidance and patience. The supervision has been of the highest quality and I am very grateful for the opportunities to present my work at conferences, to publish a book chapter, and to work on journal paper submissions. Your unwavering support during the three and a half years of study has helped me to develop significantly, both as a scholar and as a person. I would also like to extend my thanks to Professor Nicholas Clarke (University of Southampton, UK) for supervision during the early stages of my PhD, and to Associate Professor Mark Gatenby (University of Southampton, UK) and Dr Stefan Cantore (University of Southampton, UK) for acting as internal examiners for my PhD upgrade viva. Additionally, I would like to thank Professor Nicky Dries (University of Leuven, Belgium) and Associate Professor Fabian Homberg (University of Southampton, UK) for agreeing to be the external and internal examiners for this thesis.

I would like to thank Professor Pawan Budhwar (Aston University, UK) for peer review feedback and for being session chair and discussant at the British Academy of Management Doctoral Symposium (2015, Portsmouth, UK). I am also grateful to the British Academy of Management for a full bursary for the symposium fees. I am grateful to the session chair Professor Loic Cadin (ESCP, France) and discussant Professor Jean-Denis Culie (L'EM Normandie, France) for their in-depth feedback and guidance at the European Academy of Management Conference (2016, Paris, France). My thanks further extend to the session chair Professor Ans De Vos (University of Antwerp, Belgium) and for a discussion with Professor Jon Briscoe (Northern Illinois University, USA) at the European Group for Organizational Studies Conference (2017, Copenhagen, Denmark). The in-person feedback at these events, combined with feedback from the British Academy of Management Conference (2016, Newcastle, UK) was invaluable in strengthening this thesis in terms of its direction, cohesion and contribution. I would also like to thank Dr Michael Tomlinson (University of Southampton, UK) and Dr Leonard Holmes (Roehampton University, UK) for the opportunity to write a book chapter for their edited collection in 2017 and for the peer review feedback. I am also grateful for all other anonymous peer review feedback during my PhD candidature.

Glossary

Actors (Holmes, 2013; Kalfa & Taska, 2015; Tomlinson, 2013)

Refers to the macro, meso, and micro level stakeholders of graduate employability.

Boundaryless Career (Arthur & Rousseau, 1996, p.6)

There are six meanings of a boundaryless career

(1) Like the stereotypical Silicon Valley career, that move across the boundaries of separate employers;

(2) Like those of academics or carpenters, that draw validation – and marketability- from outside the present employer;

(3) Like those of real-estate agents, that are sustained by external networks or information;

(4) That break traditional organizational assumptions about hierarchy and career advancement;

(5) That involve an individual rejecting existing career opportunities for personal or family reasons; and

(6) That are based on the interpretation of the career actor, who may perceive a boundaryless future regardless of structural constraints.

Career (Arthur, Hall & Lawrence, 1989, p.8)

The evolving sequence of a person's work experiences over time.

Career Ecosystem (Baruch, 2015; 2013; Baruch, Altman & Tung, 2016; Higgins, 2005)

A view of careers and labour markets as a dynamic system with interrelated participants.

Conservation of Resources (Höbfoll, 1989, p.513)

This resource-orientated model is based on the supposition that people strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources.

Contemporary Career (Brooks, 2009; Evans, 2007; Heinz, 2009; Furlong & Cartmel, 2007)

The transition to work has become increasingly unpredictable and individualised, driven by changes within society, education and the labour market.

Cultural Capital (Esson, Ertle & Holmes, 2013; Jaeger, 2010)

This research positions cultural capital as covering university reputation, extracurricular activities, reading for enjoyment, attire, travelling, visiting cultural exhibits, speaking an additional language, networking, volunteering, use of social media and going to the gym.

Ecosystem (Inansiti & Levien, 2004, p.5)

A system that contains a large number of loosely coupled (interconnected) actors who depend on each other to ensure the overall effectiveness of the system.

Scholastic Capital (Baruch, 2009; Baruch, Bell & Gray, 2005)

The volume of knowledge acquired by an individual – drawing on the role of education in preparing students for the graduate labour market and their future careers.

Emergent Identity (Holmes, 2015; 2013; Ibarra, 2003)

An extension of working identity (Ibarra, 2003), (re)emergent identity was coined recently by Holmes (2015; 2013). The researcher challenges the notion of (re)emergent identity, preferring emergent identity, as identity by nature evolves over time, continuing to emerge through the lifespan of the individual.

Employability (Rothwell & Arnold, 2007, p.25)

The individual's ability to keep the job one has, or to get the job one desires.

Field (Kalfa & Taska, 2015)

This research positions the employability debate within a specific contextualised field of higher education and the graduate labour market.

Graduate Employability (Kinash & Crane, 2015, p.vi)

Graduate employability means that higher education alumni have developed the capacity to obtain and/or create work. Furthermore, employability means that institutions and employers have supported the student knowledge, skills, attributes, reflective disposition and identity that graduates need to succeed in the workforce.

Human Capital (Baruch at al., 2005; Becker, 1964; Useem & Karabel, 1986)

This thesis defines human capital as the accumulation of different types of capital by an individual to increase their employability. Human capital is proposed as constructed of social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills.

Inner-value Capital (Baruch et al., 2005; Baruch & Peiperl, 2000; Boyatzis & Renio, 1989)

A high sense of self-awareness, self-esteem, self-efficacy, and confidence. Drawn from MBA students, but applied in this framework, to undergraduate students in preparation for the graduate labour market. Addressed in this research as part of psychological capital.

Kaleidoscope Career (Mainiero & Sullivan, 2006; 2005; Sullivan, 1999)

Explores careers from a triad of perspectives – Authenticity, Balance, and Challenge.

Macro Level Stakeholders (Holmes, 2013; Tomlinson, 2013)

Refers to Governments and agencies at both national and regional level.

Market-value Capital (Baruch et al., 2005)

Relates to experience within the labour market, either prior to, or during higher education, as part of human capital.

Meso Level Stakeholders (Holmes, 2013; Tomlinson, 2013)

Refers to graduate recruiters, university careers service advisors, and faculty or subject specific careers advisors.

Micro Level Stakeholders (Holmes, 2013; Tomlinson, 2013)

Refers to the 'players': students and their families, employers, academics, administrative staff and educational institutions.

Need for Achievement (Cook, Hepworth, Wall & Warr, 1981)

Refers to performance on difficult assignments, past performance, attitudes to risk, desire for additional responsibility and peer rivalry in terms of performance benchmarking. Addressed in this research as part of psychological capital.

Neoliberalism and Higher Education (Fletcher, Carnicelli, Lawrence & Snape, 2017, p.4)

Neoliberalism is a value system in which the economic has replaced the intellectual and political and in which the competitive, rational individual predominates over the collective. Neoliberalism within an HE framework draws on themes of reduced state funding of higher education, economic returns, diversification, increased participation, internationalisation, league tables, employability, students-as-consumers, and accumulation of intellectual capital for deployment in a knowledge-based economy.

Perceived Employability (Vanhercke, De Cuyper, Peeters & De Witte, 2014, p.594)

The individual's perception of his or her possibilities of obtaining and maintaining employment.

Psychological Capital (Luthans, Luthans & Luthans, 2004; Seligman, 2002)

High self-efficacy, optimism, hope, and resilience. Addressed in this thesis as encompassing inner-value capital and the need for achievement.

Planned Action Theory (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975)

Draws on attitude, subjective norm, and motivations. Attitude refers to the student evaluating a suggested behaviour and determining it to be positive to them. Subjective norm refers to the student believing that people who they hold in high regard support performance of the behaviour. Motivation is the outcome of attitude and subjective norm resulting in higher intention and a greater likelihood of the student performing the behaviour.

Post-Industrial Dystopian View (Tomlinson, 2013)

Positions society as undesirable, detailing the lack of job security and precarious labour market conditions.

Post-Industrial Utopian View (Tomlinson, 2013)

Emphasises the new opportunities and rewards for people through education and employment or entrepreneurship.

Protean Career (Hall, 2004; 1996; 1976)

Draws on the motive of an individual to follow a particular career path; driven by values-driven and self-directed career moves.

Skills (Oxford Advanced Learners English Dictionary, 2015)

Proficiency, facility, or dexterity acquired or developed through training or experience.

Social Capital (Baruch et al., 2005; Useem & Karabel, 1986)

This research positions social capital to include; a network of contacts, family, school friends, university friends, memberships or affiliations and LinkedIn.

Traditional Career (Ashton & Field, 1976; Driver, 1982; Levinson, Darrow, Klein, Levinson & McKee, 1978; Roberts, 1968; Rosenbaum, 1979; Super, 1957; Whyte, 1956; Wilensky, 1961)

Organisations historically adopted a predictable, stable and predefined structure, offering an authority based hierarchical career system. This provided the employee with a stable career environment. In accordance, the employee would follow a linear pathway of upward mobility through hierarchical advancement and vertical career path progression, or until reaching a plateau.

Abbreviations

AGR *Association of Graduate Recruiters*

ANOVA *Analysis of Variance*

BA *Bachelor of Arts*

BSc *Bachelor of Science*

CEO *Chief Executive Officer*

CFPER *Cross Faculty Perceived Employability Ranking*

CFWPA *Cross Faculty Work Placement Audit*

CIPD *Chartered Institute of Personnel and Development*

CV *Curriculum Vitae*

DLHE *Destination of Leavers from Higher Education*

EDGE *Experience, Degree Subject Knowledge, Generic Skills, and Emotional Intelligence*

EU *European Union*

FAR *Faculty Administration Registrars*

HE *Higher Education*

HESA *Higher Education Statistics Agency*

MA *Master of Arts*

MBA *Master of Business Administration*

MSc *Master of Science*

NOC *National Oceanography Centre*

NSS *National Student Survey*

OECD *Organisation for Economic Co-operation and Development*

PPMCC *Pearson Product-Moment Correlation Coefficient*

REF *Research Excellence Framework*

RGR *Russell Group Ranking*

RPI *Retail Price Index*

SLC *Student Loans Company*

SOAR *Self, Opportunity, Aspirations, and Results*

STEM *Science, Technology, Engineering, and Mathematics*

TEF *Teaching Excellence Framework*

UCAS *Universities and Colleges Admissions Service*

UK *United Kingdom*

UMT *University Management Team*

USA *United States of America*

USEM *Understanding, Skilful practices, Efficacy beliefs, and Metacognition*

VC *Vice Chancellor*

WIL *Work-Integrated Learning*

WPF *Work Placement Forum*

WRG *Work Ready Graduates*

WSA *Winchester School of Art*

Chapter 1: Introduction

1.1 Graduate Employability

A complex challenge is unfolding as the landscape of higher education (HE) and the graduate labour market continues to evolve. Old systems are transforming at the macro, meso, and micro levels (Tomlinson, 2012). Macro level actors refer to governments and agencies, at both national and regional level. Micro level actors refer to the 'players': students and their families, employers, academics, administrative staff and educational organizations. Meso level actors provide mediation between those at the macro and micro level and refer to graduate recruiters and university careers advisors (Holmes, 2013). The common ground across these stakeholders is the need for a more collaborative and holistic view of employability (Tams & Arthur, 2011).

Research exploring HE, the transition to the labour market, and graduate employability at the end of the 20th century and the early part of the 21st century focused heavily on the role of skills in determining graduate employability. In the last quarter of a century, scholars have recognised the need for a more holistic approach, characterised by a focus on conceptual models of graduate employability. USEM (Knight & Yorke, 2004), CareerEDGE (Dacre Pool, 2017; Dacre Pool & Sewell, 2007), SOAR Model (Kumar, 2007), Graduate Attributes for Employability (Bridgstock, 2017; 2009), and an Integrated Model of Graduate Employability (Clarke, 2017) have each sought to advance understanding of graduate employability factors. Furthermore, Cai (2013) offered a conceptual model for understanding employers' perceptions and Jackson (2016) re-conceptualised graduate employability through pre-professional identity construction. The neo-liberalisation of HE (Section 1.3) and the graduate employability agenda (Section 1.4) underpin the need for a new conceptual model of graduate employability and identity, relevant to today's graduate labour market. Furthermore, the new conceptual model requires validation to maximise theoretical and practical contribution and impact. This research addresses such calls.

The motivation for this research emanated from seeking to make undergraduates more employable, subsequently fit for deployment in an increasingly globalised, knowledge-based economy (Crossman & Clarke, 2010); simultaneously offering implications for theory and practice to HE institutions, industry and national governments. This research highlights the importance of, and provides a mechanism for, giving a voice to a neglected actor in graduate employability, the micro level undergraduate student.

1.2 Research Purpose and Contribution

The aim of this research was to explain the students' perceptions of graduate employability via a pragmatic, sequential explanatory approach. This research adopts a human capital and contemporary career theory framework (Chapter 2.2). An extensive literature review offers a new conceptual model of graduate employability, to address the following research questions:

Research Question I: What are the factors of graduate employability? A pragmatic, sequential explanatory mixed methods design enabled validation of the conceptual model, addressing

Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?

Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions, offers a further contribution of this research.

One thousand three hundred and fifty-five (n=1,355) penultimate year undergraduates from twenty-one degree subjects completed a self-reporting questionnaire in 2015/2016 (wave one), and three hundred and eighty-seven (n=387) participants subsequently completed a second questionnaire in their final year of study in 2016/2017 (wave two). Additionally, interviews were conducted with thirty-eight final year undergraduates from twenty-one degree subjects in 2016/2017, with the purpose of further validating the conceptual model by explaining the quantitative findings. All participants came from University A, a Russell Group University based in the south of England, as a case of a knowledge-based economy within the Organisation for Economic Co-operation and Development (OECD).

Theoretical underpinning lies at the intersection of human capital theory and contemporary career theory. Human capital draws on social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills. Contemporary career theory draws on careers advice, career ownership through a protean career orientation (Hall, 2004; 1996; 1976), and career mobility through a boundaryless career orientation (Arthur & Rousseau, 1996). Moderators of gender, degree subject, and year of study provide additional depth to the new conceptual model. Furthermore, existing conceptual models of graduate employability are advanced through pursuing a holistic approach offering relevance to today's

labour market. This research advances career theory and understanding of the transition between HE and the graduate labour market. Understanding and exploring the student perspective of graduate employability factors is crucial, as their views are not well known (Jackson, 2015; Rospigliosi, Greener, Bourner & Sheehan, 2014; Tymon, 2013) and outcomes of understanding the student view strategically influence organisational performance theory (Wright, Coff & Molinterno, 2014). Additionally, the terminology of employability is addressed from undergraduates across twenty-one subject areas.

The practical contribution of this research offers ways to prepare students for the graduate labour market, helping to enhance national competitiveness across the OECD through making undergraduates more employable and providing guidance to policy makers. This is achieved by understanding the factors that undergraduate students entering the graduate labour market consider important for employability and subsequently facilitating collaboration between actors of HE and graduate employability to align their views and prepare future students for entry into the labour market. For example, seeking to better align course pedagogy and employability incongruence, which has often proved a source of controversy and friction across actors (Ashleigh, Ojiako, Chipulu & Wang, 2012; Bastalich, Behrend & Bloomfield, 2014; Maurer & Mawdsley, 2014; Ojiako, Chipulu, Ashleigh & Williams, 2014; Rufai, Bakar & Rashid, 2015; Sin & Amaral, 2017).

This thesis now explores the neo-liberalisation of HE (Section 1.3) and the graduate employability agenda (Section 1.4) to offer contextualisation of the field of research.

1.3 Neoliberal Approaches and Higher Education

Fletcher, Carnicelli, Lawrence and Snape (2017, p.4) define neoliberalism as

A value system in which the economic has replaced the intellectual and political and in which the competitive, rational individual predominates over the collective.

Critics of the neoliberalism of HE including Giroux (2014) and Ashe (2012) highlight the challenges universities face in remaining social and critical spaces, including fostering freedom of thought and promoting equality of participation. However, successive OECD governments have presided over an ideological refocus of HE by replacing social models with market-led approaches (Palfreyman & Tapper, 2016). OECD governments drew on themes of reduced state funding of HE, economic returns, diversification, increased participation,

internationalisation, league tables, employability, students-as-consumers, and accumulation of intellectual capital for deployment in a knowledge-based economy (Phipps & Young, 2015). The United Kingdom (UK) provides an excellent case for exploring these trends. Tight (2011) provides a fuller review in the book: *'The Development of Higher Education in the United Kingdom since 1945'*. Appendix A provides the executive summaries of the Robbins Report (1963), The Dearing Report (1997), the Browne Review (2010), and the Wilson Review (2012).

Following the Second World War, a liberal partnership was in place between the UK Government and UK universities, epitomised by the Robbins Report (1963) stating that HE should be freely available to anyone with the ability to pursue it. This position was largely unchallenged until the Thatcher era in the mid-1970s. As Education Secretary, Thatcher felt that significant power lay with university establishments. Upon becoming Prime Minister, Thatcher cut the state funding for HE, working in partnership with the media to outline the benefits of such a vision to the public (Tight, 2011). In fact, whilst successive governments in the four decades since Thatcher have sought to give the impression of progression through a plethora of policy and legislative reforms relating to HE, the overarching themes at the time of writing remain unchanged.

In 1992, the UK government expanded the provision of HE through conversion of polytechnics into what became termed post-1992 universities. These universities provided degrees in more vocationally oriented subjects, whereas pre-existing universities continued to provide more traditional degree subjects. In response, The Russell Group formed in 1994, composed of seventeen pre-1992 British research-based universities. Membership of this group subsequently expanded to nineteen in 1998, twenty in 2006 and twenty-four in 2012. The Russell Group sought to offer collaboration and collective power to research universities and a mechanism for collectively informing and challenging government decisions on policy and reform.

The Dearing Report (1997), chaired by Sir Ronald Dearing, then Chancellor of The University of Nottingham, made ninety-three recommendations to the UK Government; offering the most extensive review of UK HE since the Robbins Report (1963). The Dearing Report continued the pursuit of Thatcher's view of HE and became the cornerstone for a significant change to the funding structure of participation in UK HE. Pre-1997, a student received a government-funded grant, paid directly to the university at which the student was

studying. As such, The Treasury, via the UK taxpayer, fully funded the cost of a student receiving UK HE. The underlying premise for this was the Robbins Principle (Robbins Report, 1963, p.8) stating that

Courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and wish to do so.

With the ever-increasing participation in UK HE, the Dearing Report recommended a move to a mixed system of tuition fees. In practice, this meant the individual student was now accountable for a proportion of their university education costs. To ensure continued participation in UK HE, The Treasury offered low-interest student loans, which covered the immediate tuition fee cost for the student, subsequently repaid after graduation.

This agenda was further pursued by the Browne Review (2010), chaired by Lord Browne of Madingley, which explored the future direction of HE funding. Recommendations included increasing tuition fees and increasing the income level at which graduates start to repay their student loans to £21,000. Subsequently, the Wilson Review (2012) chaired by Dr. Tim Wilson, recommended that every student should be given the opportunity to undertake work-integrated learning (WIL) as part of their degree course, with the purpose of enhancing the employability of students. In the same year, the tuition fee cap placed on UK universities increased to £9,000 per annum, as the state sought to reduce further its investment in HE. A plethora of policy reforms continued this movement away from liberal education. The UK and other OECD governments recognised the impact of globalisation and placed an ever-greater emphasis on partnerships and developing graduates capable of offering national competitiveness in a knowledge-based, technologically advanced, graduate labour market (Baruch, 2009; Ellis, Kisling & Hackworth, 2014; Jackson, 2014; 2013; Masui, Broeckmans, Doumen, Groenen & Molenberghs, 2014). Additionally, internationalisation became evident in universities across the OECD as students were prepared to relocate temporarily to pursue their studies at the best possible HE institution (Lauder, Brown, Dillabough & Halsey, 2006). The meaning of this for undergraduate students was, and remains, the need to cope with a heavy financial burden and to secure employment within an increasingly competitive graduate labour market.

A cornerstone of Government policy across the OECD is an increased participation in HE. Following the UK as a case, this research addresses this global trend. At the time of the Robbins Report (1963), 216,000 undergraduates from the UK and European Union (EU) were

participating in UK HE. By comparison, in 2014, there were 1,127,000 domestic and EU undergraduates, an increase of 422% (Higher Education Funding Council, 2014). These figures indicate the scale at which mass participation in UK HE has soared, with nearly half of all school leavers in 2014, 49.3%, attending university (Higher Education Funding Council, 2014); a trend which is expected to continue (Tomlinson, 2014; Trow, 2007). A key trend is the rebalancing of the gender of the participants, specifically the increase in female participation in UK HE. In 1963, female representation was just 3,996, or 1.85%. By comparison, in 2014, female representation had risen to 597,310, or 53.00% of the total undergraduate population (Higher Education Funding Council, 2014).

Whilst the raw data from HE participation may indicate equality across gender representation, this is still far from the case from an industry perspective. The Office for National Statistics (2016) reported the gender pay gap for all employees as 19.2%. Male graduates, not exclusively, but certainly dominantly, are continuing to obtain higher graduate salaries, and are often reported as being more confident during the application process (Tomlinson, 2012). This is in spite of employment law, which prohibits the discrimination between candidates based on gender, and many other factors. Perhaps, as suggested by Tomlinson (2013), male candidates have stronger negotiation skills and higher self-esteem, leading to higher starting salaries. Perhaps the continued domination of CEO-board positions by males means that companies favour male applicants, putting female applicants at a disadvantage. Perhaps female graduates are more realistic about their abilities and subsequently lose out during the selection process to male counterparts who overstate their skills and abilities? None-the-less it seems quite unacceptable that when undergraduate degree participation is near parity based on gender that this does not translate into the workplace. The Association of Graduate Recruiters (2016) claimed the underrepresentation of females on graduate schemes is the result of fewer females applying in the first place and that females who do apply are more likely to secure a position than their male counterparts are. Chapter 2.6.1 further explores the influence of gender as a moderator on factors of graduate employability.

1.4 Graduate Employability Agenda

The mantra of 'go to university, get a good degree, and be set for life' regurgitates from every angle of influence for young people today. Tutors and teachers, friends and family, government and media, industry, and, of course, university establishments all encourage this

aim in prospective students entering HE. Thus, the transition from secondary to tertiary education, pursued at the 'best' possible institution, is seen as critical for both academic and career advancement. Individual personality, background, and the environment influence people's attitudes and actions (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), and culture 'programmes' human mindset (Hofstede, 2001). Furthermore, the economic rhetoric of increased earnings as a direct result of undertaking a university degree is widely cited (Brooks & Youngson, 2016; Push Survey, 2011). Nevertheless, why do students perceive a particular university to be the 'best' institution in which to pursue their degree? Is it the reputation of the university such as Oxbridge or Russell Group affiliation? Is it the reputation of the specific degree course through university league tables, or the presence of leading academics in the field? Is it an endorsement from alumni? Do the views of teachers, friends, or family play a part? Is its geographical location on either a national or an international scale? What weight is given to extracurricular opportunities offered through participation in clubs, societies, and social life?

Perhaps a multitude of factors is involved in attempting to answer such questions (Esson & Ertl, 2016; Esson, Ertl & Holmes, 2013). In the same way, that the UK Government is seeking an economic return on investment for The Treasury and subsequently the country, students are seeking an economic return for the ever-increasing accumulated debt associated with participation in HE (Stone, Berrington & Falkingham, 2014). However, education itself often represents a means of securing future employment that is of high status and well paid, with strong career progression prospects, i.e. a graduate level job. Subsequently, the economic expectation of increased salary and associated employment benefits realised from a degree qualification draws focus (Brooks & Youngson, 2016; Push Survey, 2011). Alternatively, credential inflation may drive a defensive expenditure (Martin, 2016; Thurow, 1972), whereby individuals seek to minimise economic loss from not pursuing HE, as much as seeking a return on their economic investment for pursuing it (Esson et al., 2013; Tomlinson, 2013).

Thus, UK HE seeks to establish an intellectual capital base (Ashe, 2012; Giroux, 2014). The post-industrial utopian view emphasises the new opportunities and rewards for people through education and employment or entrepreneurship. In contrast, the post-industrial dystopian view positions society as undesirable, detailing lack of job security and precarious labour market conditions (Tomlinson, 2013). The dystopian view positions graduates' as educational consumers, where skills and knowledge are the commodities, with a focus on providing graduates with employability for operating in a knowledge-based economy (Brown,

2013; Bunney, Sharplin & Howitt, 2015; Jackson, 2014; Tomlinson, 2014; 2012; Wilton, 2014; 2011). Jackson evidenced this position in Australia and Wilton in the UK, both via quantitatively based studies; while Tomlinson adopted a UK based qualitative approach. Bunce, Baird and Jones (2016), in a study of six-hundred-and-eight students (n=608) from across thirty-five English universities, found that increased consumer orientation was linked to lower academic performance. Limitations of this study included the cross-sectional approach and opting to measure academic performance by asking the student to self-report their latest module mark. However, their proposed findings are certainly of interest and merit further exploration.

A cornerstone of policy reforms of OECD and UK HE has been the drive for employability (Holmes, 2015; 2013; Jackson, 2015). Rothwell and Arnold (2007, p.25) define employability as *the individual's ability to keep the job one has, or to get the job one desires.* The more graduates in employment and the greater their earnings, the greater the proportion of the student debt repaid. This proved problematic when industry demand for graduate level jobs, which prior to the economic recession had risen year on year, fell sharply in 2008. In fact, demand for graduate jobs did not return to pre-recession levels until 2014. Fortunately, the green shoots of recovery look set to continue, with the Association of Graduate Recruiters (AGR) evidencing record demand year-on-year for graduate level jobs since 2015. However, the effect on demand for graduates following the UK's decision to leave the EU is currently unknown.

Confusion exists surrounding the terminology of employability. The UK Government and industry task universities with producing employable graduates, equipped with the necessary skills to thrive in a knowledge-based economy (Keep, 2009). However, their main measurement of employable graduates is via employability, currently only including domestic students, six months post-graduation, via the '*Destination of Leavers from Higher Education Survey'* (DLHE). This is a highly contentious issue since it is perfectly feasible for a graduate to be employable - that is to say possessing the necessary skills and degree qualification to be capable of undertaking a job in the graduate labour market (Remedios, 2012; Van der Heijde & Van der Heijden, 2006) – without necessarily being employed and thus failing to satisfy the existing measure of employability (Jackson, 2014; 2010; Holmes, 2013). This is reflected by Clarke (2008) stating the availability of jobs in the labour market determined employment opportunities. Furthermore, the data set neglects issues of underemployment (Scurry & Blenkinsopp, 2011), for example, university graduates in non-graduate jobs (Okay-Somerville

& Scholarios, 2014; 2013), and classifies graduates pursuing additional HE courses as employed.

Every two years the UK Government also publishes a longitudinal study of graduate employability titled *'Destination of Leavers from Higher Education Longitudinal Survey'*, evidencing a further snapshot in time, three and a half years after graduation. The most current publication, prior to data collection of this research, was in August 2015 and related to graduates from 2010/2011 (Higher Education Statistics Agency, 2015). Of 81,650 responses from graduates surveyed in November 2014, 71,852 (88%) were in employment, with a median salary of £26,000 and 4,899 (6%) in further education. However, there was significant variance by UK region and by degree course studied. For example, employment varied from 71.5% in the south-east of England to 90.3% in Scotland. Furthermore, 62,136 graduates (76.1%) felt their degree had prepared them well for their career, although 23,352 graduates (28.6%) would have chosen a different subject, 16,657 (20.4%) a different HE provider, and 29,231 (35.8%) a different type of qualification. These figures highlight the complexity and challenges facing students in selecting the appropriate subjects and degree course, given their relatively limited life and labour market experience.

McCowan (2015) offers further criticism of the UK Government measure of perceived employability by acknowledging a range of factors that may either facilitate or hinder employability of individual graduates across the OECD. This includes the general availability of jobs, the distribution of different types of job, and potential discrimination in the job market. McCowan also challenges the Government stance of placing accountability for employability on the individual micro level graduate actor, rather than at state level, citing employability as a slight of hand legitimising inequality. Consequently, this research seeks to understand whom undergraduate students perceive as responsible for their employability in the graduate labour market.

Through seeking to address the inadequacies of the UK Government measure of employability, Rothwell and Arnold (2007) proposed an alternative measure of employability. They developed and validated a concise measure of factors influencing employability, subsequently used in studies by De Cuyper, Bernhard-Oettel, Bernston, Witte and Alarco (2008), and De Cuyper and Witte (2011). This research adopts items from this measure as evidenced in the methodology (Chapter 3) to reflect proposed factors of the conceptual model. It is also crucial to highlight the interplay between society and education, with each reflecting and influencing the other, highlighting the importance of diversity and inclusion to maximise

national competitive advantage and innovation (Tomlinson, 2012). Chapter 2 further investigates these themes and also explores the relevance to prospective graduates of improving employability (Fugate, Kinicki & Ashforth, 2004; McArdle, Waters, Briscoe & Hall, 2007), with organisations increasingly expecting individuals to take ownership of their career planning and management, and to develop career resilience (Baruch, 2001; Peiperl & Baruch, 1997).

1.5 Scope of Study

This research is relevant to a number of scholarly debates in HE, human resource management, organisational studies, and sociology. It provides and validates a model of graduate employability factors influenced by human capital and contemporary career theory, for application across the OECD. The research is contextualised within University A, based in England as a 'typical case' since its HE provision and graduate labour market are reflective of the challenges faced across the OECD, as highlighted in Sections 1.3 and 1.4. The 'University A' naming convention is used throughout the research to offer confidentiality and anonymity to the specific institution. University A gained Royal Charter status in 1952, becoming one of the seventeen founding members of The Russell Group in 1994, which was set up to collaboratively evidence research excellence. This was of particular significance given the expansion of UK HE in 1992 through conversion of polytechnics offering vocational degree subjects to post-1992 universities. The Russell Group expanded in 1998, 2006, and 2012 to its current membership of twenty-four UK universities. University A is a world-leading research university, ranked in the top 100-150 universities in the world, and the 20th in the UK in 2017 for graduate employment outcomes (QS Graduate Employability Rankings, 2017). The rankings consider responses from approximately 38,000 employers, 20,000 high-achieving graduates, 70,000 employers' connections with graduates and 180,000 work placement partnerships. The highest scores for University A came from the graduate employment rate, partnerships with employers, and employer-student connections. University A is situated in the south of England, approximately seventy miles from London, the largest city for graduate employment opportunities in the UK, employing 24% of graduates from UK universities six months after graduation in 2014 and 2015 (Centre for Cities, 2016.)

The researcher carried out a cross-faculty study of University A, driven by literature review findings, and preliminary research conducted by the University. A pilot study addressed students from the Faculty of Physical Sciences and Engineering. Subsequently, a quantitative,

two-wave study involved the participation of 1,355 penultimate year undergraduates (wave one) and 387 final year undergraduates (wave two) from twenty-one subject areas. Group one covered Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences. Group two covered Business, Engineering, Law, Modern Languages, and Mathematics. Addressing students from subjects beyond Business, Engineering, Healthcare, Law, Mathematics, Medicine, and Modern Languages is of particular importance, given their views are not well represented in existing career literature (Edwards, 2014; Jackson & Wilton, 2017; Wilton, 2014). The qualitative stage targeted final year undergraduates via interviews with the purpose of explaining unexpected findings from the literature review and quantitative stage. The researcher considers that the scope of including different degree subjects in this research added complexity and originality. The literature review draws on macro, meso, and micro level actors of HE and graduate employability, to understand the wider views for informing the proposed conceptual model, and to see if students support these views.

The Wilson Review (2012) stated that universities should offer all undergraduates the opportunity to gain WIL, which this research positions as a component of market-value capital. Passmore (2014) found that 92% of students referred to the importance of having opportunities for placements, work experience, or internships, but only 27% of the students at University A undertake WIL. However, as a caveat, the 27% figure emerged via a field in the individual students' records that asked students to self-report if they had undertaken a placement. Data at individual faculty level proved non-existent or poorly maintained (Gowar & Donald, 2015). The 27% figure placed University A in position seventeen of the twenty universities that provided data, which indicated a target-rich environment for this research. As evidenced, University A is reflective of a traditional pre-1992 English university, which in turn is reflective of universities across the OECD.

In summary, this research offers a new contribution through giving a voice to students from across a wide range of degree subjects, to enable better understanding and collaboration, and to improve the employability of future graduates in the UK and across the OECD. As a caveat, there must be acknowledgement and awareness of an unfolding drama and a complex interplay between macro, meso, and micro level actors. In response, the literature review shows awareness of debates from different actors, including governments, employers, educational institutions, lecturers, and gatekeepers. An acknowledgement of the media in supporting or

contradicting the individual agendas of these stakeholders is also important, although beyond the scope of this research. Furthermore, this research investigates whether students had developed sufficient awareness to self-report accurately their view of the graduate labour market, given their lack of exposure. However, without an understanding of the student perspective, there is an attempt to form policy and strategy without engaging the very actors affected by such proposals, risking disconnect, and failing to explore all potential options available.

1.6 Thesis Structure

This thesis is composed of eight chapters. The opening chapter has introduced the study, covering background, research purpose, intended contribution, motivation, and scope. Chapter 2 reviews and evaluates literature addressing existing conceptual models of graduate employability, research framework, human capital, career orientation, careers advice, and moderators. The literature review follows a systematic approach to constructing a conceptual model of graduate employability and hypotheses for testing and validation of the model. The chapter concludes by addressing graduate debt and earnings. Chapter 3 details pragmatism as the philosophical position and the sequential explanatory mixed methods approach used to test and validate the proposed conceptual model. This included a quantitative two-wave stage informed by self-reporting questionnaires and, subsequently, a qualitative stage using interviews to explain the quantitative findings. The chapter then evidences the research design, research sample, ethical considerations, and strategies for preparing the data for analysis. Chapter 4 provides the quantitative results and Chapter 5 the treatment of qualitative data. Chapter 6 offers findings and analysis, and Chapter 7 provides discussion by research question and the theoretical and practical contribution of this research. Finally, Chapter 8 offers conclusions, limitations, and directions for further research.

Chapter 2: Literature Review

2.1 Graduate Employability and Conceptual Models

Yorke (2004, p.8) defined graduate employability as

A set of achievements – skills, understanding and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations. Which benefits themselves, the workforce, the community and the economy.

In collaboration with Universities UK, the Confederation of British Industry (2009, p.9) offers a comparable definition of graduate employability as

A set of attributes, skills and knowledge that all labour market participants should possess to ensure they have the capability of being effective in the workplace – to the benefit of themselves, their employer and the wider economy.

Whilst these remain the two most cited definitions in graduate employability literature, this research addresses calls by Holmes (2017, p.362) and Keep and Mayhew (2010) for a movement away from a limited focus on skills, towards a more holistic approach to evidence what factors influence graduate employability. Therefore this research adopts Kinash and Crane's (2015, p.vi) more encompassing definition of graduate employability based on the views of stakeholders in Australia, recognising the similarities in the higher education agendas between the UK and Australia

Graduate employability means that higher education alumni have developed the capacity to obtain and/or create work. Furthermore, employability means that institutions and employers have supported the student knowledge, skills, attributes, reflective disposition and identity that graduates need to succeed in the workforce.

Furthermore, Nilsson (2017, p.71), who talks about operationalising employability from a recruitment perspective, states

One important aspect of employability, especially in areas with high competition for jobs, is the ability to market oneself, to negotiate and to accentuate the appropriate forms of individual competence, personal capital, social capital and cultural capital to a recruiter.

This extends Rothwell and Arnold's (2007, p.25) definition of employability as *the individual's ability to keep the job one has, or to get the job one desires*, and Vanhercke, De Cuyper, Peeters and De Witte (2014, p.594) definition of perceived employability as *the individual's perception of his or her possibilities of obtaining and maintaining employment.* This research adopts a three-item measure of graduate employability adapted from Rothwell and Arnold: *(i) I am optimistic that I would find a job if I looked for one*; *(ii) If I have to find a job, it would be easy*; and *(iii) I could easily switch from one job role to another.*

Existing conceptual models of employability have begun to address these themes. USEM (Knight & Yorke, 2004), sort to embedded employability into the university curriculum with the purpose of considering the views from a variety of stakeholders. CareerEDGE (Dacre Pool & Sewell, 2007) developed this position by evaluating employability at different stages, again by considering the views of different stakeholders. Dacre Pool (2017) extended the CareerEDGE model to include emotional intelligence. SOAR (Kumar, 2007) introduced the notion of employability as a process that evolves over time, with the model heavily reflective of the system-design lifecycle model, perhaps reflecting the continued importance and prevalence of technological change on organisations and their employees. Graduate Attributes for Employability (Bridgstock, 2009) began to evidence contemporary career theory through highlighting the importance of career management skills and self-management of the career building process by graduates. Bridgstock (2017) extended her model to include experiential, social, and networked attributes of graduate employability, embedded within the university curriculum. An Integrated Model of Graduate Employability (Clarke, 2017) draws on human capital, social capital, individual behaviours, individual attributes, perceived employability, and labour markets. Cai (2013), offered a conceptual model for understanding employers' perceptions. This drew on signalling theory by applicants, employers' belief systems, recruitment decisions, and performance output. Although distinct from the other graduate employability models, Cai offered a complementary model evidencing outcomes and highlighting the need for engagement and collaboration between all stakeholders to align employability expectations. Jackson (2016) seeks to re-conceptualise graduate employability via pre-professional identity. The researcher agrees with Jackson, Holmes (2017, p.362), and Kinash and Crane (2015) that there is a need for a new conceptual model of graduate employability, looking beyond the skills agenda, and based on the notion that a collection of factors develops an identity of the graduate. This research expands on existing work by Forrier,

Verbuggen and De Cuyper (2015), Lin (2015), and De Vos, De Hauw and Van der Heijden (2011) to explain the self-perceived components of graduate employability.

This literature review responds to the need for a new conceptual model of graduate employability and addresses: *Research Question I: What are the factors of graduate employability?* The literature review systematically constructs the conceptual model by exploring human capital (Section 2.3), the graduate career orientation (Section 2.4), careers advice (Section 2.5), and moderators (Section 2.6). The conceptual model (Section 2.7) and hypotheses (Section 2.9) underpin *Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?* Furthermore, the literature review addresses *Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions* (Section 2.8). A mixed methods methodology (Chapter 3), quantitative results (Chapter 4), treatment of qualitative data (Chapter 5), and analysis and contributions (Chapter 6) provide answers to Research Questions II and III.

2.2 Research Framework

The theoretical underpinning of this research lies at the intersection of human capital theory and contemporary career theory. Human capital (Section 2.3) draws on social capital (Section 2.3.1), cultural capital (Section 2.3.2), psychological capital (Section 2.3.3), scholastic capital (Section 2.3.4), market-value capital (Section 2.3.5), and skills (Section 2.3.6). Contemporary career theory (Section 2.4.2) draws on career mobility through a boundaryless career orientation (Section 2.4.3), career ownership through a protean career orientation (Section 2.4.4) and careers advice (Section 2.5), operating within a career ecosystem (Section 2.2). The research positions the employability debate at the transition between HE and the graduate labour market within the Organisation for Economic Co-operation and Development (OECD). Understanding and exploring the student perspective of graduate employability factors is crucial, as their views are not well known (Jackson, 2015; Rospigliosi et al., 2014; Tymon, 2013) and outcomes of understanding the student view strategically influence organisational performance theory (Wright et al., 2014). Additionally, the terminology of employability is addressed from undergraduates across twenty-one subject areas, seeking to

better align course pedagogy and employability incongruence, which has often proved a source of controversy and friction across actors (Ashleigh et al., 2012; Bastalich et al., 2014; Maurer & Mawdsley, 2014; Ojiako et al., 2014; Rufai et al., 2015; Sin & Amaral, 2017).

Inansiti and Levien (2004, p.5) define an ecosystem as

A system that contains a large number of loosely coupled (interconnected) actors who depend on each other to ensure the overall effectiveness of the system.

The actors represent individuals, institutions and nations (Baruch, Altman & Tung, 2016). Within this research, actors are the macro, meso and micro level stakeholders involved in the graduate employability agenda. Career ecosystems (Baruch, 2015; 2013, Higgins, 2005) form part of the contemporary career theory framework for this research, drawing on a kaleidoscope career and planned action theory (Section 2.2). The undergraduate perception of the graduate labour market addresses the construction and movement of human capital from universities into the graduate labour market, as part of a lifelong learning process, replacing a job for life as a mechanism for career sustainability (Van der Heijden & De Vos, 2015). Furthermore, boundaryless career theory offers an exploration of the students' perceptions of talent flow across organisational and national borders, and protean career theory focuses on taking ownership of one's career within the dynamic structure of a career ecosystem (Baruch, 2013). New work arrangements continue to manifest in response to an evolving career ecosystem (Baruch et al., 2016). Mass migration, globalisation, technological advancement, modernising economies, and the global financial crisis are just some of the factors influencing movement within a career ecosystem (Baruch & Altman, 2016). Furthermore, the competition between organisations to secure the most employable graduates is fierce, while less employable graduates continue to struggle to secure employment (McNulty, 2014).

In the development and initial validation of a multidimensional measure of early career success during the university-to-work transition, Oliveira, Melo-Silva, Taveira and Grace (2016) state the importance of further research exploring professional identity construction, while Jackson (2016) offers the terminology pre-professional identity. The researcher agrees with Oliveira et al. and Jackson on the need for a conceptual model of graduate employability, and that human capital theory and contemporary career theory play a role in the development of identity over time, from university into the workplace and beyond. Dries (2013a, p.108) captures the notion of development over time by stating that

Rather than seeing career choice as a one-off decision, it is now perceived as an ongoing journey of exploration and self-construction.

In an extensive review of identity literature, Brown (2015) highlights the numerous metaphors surrounding identity, favouring work identity as the metaphor of choice. However, this research addresses both pre-professional identity (Jackson, 2016) and work identity (Brown, 2015).

As an alternative, this research offers the new terminology emergent identity, underpinned by (re)emergent identity (Holmes, 2015; 2013), working identity (Ibarra, 2003) and social identity theory (Ashforth & Mael, 1989). The researcher challenges the notion of (re)emergent identity (Holmes, 2015; 2013), preferring emergent identity as identity by nature evolves over time, continuing to emerge throughout the lifespan of the individual. Sullivan (1999) and Mainiero and Sullivan (2006; 2005) provide further support for this position through the concept of a kaleidoscope career; reflecting a need for individuals to react to changing circumstances within their own lives. Sullivan and Baruch (2009, p.1557) state that a kaleidoscope career details careers from a triad of perspectives

A) *Authenticity, in which the individual makes choices that permit him/her to be true to him/herself;*
B) *Balance, whereby the individual strives to reach an equilibrium between work and non-work (e.g. family, friends, elderly relatives, personal interests) demands; and*
C) *Challenge, which is an individual's need for stimulating work (e.g. responsibility, autonomy) as well as career advancement.*

The construct of a kaleidoscope career, as part of contemporary career theory, underpins emergent identity through the shifting and evolving nature of identity construction. In developing this theme in the context of a sustainable career, Van der Heijden and De Vos (2015, p.7) highlight

The sequences of career experiences reflected through a variety of patterns of continuity over time, thereby crossing several social spaces, characterized by individual agency, herewith providing meaning to the individual.

Planned action theory (Fishbein & Ajzen, 1975) also plays a role through attitude, subjective norm, and motivations. Attitude refers to the student evaluating a suggested behaviour and determining it to be positive to them. Subjective norm refers to the student believing that people who they hold in high regard support performance of the behaviour.

Motivation is the outcome of attitude and subjective norm resulting in higher intention and a greater likelihood of the student performing the behaviour. In the context of HE, it is important to foster positive attitudes, provide students with subjective norms through family, friends, and academics, and seek to enhance motivation in the student to develop human capital and career orientation, subsequently informing a sense of emergent identity and employability.

The literature review continues to address *Research Question I: What are the factors of graduate employability?* by exploring the construction of emergent identity through human capital (Section 2.3), career mobility through a boundaryless career orientation (Section 2.4.3), career ownership through a protean career orientation (Section 2.4.4), careers advice (Section 2.5), and moderators of gender, degree subject and year of study (Section 2.6).

2.3 Human Capital

Dries (2013b), and Manroop and Richardson (2016) are keen to highlight the multidisciplinary nature of career theory, drawing on human resource management, economics, educational psychology, vocational psychology, positive psychology, and social psychology. This diversity of influence is evident in the literature applying human capital theory to educational pathways (e.g. Burke, 2015; Bradley et al., 2013; Reay, David & Ball, 2005).

Human capital theory emerged in neoclassical economic literature, becoming prominent through Becker (1964) who suggested that an organisation's investment in human capital could create value for it. This labour economist position was further adopted by Mincer (1958), Schultz (1971), and Bowles and Gintis (1975). These scholars observed the value of human capital in the marketplace through increased profitability of a firm; subsequently profiting the educated individual worker through increased wages. However, Bowles and Gintis departed from other labour economist scholars by adopting a Neo-Marxist perspective. As a result, these scholars believed that wages of the worker increased by education, not because education increases human capital but rather, because education increases corporate compliance and reliability. Spence (1973a) further departed from the views of Mincer, Becker, and Schultz by claiming that the rewards based on the observation of human capital may actually be rewarding other characteristics of the person under the guise of human capital.

Useem and Karabel (1986) contextualised human capital within the education arena. They stated that an educational institution could confer three distinct types of human capital

onto its students; social capital, cultural capital and scholastic capital. Baruch, Bell and Gray (2005) extended this framework to include inner-value capital and market-value capital, through looking at the contribution of HE qualifications. This research incorporates inner-value capital and the need for achievement (Cook, Hepworth, Wall & Warr, 1981), as part of psychological capital (Section 2.3.3). Jackson (2014), Jackson and Chapman (2012), Knight and Yorke (2004; 2002), and Wilton (2014; 2012) highlighted the role of skills in increasing the employability of HE graduates. This thesis now defines, explores, and develops these six constructs of human capital; social capital (Section 2.3.1), cultural capital (Section 2.3.2), psychological capital (Section 2.3.3), scholastic capital (Section 2.3.4), market-value capital (Section 2.3.5) and skills (Section 2.3.6), when applied to micro-level undergraduate students participating in OECD HE ahead of their entry into the graduate labour market. Human capital offers an accumulation of these six types of capital for the purpose of emergent identity and employability, acknowledging overlaps and interplay between the different forms of capital.

2.3.1 Social Capital

Bourdieu (1977, p.503) originally defined social capital from a viewpoint of social justice as a

Capital of social relationships which will provide, if necessary, useful 'supports': a capital of honourability and respectability which is often indispensable if one desires to attract clients in socially important positions.

This research acknowledges a progression in the construct of social capital; defined by its structural identity (Coleman, 1990), by its networks, norms and trust (Putnam, 1993) and later as people using their social network as a valuable resource (Field, 2003). As part of a systematic literature review, Lee (2009) identified three core dimensions of social capital: structural, relational and cognitive. However, Pillai, Hodgkinson, Kalyanaram and Nair (2017) issue a word of caution around social capital. They argue that, as individuals seek to conform to a status quo, there can be an over-commitment to an organisation, or to other individuals within the network, inhibiting both learning and development of the individual. Bourdieu's definition thus offers a point of departure for this research, examining employability at the nexus of social capital as defined by Bourdieu, Coleman, Putnam, Field and Lee, whilst remaining aware of the potential for those negative effects raised by Pillai et al. (2017). Specifically, social capital will address networks of contacts, family, school friends, university

friends, memberships or affiliations and LinkedIn, as a factor of human capital (Baruch et al., 2005; Batistic & Tymon, 2017; Sibunruang, Garcia & Tolentino, 2016; Useem & Karabel, 1986).

Hypothesis 1a (H1a): Social capital is a factor of human capital.

2.3.2 Cultural Capital

Cultural capital is the ability to either facilitate or hinder the social mobility of an individual. Bourdieu (1986; 1984; 1977) states how cultural practices of the middle classes inform the educational setting. Whilst increased legislation has facilitated inclusion, there is insufficient downward mobility and loss of privilege for education or the labour market to facilitate social mobility to the extent necessary to overcome pre-existing bias (Tomlinson, 2013). More so, the culture of entitlement for education by the middle classes actually re-enforces middle-class practices and values, both in education and in career settings (Reay, 2008; Skeggs, 2004). This is evidenced by a link between class profile and choice of university due to pre-existing levels of social and cultural capital (Archer, Hutchings & Ross, 2003; Reay et al., 2005; Vignoles, Goodman, Machin & McNally, 2008).

Furthermore, employers may harbour bias towards different graduates from different universities (Brown & Hesketh, 2004; Harvey, Moon, Geall & Bower, 1997; Morley, 2007; Rivera, 2011; Tholen, Brown, Power & Allouch, 2013). Using a self-reporting questionnaire (n=485), Branine and Avramenko (2015), found that 33% of UK undergraduates expected to secure employment based on their university of study, compared to 78% in France, 56% in Spain and 26% in Germany. These biases are further fuelled by the UK Government focus on university league tables, providing prospective students, employers and other stakeholders with a force ranked, quantitative positioning of the achievement of a university in relation to other universities. As a result, both prospective and present students place significant emphasis on the cultural capital of the university, perceiving institutional or degree course rankings as directly associated with securing subsequent graduate employment (Morley, 2007; Rothwell, Herbert & Rothwell, 2008).

In response to the potential for bias, the UK Government announced the removal, from 2017, of candidate names from all Universities and Colleges Admissions Service (UCAS) applications in an attempt to prevent unconscious bias against candidates. Leading graduate employers have also pledged to name-blind recruitment in an attempt to boost diversification

and the considerable benefits associated. Whilst it is encouraging that the UK Government and graduate employers are acknowledging that discrimination still exists (Dorling, 2015), although less overtly than in previous generations (Dorling, 2014), their approach to tackling this problem appears unconvincing. Whilst a candidate may pass the Curriculum Vitae (CV) or application form stage of the recruitment process, they are still likely to face the same unconscious biases when participating in face-to-face interviews, where the very nature of the selection process compromises their anonymity. Furthermore, asking university or graduate job applicants to hide their names fails to tackle the root cause of unconscious bias, which could emanate from many different sources, including the application and interview questions. The barriers are thus considerably more complex and nuanced than may first appear.

Cultural capital covers traditional facets including university reputation, extracurricular activities, reading for enjoyment, attire, travelling, visiting cultural exhibits, speaking an additional language, networking, and volunteering (Esson et al., 2013). In recognition of an evolving world and workplace, this research extends cultural capital to include the use of social media and going to the gym (Jaeger, 2010). Social media is reflective of technological advancement and increasingly used by applicants in daily life and for searching for job opportunities, and by organisations to offer opportunities and to profile candidates (Inkson, Dries & Arnold, 2015, pp.303-304). Keeping fit and choosing attire to portray body image, coupled with an increased focus on healthy lifestyle choices, could be particularly relevant for graduate jobs that involve either client or public interaction. This research proposes that students with more cultural capital have greater social mobility and are more employable (Fuller, Heath & Johnston, 2011; Tholen, 2014).

Hypothesis 1b (H1b): Cultural capital is a factor of human capital.

2.3.3 Psychological Capital

Baruch et al. (2005) extended employability capital as proposed by Useem and Karabel (1986) to include inner value capital and market value capital, through looking at the contribution of the MBA qualification to employability outcomes of students within the OECD, specifically in the UK and the USA. Baruch et al. (p.54), drawing on earlier work of Boyatzis and Renio (1989) and Baruch and Peiperl (2000), defined inner-value capital as *a high sense of self-awareness, self-esteem, self-efficacy and confidence*. Whilst the context of these studies focused on MBA students and MBA alumni, who are likely to have considerably more industry

experience than their undergraduate counterparts, inner-value capital still has significant relevance to graduate employability. This is evidenced by Baruch et al. drawing on the ability of inner-value capital to facilitate people in their career decisions (Stein, 1993 in Baruch et al., 2005) and to agree feasible objectives, assisting individuals in matching their ability to the correct career (Super, 1990 in Baruch et al., 2005). Inner-value capital of self-awareness, self-esteem, self-efficacy, and confidence has significant overlap with psychological capital of high self-efficacy, optimism, hope and resilience (Luthans, Luthans & Luthans, 2004). Both terminologies are concerned with 'who you are' (Kaur & Sandhu, 2016; Luthans et al., 2004). This research adopts the term psychological capital reflecting terminology of more recent employability literature (Luthans, Yousef & Avolio, 2015). This research also incorporates the need for achievement into psychological capital, looking at performance on difficult assignments, past performance, attitudes to risk, desire for additional responsibility, and peer rivalry in terms of performance benchmarking (Cook et al., 1981).

Hypothesis 1c (H1c): Psychological capital is a factor of human capital.

2.3.4 Scholastic Capital

Scholastic capital concerns the volume of knowledge acquired by an individual. Bourdieu (1977) challenged the dominant position of inherited economic capital as a mechanism for transferring economic capital by highlighting the role of education. Studies have subsequently explored scholastic capital in an educational context, examining the contribution of the Master of Business Administration (MBA) qualification to students in the UK and the USA (Baruch, 2009; Baruch et al., 2005). However, a gap exists for further explanation of the role of scholastic capital in enhancing perceived employability in the wider context of the undergraduate population, beyond management education. Scholastic capital addresses the value of pre-university education and university education through the perceived value of the school grades and the university degree in determining graduate employability in the labour market.

Hypothesis 1d (H1d): Scholastic capital is a factor of human capital.

2.3.5 Market-Value Capital

The concept of WIL has existed for nearly half a century. Smithers (1976) details the sandwich placement model applied to engineering students. The sandwich placement represents a period of time, usually a year, between the penultimate and final year of undergraduate study, whereby the student gains employment experience in industry (Committee on Research into Sandwich Education, 1985; in Auburn, 2007). The diversity of courses adopting the sandwich placement model dramatically increased in the 1980s, with the rise of vocational degree courses, and increased again in the 1990s following the expansion of HE institutions in 1992 (Council for National Academic Awards Development Services, 1984; in Auburn, 2007). Historically, much of the focus of the sandwich placement model has been on vocational degree courses, that is to say, degree courses whereby close alignment exists between the employment outcome and the degree course - for example, Business, Engineering, Healthcare, Law, Mathematics, Medicine, and Modern Languages have been the focus of much academic research in recent years (Gupta, Hays, Woolley, Kelly & Jacobs, 2014; Hsieh & Hsu, 2013; Oakley & Oyebode, 2008; Sheepway, Lincoln & McAllister, 2014). More recently, as successive UK Governments place greater emphasis on the employability of graduates, the employer, the university and the student are recognising the need for industry experience. This is especially true as employers continue to look beyond the degree qualification and students seek to build human capital, including skills, to secure offers of graduate employment (Brooks & Kay, 2014; Confederation of British Industry, 2016).

Market-value capital draws on the experiences gained from the labour market (Baruch et al., 2005). Undergraduate students develop market-value capital through WIL, characterised by the opportunity to participate in the labour market alongside degree studies, often for a fixed length of time (Jackson & Chapman, 2012). There has been a movement away from the terminology of sandwich placements and instead the terminology of WIL is favoured (Jackson, 2015). One reason for this is universities seeking to provide a distinction between vocational and non-vocational degree programmes, and a further reason is to encompass a wider variety of offerings including work placements, internships, fieldwork, sandwich year, job shadowing, and cooperative education (Jackson, 2015). WIL draws on active learning theory (Bonwell & Eison, 1991) and experiential learning theory (Kolb, 2014; 1984). The student initially develops skills within an academic environment and subsequently applies these in a workplace environment. This process helps to inform the student of the reality of the workplace,

subsequently enabling the student to understand better their career ambitions (Zegwaard & McCurdy, 2014).

An extensive review of UK HE recommended that undergraduates be given the opportunity to participate in WIL as part of their degree studies (Wilson Review, 2012). Based on these recommendations, universities across the OECD are rolling out schemes to facilitate such opportunities. Undergraduates may also have previous professional experience within the labour market prior to undertaking their degree studies, which contributes to their market-value capital. The position appears to be clear: WIL offers augmented employability skill development and increases employability and starting salary of the individual (Auburn, 2007; Brooks & Youngson, 2016; Evans, Gbadamosi & Richardson, 2014; Gupta et al., 2014; Oakley & Oakley, 2008; Sheepway et al., 2014; Taylor & Hooley, 2014; Trede & McEwen, 2015; Yorke, 2011). Furthermore, WIL provides a positive impact on academic performance, through increased final year grades and degree classification (Brooks & Youngman, 2016; Gamble, Patrick & Peach, 2010; Mansfield, 2011).

However, Bullock, Gould, Hejmadi and Lock (2009) voice concern around the cause and effect correlation, questioning whether, in fact, better-performing students are more likely to participate in work-related learning and, therefore, whether these students would have performed better than their peers anyway. Crawford and Wang (2016) share this view through a UK-based study of accounting and finance students, which indicated evidence of increased grades from WIL, but also evidence of self-selection by the stronger performing students to participate in WIL. Furthermore, as Edwards (2014) and Wilton (2014; 2012) point out, the actual benefits of WIL, along with the student perspective, are still widely unknown and this area of research is more complicated than sometimes portrayed. Jackson (2015) has begun exploration of these areas, drawing on the self-reported survey findings of one hundred and thirty-one undergraduates from across three faculties from a university in Western Australia. Jackson refers to classroom learning as providing the scaffolding whilst WIL helps in the development and refinement of these skills (Jackson, 2015). Students, however, reported struggling with communication in a multi-cultural environment, presenting work to colleagues, and receiving critical feedback. Jackson's paper, therefore, provides a stepping-stone for further exploration and explanation in a UK context.

Tomlinson (2012; 2008) calls for further exploration of WIL, applied in an undergraduate context. This is of particular importance. If UK Government policy is

encouraging all undergraduates to complete WIL, there needs to be sound evidence that this policy does indeed make the student more employable in the graduate labour market, or, at least, enhances the employability perception of the individual student. Furthermore, much of the published literature surrounding WIL in underpinned by a quantitative methodology, via a self-reporting questionnaire, providing a snapshot in time response (Baguley, 2006; Hodges & Burchell, 2003; Gault, Leach & Duey, 2010; Oakley & Oyebode, 2008; Paisey & Paisey, 2010; Saunders & Zuzel, 2010; Taylor & Hooley, 2014). More recently, there has been a call for a two-wave study, looking at students both before and after undertaking WIL; alongside a control cohort without WIL experience (Clark & Zukas, 2016; Edwards, 2014; Guilbert, Bernaud, Gouvernet & Rossier, 2016; Hsieh & Hsu, 2013; Wilton, 2012). Their request specifically seeks to validate or challenge the dominant literature position, underpinned by snapshot-in-time studies and limited to more traditional research participants from Business, Engineering, Healthcare, Law, Mathematics, Medicine, and Modern Languages disciplines (Jackson & Chapman, 2012). This research seeks to inform the UK Government policy on graduate employability through addressing this call from fellow scholars of career theory.

A quantitative, Cross Faculty Work Placement Audit (CFWPA) was conducted at University A, the focus of later data collection for this research (Gowar & Donald, 2015). Gowar was employability project manager at student services and Donald is the author of this research. The objective of the CFWPA was to obtain a firm understanding and appreciation of current WIL provision across University A, in terms of volume and type. A further objective was to aid identification, in collaboration with the literature review, of a range of degree subjects for the focus of this research. Conceptualisation of the CFWPA occurred in early July 2014 via the '*Work Placement Forum*' (WPF) and distribution to each of the '*Faculty Administration Registrars*' (FARs) subsequently occurred in late July 2014. The following data fields were requested from the FARs: Faculty, Programme of Study, Placement Type (Semester in Industry, Year in Industry, Clinical Placement, School Placement, Field Trips, Undergraduate Ambassador Scheme), Year of Placement (1st, 2nd, 3rd, 4th), Length of Placement (Semester, Year, Other), Optional or Compulsory Placement, and Number of Students on Placement. Collation of results took place in December 2014, with publication internally at University A in January 2015. The CFWPA findings indicated that only six hundred and fifty-four (n=654) undergraduate students at University A undertook WIL as part of their degree course. However, students with WIL opportunities appeared to be more employable (Gowar, 2015; Gowar & Donald, 2015). Given the relatively low number of students at University A

participating in WIL, the qualitative stage of this research looks to explain the barriers as perceived by students to undertaking WIL. Furthermore, this research adopts the dominant position in the literature and in the CFWPA findings of market-value capital as positively related to employability as a factor of human capital.

Hypothesis 1e (H1e): Market-value capital is a factor of human capital.

2.3.6 The Skills Agenda

The Oxford Advanced Learners English Dictionary (2015) defines skills as *proficiency, facility, or dexterity acquired, or developed, through training or experience.* A number of scholars provide significant coverage of skills in relation to enhancing graduate employability, with the findings reflecting those of empirical studies listed later in tables three and five (Cranmer, 2006; Jackson, 2014; 2010; Jackson & Chapman, 2012; Knight & Yorke, 2004; 2002; Wilton, 2014; 2012; 2008; Yorke & Knight, 2007). However, much of this literature seeks to offer skills frameworks. Critics of the possession approach, including Holmes (2015; 2013) and Mason, Williams and Cranmer (2009), criticise the plethora of models and frameworks, as well as the wide and diverse list of skills, identified. However, the significant overlap of the most cited skills across the lists and models alleviates some of this concern. Furthermore, despite prominence in late 20th-century literature, a large volume of academic literature continues to publish skill-based findings; evidencing the continued significance of this area.

This research continues the trend of moving away from top-down models, instead opting for individual skills, applied to a specific setting and actor - in the case of this research, university undergraduate students. Holmes (2013) issues a caveat here, drawing on the comments of Ryle (1954) and Hirsh and Bevan (1988) that different terms or skills may mean different things to different people or in different cultures, either in the context of HE or subsequent graduate employment. However, several studies have since reported findings based on the perception of skills, whilst referring to this caveat (Jackson & Chapman, 2012; Smith, Wolstencroft & Southern, 1989; Wilton 2012). Furthermore, this research seeks to explain better the perspective of the undergraduate student, to understand the extent to which alignment exists between their understanding and views of skills compared to other actors. For example, according to an annual survey of five hundred employers in 2016, 69% were concerned with a shortage of skills in their employees, up from 55% in 2015; with nearly a third of employers

concerned about literacy and numeracy skills of new recruits (Confederation of British Industry, 2016).

Accountability for skill development of HE students is a hotly contested topic (Pfeffer & Fong, 2002; Wickramasinghe & Perera, 2010). One viewpoint is for the university to be responsible for skill development in their students (Benson, Morgan & Filippaios, 2014; Jones, McIntyre & Naylor, 2010). Another viewpoint suggests that universities alone cannot develop skills in their students without working in partnership with the individual student (Direito, Pereira & Duarte, 2012; Ferns & Lilly, 2016; Jackson, 2010; Merl, Csanyi, Petta, Lischka & Marz, 2000; Tymon, 2013; Villar & Albertin, 2010; Yorke & Knight, 2007). A further alternative stance places accountability for skill development with industry (Bridgstock, 2009) although the dominant position is a partnership between the university, the student and industry (D'Este & Patel, 2007; Edwards, 2014; Gault et al., 2010; Pfeffer & Fong, 2002; Poyago-Theotoky, Beath & Siegel, 2002; Taylor & Hooley, 2014; Wickramasinghe & Perera 2010). This partnership has two aims, to create a lifelong learning process (Wilton, 2014; 2012) and to better align pedagogy incongruence and employability (Ashleigh et al., 2012; Bastalich et al., 2014; Bennet et al., 2015; Maurer & Mawdsley, 2014; Ojiako et al., 2014).

Sections 2.3.7 and 2.3.8 now explore the skills agenda in further depth by providing empirical insights into educational based skill development and market-value based skill development via WIL. This helps to develop support for skills as a final factor of human capital.

2.3.7 Empirical Insights: Undergraduate and MBA Skill Development

The twenty-four articles included in this section provide empirical insights into skills, in relation to either undergraduate skills (Table 1) or MBA skills (Table 2). Articles are included if they were published since The Dearing Report (1997), as detailed in the policy reform of HE section of Chapter 1. A cut-off date of 1997 also aligns with the Generation Y student cohort. Generation Y individuals were born between approximately 1983 and 2000 (Markert, 2004, p.5) and subsequently started university between 2001 and 2015. A cut-off point of 1997 offers us clarity and safeguarding of relevance, whilst offering a sufficient time-span to identify key themes and findings. Articles are included if they were published before the commencement of data collection for this research in November 2015. Articles are listed in chronological order, starting with the most recent publication.

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Branine and Avramenko (2015)	France, Spain, Germany, UK, Undergraduates Employers	Undergraduates (485) Employers (252)	Quantitative: Self-Reporting Questionnaire	Employers expected graduates to have the following skills: willingness to learn, teamwork, motivation, communication skills (oral and written), leadership, IT, dependency or reliability and confidence or assertiveness. Selection process varied across countries but skills looked for remained constant. 78% of French students, 56% of Spanish, 33% of British, and 26% of German students thought the place of HE study would influence their chance of employment.
Burke (2015)	Ireland, Graduates	Graduates (27) *Graduated 2-10 years before participation*	Qualitative: Biographical Narrative Interview Method (2009-2012)	Extension of previous research applying Bourdieusian social theory to education pathways. Focus on the impact of social class on graduates' aspirations and expectations of the labour market. Clear classed level of both aspiration and expectation present within the research sample. The general working class level of aspiration and expectation – demonstrating quite low levels – and a general middle-class level of aspiration and expectation – displaying a contrastingly high level.

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Benson et al. (2014)	UK (England), Business	Undergraduates (168)	Quantitative: Self-Reporting Questionnaire	Online networking positively linked to building and re-enforcing social capital. Undergraduates need more information about the power of social networks and IT skills. More likely to currently use technology for the social activity. Draws on social capital theory.
Masui et al. (2014)	Belgium, Business	Undergraduates (168)	Quantitative: Study Time Sheet Student Records	Study time more important than gender to academic achievement. Prior subject knowledge increases academic achievement unless countered by a drop in study time. Reading and maths are independent abilities as predictors of achievement. Study time most significant predictor of exam success and grades. Intelligence test scores also positively predict success. The hypothesis presented by the researcher based on findings: women study more hours than men, possibly as more committed or less time spent on hobbies or part-time jobs than men. Theory cited - women also have more tolerance to exploring the unfamiliar.

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Morrison (2014)	UK (Wales), Undergraduates	Education Studies Undergraduates (21)	Qualitative: Focus Groups	Bernsteinian conceptual analysis: transferable utility of degree for employment and importance of class and gender. Driven by public sector cuts requiring education studies undergraduates to often work outside the education sector. Students perceived Business/Finance jobs as open to them in terms of class and gender but somewhat closed in terms of their degree providing them with the necessary skills. Findings reject a discourse regarding transferable graduate skills, and challenge the assumptions of graduate occupational mobility.
Akkermans, Schaufeli, Brenninkmeijer and Blonk (2013)	Netherlands, Young Employed People Aged 16-30	Young Employed People Aged 16-30 (305)	Quantitative: Self-Reporting Questionnaire	Career skills positively related to job resources and work engagement, but not to job demands and emotional exhaustion. Furthermore, career skills had a partially mediating effect on the relationship between job resources and work engagement, and job resources had a partially mediating effect on the relationship between career skills and work engagement. These findings suggest that career skills may act in a similar way to personal resources in fostering work engagement.

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Finch, Hamilton, Baldwin and Zehner (2013)	Canada, Undergraduate Employers	Undergraduate Employers (30) Undergraduate Employers (115)	Mixed Methods: Interview Self-Reporting Questionnaire	The most important focus of graduate employability concerns soft skills. Learning outcomes at university need to link to soft skills. University graduates should highlight their soft skills when applying for jobs. There is an increasing gap between the perceptions of the industry and the perception of universities in relation to graduate employability. Problem solving viewed as highly valuable and a strong predictor of job performance in graduate level jobs. Employers increasingly interested in hiring graduates who are versatile and can work across different areas of the business. This is in contrast to previous primary demand for job specific skills.
Tymon (2013)	UK (England), Business	Undergraduates (400)	Qualitative: Focus Groups	Skills most commonly cited by student sample in this study: communication, team working, IT, planning, and organising. Personal attributes of importance: flexibility, adaptability, hard work, commitment, and dedication. Theory: comparison of employability frameworks and skills. A need for students to be actively involved and responsible for their education, investing in their own social capital.

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Direito et al. (2012)	Portugal, Engineering	Undergraduates (337)	Quantitative: Self-Reporting Questionnaire	Individuals need to take ownership for their own soft skills development. Curriculum development must use appropriate pedagogic techniques to prepare undergraduates for employment. Undergraduates rated the importance of soft skills more highly than proficiency in the same skills (time management, creativity and innovation, oral communication, meeting deadlines, teamwork and pressure tolerance).
English, Manton, Sami and Dubey (2012)	USA, Business	Undergraduates (360) Postgraduates (153)	Quantitative: Self-Reporting Questionnaire	Good work ethic and integrity/honesty as most important qualities for employment; Second language and extracurricular activities as least important. Theory: employers seek communication skills, strong work ethic, teamwork and analytical skills in that order. Employers often hire graduates based on attitude, and then provide skills training.
Stanley and Marsden (2012)	Australia, Business	Undergraduates (481)	Mixed Methods: Self-Reporting Questionnaire	Problem-based learning. Focus on teamwork, questioning and solving real-life unstructured problems. The case study has limitations as often requires a state-all approach. Learn-by-doing gives better learning outcomes.

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Detlor, Julien, Willson, Serenko and Lavallee (2011)	Canada, Business	Undergraduates (52) Librarians (7) Administrators (4) Teaching Faculty (16) Undergraduates (1,087)	Mixed Methods: Interviews SAILS (Information Literacy Skills)	Students generally think their literacy skills are good, whereas librarians, administrators, and teaching faculty see room for improvement. Students often fail to see the potential for transferable literacy skills into the workplace. Theory: a conceptual framework. Information literacy instruction has three areas: learning environment, program components, and student learning outcomes (incorporating behavioural outcomes).
Whatley, Ireland and Bell (2011)	UK (England), Business	Undergraduates (130)	Quantitative: Self-Reporting Questionnaire	Course design evaluation and personal development planning. Employability skills developed at university: public speaking and communication skills, technical IT skills, innovation, self-reliance, teamwork, self-reflection, CV writing and delivery of content.

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Jones et al. (2010)	UK (England), Physiotherapy	Undergraduates (60) Undergraduates (12)	Mixed Methods: Self-Reporting Questionnaire Semi-Structured Interviews	Students felt unprepared for employment. Only 25% of students cited effective communication and only 10% cited flexible working as transferable skills. Self-management (prioritisation, time management, and documentation) not perceived as essential for employment. Universities need to reflect on curriculum development to produce graduates who meet employers' expectations.
Simola (2010)	Canada, Business	Undergraduates (101)	Qualitative: Self-Reporting Questionnaire (Open-Ended Questions)	Course design evaluation: ethical problem solving skills. The importance of business ethics education via the Coping-Modelling Problem Solving (CMPS) model. Theory: moral recognition, moral judgement, and moral action.
Klein and Fowles (2009)	USA, Nursing	Undergraduates (391)	Quantitative: Self-Reporting Questionnaire	Curricular revisions designed to improve leadership and technical skills proposed. Prior work experience positively influenced only one sub-scale: leadership. Active learning strategies positively affect skills development. A longitudinal study could be beneficial in assessing skills development (either quantitative or qualitative).

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Licqurish and Seibold (2008)	Australia, Midwifery	Undergraduates (8)	Qualitative: In-Depth Interviews	This paper focused on hands-on learning (therapeutic, interpersonal, and clinical). Hands-on practice, reflecting on practice, building confidence, gaining knowledge, working with midwives and constructing a sense of self, identified by wider literature and data analysis as important. Students gained most from working with a caring preceptor who enjoys teaching and answers questions fairly. Students benefited from supportive supervision, hands-on learning, and debriefing. Positive preceptor-student relationship integral part of skills development during undergraduate study.
Dixon and Donovan (2004)	UK (England), Midwifery	Undergraduates (41)	Qualitative: Focus Groups (Longitudinal Study)	Courses composed of 50% theory and 50% clinical experience. Key skills examined: communication, numeracy, information technology, and working with others. Key skills audit of course, then a longitudinal study over an academic year. Students showed resistance to complete skills documentation due to time pressures. The risk of students only seeing key skills in midwifery frame of reference, thus losing transferability of skills. The perception that skills already developed – potential gap between perceived and actual ability.

Table 1: Empirical Studies on Undergraduate Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Merl et al. (2000)	Austria, Medicine	Stakeholders (113) Stakeholders (17)	Mixed Methods: Self-Reporting Questionnaire Structured Interviews	Knowledge and understanding, communication skills, clinical skills, professional attitudes and skills relevant to the profession. A profile of student skills must balance the demanding objectives of curriculum planners and the actual challenges presented by many local parameters.
Leckey and McGuigan (1997)	Ireland, Business	Undergraduates (1,456) Academic Staff (357)	Quantitative: Self-Reporting Questionnaire	Teamwork, problem solving, and analytical scores rated highly as skills. Academic staff believes themselves to be effective in their role of fostering academic skills. Students perceive academic staff to be ineffective.

Table 2: Empirical Studies on MBA or Specialist Management MSc Skills 1997 to 2015

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Baruch et al. (2005)	USA, MBA Graduate Master's Graduate	MBA Graduates (318) Specialist Management MSc Graduates (97)	Quantitative: Self-Reporting Questionnaire Student Record Information	An MBA offers greater knowledge and scholastic capital and facilitates achievement of hierarchical progression in the workplace. Studying a specialist Management MSc increases social capital. Future research to examine the differences in skills and human capital gained across universities or degree programmes. Theory: Human Capital (Scholastic Capital, Social Capital, Cultural Capital, Inner-Value Capital, Market Value Capital), Skills, Career Success. Theory: Protean Career Measure
Baruch and Leeming (2001)	UK (England), MBA Graduate	MBA Graduates (344)	Quantitative: Self-Reporting Questionnaire	The benefit of an MBA chiefly seen in the satisfaction gained from the achievement of personal goals and skills. Effective reading, oral and written presentations, time management, personal computing, research skills, leadership and learning skills. Limitation: only full-time MBA students at a single university.

Table 2: Empirical Studies on MBA or Specialist Management MSc Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Baruch and Peiperl (2000)	UK (England), MBA Managers	Managers (129) Manager + MBA (57)	Quantitative: Self-Reporting Questionnaire	Skills are drawn from literature and focus group with MBA graduates. Results of survey indicate that an MBA enhances all tested skills (effective reading, oral presentations, written presentations, time management, interviewing, financial skills, managing change, stress management, career management, research skills, accountancy skills, working in teams, negotiating skills, self-confidence, decision making, interpersonal skills, abstract thinking, and managing others). Theory: Social Identity, Performance, Skills.
Tracy and Waldfogel (1997)	USA, MBA Graduate	Business School Deans Reporting on MBA Graduates (49)	Quantitative: Self-Reporting Questionnaire	A new methodology for evaluating MBA (based on Class of 1991 data). Student backgrounds (GMAT, undergraduate GPA, full-time work experience greater than a year), immediate Post-MBA job placement (salary adjusted by occupation, industry, and region), and characteristics of MBA programme. Salary depends more on the job than on graduate characteristics. Limitation: focus on starting salary not career progression salary, income crude measure of success.

The tables above manifest a wealth of existing knowledge whilst simultaneously identifying gaps in the literature. These gaps include: what skills are relevant for employability? What importance do undergraduate students place on skills for enhancing their graduate employability? Is there a gap between the students' perceptions and perceptions from other actors, of graduate employability? Do undergraduates feel their degree enhances these skills? Do undergraduates feel they should take ownership and responsibility for their own development and employability? In addition, what, if any, are the moderator impacts of degree subject, year of study and gender? (Section 2.6). This research aims to bridge these gaps as part of a theoretical and practical contribution.

Empirical study coverage of skills is another fruitful avenue of research. As detailed in Chapter 3.3.6, this research rejected adopting a single skills and attributes model or framework in favour of select individual skills, as identified from empirical insights in academic literature. In turn, this provided a mechanism for construction of an emergent identity of self-perceived employability. Table 3 provides a summary of the skills based on the findings evidenced in Tables 1 and 2. Seven skills emerged as regularly cited: oral communication (12), teamwork (10), IT skills (6), problem solving (5), time management (5), literacy skills (5), and numeracy skills (5). These findings align with a later literature review conducted by Osmani et al. (2015). Problems exist with securing good data on soft skills development (Gibb, 2014; Klein & Weiss, 2011; Laker & Powell, 2011). Whilst literacy and numeracy are two distinct strands within their own right, the literature continues to report them often as a single combined skill. This might be the result of participant responses assuming literacy and numeracy to form a single skill, or by data collection design portraying them as such. This research thus reports literacy and numeracy as two distinct skills, acknowledging the feasibility for an individual to perform more strongly, and perceive greater importance, of one stratum or another.

Table 3: Skills by Journal Article

Skill	Journal Article(s)
Analytical Skills	English et al. (2012); Leckey and McGuigan (1997); Whatley et al. (2011).
Ethics and Integrity	English et al. (2012); Simola (2010).

Table 3: Skills by Journal Article (Continued)

Skill	Journal Article(s)
IT Skills	Baruch and Leeming (2001); Benson et al. (2014); Branine and Avramenko (2015); Dixon and Donovan (2004); Tymon (2013); Whatley et al. (2011).
Leadership	Baruch and Leeming (2001); Branine and Avramenko (2015); Klein and Fowles (2009).
Literacy Skills	Baruch and Leeming (2001); Baruch and Peiperl (2000); Branine and Avramenko (2015); Detlor et al. (2011); Dixon and Donovan (2004).
Numeracy Skills	Baruch and Leeming (2001); Baruch and Peiperl (2000); Branine and Avramenko (2015); Detlor et al. (2011); Dixon and Donovan (2004).
Oral Communication	Baruch and Leeming (2001); Baruch and Peiperl (2000); Branine and Avramenko (2015); Direito et al. (2012); Dixon and Donovan (2004); English et al. (2012); Jones et al. (2010); Leckey and McGuigan (1997); Licqurish and Seibold (2008); Merl et al. (2000); Tymon (2013); Whatley et al. (2011).
Pressure Tolerance	Direito et al. (2012).
Problem Solving	Baruch and Peiperl (2000); Leckey and McGuigan (1997); Merl et al. (2000); Simola (2010); Stanley and Marsden (2012).
Teamwork	Baruch and Peiperl (2000); Branine and Avramenko (2015); Direito et al. (2012); Dixon and Donovan (2004); English et al. (2012); Jones et al. (2010); Leckey and McGuigan (1997); Stanley and Marsden (2012); Tymon (2013); Whatley et al. (2011).
Technical Skills	Klein and Fowles (2009); Licqurish and Seibold (2008); Merl et al. (2000).

Table 3: Skills by Journal Article (Continued)

Skill	Journal Article(s)
Time Management	Baruch and Leeming (2001); Baruch and Peiperl (2000); Direito et al. (2012); Jones et al. (2010); Tymon, (2013).
Work Ethic	Branine and Avramenko (2015); English et al. (2012); Masui et al. (2014).

2.3.8 Empirical Insights: Undergraduate WIL and Skills

The twenty-six articles included in this section provide empirical insights into WIL and skills of undergraduates (Table 4). Articles are included if they were published since The Dearing Report (1997), as detailed in the policy reform of HE section of Chapter 1. A cut-off date of 1997 also aligns with the Generation Y student cohort. Generation Y individuals were born between approximately 1983 and 2000 (Markert, 2004, p.5) and subsequently started university between 2001 and 2015. A cut-off point of 1997 offers us clarity and safeguarding of relevance, whilst offering a sufficient time-span to identify key themes and findings. Articles are included if they were published before the commencement of data collection for this research in November 2015. Papers by Clark and Zukas (2016), and Crawford and Wang (2016) were included as these papers were published online in 2015. Articles are listed in chronological order, starting with the most recent publication.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Clark and Zukas (2016)	UK (England) IT	Undergraduates (17) Case Study Sample (2)	Qualitative: Interviews (Longitudinal Study)	Bourdieu's (1977) concepts of 'habitus' and 'field'. The importance of non-cognitive aspects of informal learning through placements. Successful placements can be a catalyst for better grades on return to university. Placements must be suited to the interests of the individual, thus not necessarily embedded in, or aligned to, a degree course.
Crawford and Wang (2016)	UK (England) Accounting and Finance	Undergraduates (268)	Quantitative: Student Records	Placement increases final year grades, although evidence of self-selection. Recognition that a year-long placement delays graduation. Differences between the UK and international students. The gap between the UK and Chinese student academic performance increases each year of study. Sandwich students consistently outperform full-time students, with the gap increasing to a variance of 7.86% in final year.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Helyer and Corkill (2015)	UK (England), Undergraduate Lecturers	Lecturers (43) Lecturers (5)	Mixed Methods: Self-Reporting Questionnaire Semi-Structured Interviews	The findings detailed a multitude of ways in which learning can be accessed and facilitated away from the classroom. The growth of different types of experiential learning means that the university environment is being altered, even redefined.
Jackson (2015)	Australia, Undergraduates	Undergraduates (131) Cross-Faculty (3)	Quantitative: Self-Reporting Questionnaire	WIL helps to develop and refine skills learnt in the classroom (scaffolding and development). Cited importance of assessment activities involving planning, goal setting, and self-reflection on performance. Placement prepares work-ready graduates through on the job training, mentoring, coaching, and the creation of a skills portfolio. The challenges of placements include: a multi-cultural environment, presenting work, and receiving critical feedback.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Nagarajan and Edwards (2015)	Australia, IT	Graduates (24)	Qualitative: Self-Reporting Questionnaire (Open-Ended Questions)	Development of work-ready skills is a distributed responsibility. Each player must accept its responsibilities and cooperate with the others. Universities should take responsibility for preparing graduates in how to learn in uncertain situations. Employers need to take responsibility for training graduates when they commence work. Graduates should take personal responsibility for developing their skills. Professional associations should offer exposure to industry through scholarships, internships.
Passaretta and Triventi (2015)	Germany Italy Norway Spain Graduates	Graduates Spain (3905) Italy (2001) Germany (520) Norway (501)	Quantitative: Self-Reporting Questionnaire Data (CHEERS & REFLEX)	In Italy and Spain, work activities during tertiary education were associated with better labour market positions post-graduation: any type of work experience increases employability and reduces the risk of unemployment. Previous work experience, especially when coherent with the field of study, decreases the probability of skills mismatches in future occupations. The effect of student employment is smaller in Germany and negligible in Norway for most outcomes.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Edwards (2014)	UK (England), Undergraduates	Undergraduates (10) Undergraduates (4)	Mixed Methods: Self-Reporting Questionnaire (Longitudinal) Semi-Structured Interviews	Work placements have a positive impact on students' self-efficacy, especially in relation to their confidence in making applications and or attending interviews, and in articulating their skills and strengths. Need to encourage students to engage in critical self-reflection. Important for university/industry collaboration. More research required, given small sample size.
Evans et al. (2014)	UK (England), Business	Undergraduates (30)	Qualitative: Semi-Structured Interviews	The main motivator to work part-time is money (to avoid/reduce debt or to support a higher standard of living). Tensions exist between part-time work and full-time study (flexibility of employer required). The majority of students did not see a link between part-time work and their future career.
Gupta et al. (2014)	Australia, Medicine	Undergraduates (22)	Qualitative: Focus Groups Interviews	Students felt the penultimate year focused on passing 'artificial' examinations. The final year addressed building skills for work and career development, promoting a lifelong learning approach. Real life experience is highly valuable. Literature favours a programmatic approach to skill assessment, assessed through the whole course on multiple occasions, by multiple judges, and using multiple methods of assessment.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Huang, Turner and Chen (2014)	UK, (England), Chinese International Students	Undergraduates (449)	Quantitative: Self-Reporting Questionnaire	Internships identified as developing employability. Employability of non-domestic students given little attention by policy makers. Personal skills and attitudes perceived as the most important factors influencing the development of employability, with gender and age least influential.
Sheepway et al. (2014)	Australia, Speech Language Pathology	Undergraduates (56)	Quantitative: COMPASS Skill Assessment Tool	A one-year longitudinal study covering three placements. Skill measured via COMPASS skill assessment after each placement. Skill increased via placement opportunity regardless of placement type or context, indicating the transfer of learning between placement types. Caseload and intensity varied but skill development realised regardless.
Taylor and Hooley (2014)	UK, (England), Business	Undergraduates (61)	Mixed Methods: Leavers of Higher Education Survey	Structured work experience has clear positive effects on the ability of graduates to secure employment in 'graduate level' jobs within six months of graduation. Participation in a university career management skills module has a clear, positive effect on the ability of participants to secure employment.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Wilton (2014)	UK, (England) Undergraduates	Work Placement Managers (30)	Qualitative: Interviews	Multi-facets of employability that are the explicit or implicit focus of student recruitment. Highlights the often subjective, knowable, and shifting criteria used to select among similar candidates for employment. Call for an additional focus on the recruiter viewpoint of selection.
Hsieh and Hsu (2013)	Taiwan, Nursing	Undergraduates (618)	Quantitative: Self-Reporting Questionnaire (Longitudinal Study)	Significant differences in nursing skills, in general clinical skills, lifelong learning, clinical biomedical science, caring, critical thinking and reasoning between week one and week six survey. The nursing programme, prior schooling, type of nursing licence, interest in nursing, and extracurricular activity related to mean total skill. Demographics and learning factors linked to subscale competence scores.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Wilton (2012)	UK (England), Business	Undergraduates (1,060) Undergraduates (25)	Mixed Methods Quantitative: Self-Reporting Questionnaire (Longitudinal Study) Interviews	Work placements during degree enhance self-confidence and tacit understanding of workplace but less evidence to support the development of employability skills or immediate increased earning potential. Employers particularly value [in graduates] broad 'employability' skills, such as communication, motivation, independence, analysis, confidence, and problem solving.
Klein and Weiss (2011)	Germany	Graduates (2,594)	Quantitative: Self-Reporting Questionnaire	Exploration of views five years after graduation. Focus on mandatory internships in Germany. Variables: search duration until first significant job, employment history complexity, and wages five years after graduation. Results showed that compulsory internship programs neither have a positive effect on labour market outcomes in general, nor are they particularly beneficial for graduates from lower educational backgrounds.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Maelah, Aman, Mohamed and Ramli (2011)	Malaysia, Accounting	Undergraduates (137)	Quantitative: Self-Reporting Questionnaire	6-month placement in accountancy compulsory in Malaysian universities since 2005. Students develop time management, leadership, self-management, oral communication, and working in a group. Indicates the importance of industry placement.
Gault et al. (2010)	USA, Business	Undergraduate Intern Employers (185)	Quantitative: Self-Reporting Questionnaire	Significantly more employment opportunities for undergraduates with internship experience, including higher starting salaries. Employer perception of the value of internship programme linked to the performance of interns. Internships linked to success in post-graduation employment.
Paisey and Paisey (2010)	UK (Scotland), Business	University A Undergraduates (165) Placement Supervisors (26) University B Undergraduates (67)	Quantitative: Self-Reporting Questionnaire	Real life experience is seen as the most important factor of work experience by undergraduates and placement supervisors. Extract and analyse information, time management, computing ability and coping with stress (developed through work experience) versus working in a group and written and oral communication (developed in degree).

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Saunders and Zuzel (2010)	UK (England), Biomolecular Science	Undergraduates (29) Undergraduates (67)	Quantitative: Self-Reporting Questionnaire	A strong correlation between employer and student perceptions of skill importance. Enthusiasm, oral communication, and team working scored higher, subject knowledge scored lower. Skills rated less highly by employers than by the graduates themselves. Year 3 students consider themselves more employable than year 1.
Oakley and Oyebode (2008)	UK (England), Medicine	Undergraduates (504)	Quantitative: Self-Reporting Questionnaire (Longitudinal Study)	Questionnaire before and after placement. Students expected placements to be more beneficial than they actually found them to be – although benefit still cited. Doctors have often complained that undergraduate training provides little experience of what to expect from the working environment. Only 36.3% of students felt medical school prepared them well for work after graduation.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Wilton (2008)	UK (England), Business	Undergraduates (1,999)	Mixed Methods: Self-Reporting Questionnaire Interviews	Team projects, exercises and frequent presentations transferable to industry. Business degrees provide entrepreneurial, management and leadership skills more than the majority of other degree routes (work placement students further benefited). A mismatch between ranked skills developed at university and those required in industry.
Baguley (2006)	Australia, Veterinary Science	Undergraduates (52)	Quantitative: Self-Reporting Questionnaire	Placements viewed as useful in terms of receiving feedback, completing case logs, and developing communication and interpersonal skills. Placements viewed as valuable in preparing students for Veterinarian Practice. Industry indicates learning, communication skills, work ethic, teamwork, professionalism, and humanistic values as most important skills.
Reddy and Moores (2006)	UK (England), Psychology	Undergraduates (414) Undergraduate Supervisors (9) Focus Groups (2)	Mixed Methods: Student Records Focus Groups	Students who undertake a placement achieve higher final year results, have a better idea of their career direction, and receive higher salaries. The placement year improves communication, time management, confidence, responsibility writing skills and teamwork.

Table 4: Empirical Studies on Undergraduate WIL and Skills 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Crebert, Bates, Bell, Patrick and Cragnolini (2004)	Australia, Microelectronic Engineering, Criminology and Criminal Justice, and Leisure Studies	Undergraduates (164) Undergraduates (11) Undergraduate Employers (6)	Mixed Methods: Self-Reporting Questionnaire Focus Groups	Students recognised the contribution of the university to skills development, but greatly valued the experience of learning in the workplace during work placements. Teamwork cited as greatly developed by work placement experience.
Hodges and Burchell (2003)	New Zealand, Business	Undergraduate Employers (154)	Quantitative: Self-Reporting Questionnaire	Employers looking for: an ability and willingness to learn, energy and passion, teamwork and cooperation, interpersonal communication, customer service orientation, order, quality and accuracy, flexibility, problem solving, achievement orientation and initiative. High importance placed on previous work experience to make undergraduates 'work-ready'.

Table 4 above manifests a wealth of existing knowledge whilst simultaneously identifying gaps in the literature. These gaps include: Do undergraduate students perceive WIL as relevant to improving their graduate employability? Whom do students see as responsible for their employability and the production of work-ready graduates? Do students feel WIL complements classroom-based learning? To what extent do students' perceptions align with the views of other graduate employability stakeholders? Moreover, what, if any, are the moderator impacts of degree subject, year of study and gender? (Section 2.6). This research aims to bridge these gaps as part of a theoretical and practical contribution. Table 5 provides a summary of skills by journal article from Table 4.

Table 5: Skills by Journal Article (WIL)

Skill	Journal Article(s)
Analytical Skills	Hsieh and Hsu (2013).
Creativity	Hodges and Burchell (2003).
Ethics and Integrity	Baguley (2006); Maelah et al. (2011).
IT Skills	Paisey and Paisey (2010).
Leadership	Maelah et al. (2011); Wilton (2008).
Literacy Skills	Baguley (2006); Hodges and Burchell (2003); Reddy and Moores (2006).
Numeracy Skills	Baguley (2006); Hodges and Burchell (2003); Reddy and Moores (2006).
Oral Communication	Baguley (2006); Hodges and Burchell (2003); Maelah et al. (2011); Paisey and Paisey (2010); Reddy and Moores (2006); Saunders and Zuzel (2010); Wilton (2008).
Pressure Tolerance	Paisey and Paisey (2010).
Problem Solving	Baguley (2006); Hodges and Burchell (2003); Paisey and Paisey (2010).

Table 5: Skills by Journal Article (WIL) (Continued)

Skill	Journal Article(s)
Teamwork	Baguley (2006); Crebert et al. (2004); Hodges and Burchell (2003); Maelah et al. (2011); Paisey and Paisey (2010); Reddy and Moores (2006); Saunders and Zuzel (2010); Wilton (2008).
Technical Skills	Hsieh and Hsu (2013).
Time Management	Evans et al. (2014); Maelah et al. (2011); Paisey and Paisey (2010); Reddy and Moores (2006).
Work Ethic	Baguley (2006); Saunders and Zuzel (2010).

Previously, seven skills emerged as regularly cited in relation to undergraduate degree skills: oral communication, teamwork, IT skills, problem solving, time management, literacy skills, and numeracy skills. The findings in relation to work-related learning support six of these seven skills as most cited: teamwork (8), oral communication (7), problem solving (3), time management (4), literacy skills (3) and numeracy skills (3). The seventh skill, IT skills, cited once, is less prevalent than before. These findings would indicate that alignment does exist between skills developed during an undergraduate degree and skills developed during WIL. Freudenberg, Cameron and Brimble (2011), also support the skills identified from this literature review, but what is less evident is whether the skills derived here, primarily from Business, Engineering, Healthcare, Law, Mathematics, Medicine, and Modern Languages students, are applicable more generally across the wider undergraduate population.

The seven skills derived from the literature and addressed by this research are (i) oral communication, (ii) teamwork, (iii) IT, (iv) literacy, (v) numeracy, (vi) problem solving, and (vii) time management. However, a multitude of additional skills may influence employability and are likely to evolve through time. These skills lie outside the scope of this research.

Hypothesis 1f (H1f): Skills are a factor of human capital.

2.3.9 Summary of Human Capital

This research proposes human capital as constructed of social capital, cultural capital, psychological capital, scholastic capital and market-value capital (drawing on work by Baruch et al., 2005; Becker, 1964; Useem & Karabell, 1986). Social capital addresses whom you know, cultural capital and psychological capital address who you are, scholastic capital addresses what you know and market-value capital addresses what you have (Kaur & Sandhu, 2016; Luthans et al., 2004). These groupings expand on the three pillars of the intelligent career: knowing how, knowing whom, and knowing why; previously offered by Arthur, Claman and DeFillippi (1995).

Human capital also incorporates skills (Jackson & Wilton, 2017; Knight & Yorke, 2004; 2002). This continues the significant focus on seeking to better align course pedagogy and employability incongruence, which has often proved a source of controversy and friction across actors (Ojiako et al., 2014; Rufai et al., 2015; Sin & Amaral, 2017). Skills are included in the model to capture the importance of skill development; however, the model seeks to promote a more holistic view of graduate factors for employability (Clarke, 2017; Gubler, 2011). This is in response to critics of the possession approach, including Holmes (2017; 2015; 2013) and Mason, Williams and Cranmer (2009), who criticise the plethora of models and frameworks as well as the wider and diverse list of skills identified.

Based on the factors identified in the literature review, this research starts from the position that developing human capital is positively associated with graduate employability.

Hypothesis 2 (H2): Developing human capital is positively associated with graduate employability.

Next, focus moves to the graduate career orientation, including traditional and contemporary careers, career ecosystems, and exploration of boundaryless and protean career constructs.

2.4 The Graduate Career Orientation

The historic career practice of a stable 'one-size-fits-all', 'job-for-life' has been replaced with a dynamic and volatile labour market (Baruch, 2004; Peiperl & Baruch, 1997), with an average USA employee changing employment every four years and seven months (Bureau of Labor Statistics, 2014). In the UK this figure is six years, however younger

employees move considerably more often, approximately every four years (Job Satisfaction Survey, 2014). Figures published by the Association of Graduate Recruiters (2017) indicate that 16% of graduates leave an employer within the first two years, up from 9% in 2016 and that 46% of the graduate workforce leaves an employer within five years, up from 39% in 2016. This seismic shift in recent decades, more deeply entrenched by the fall-out of the 2007-2008 global financial crisis, places ever greater emphasis on the individual to take responsibility for his or her own career path (Farber, 2010).

This section addresses the traditional career and contemporary career, including boundaryless career (Arthur & Rousseau, 1996) and protean career (Hall, 2004), followed by a summary of relevant empirical studies. The conclusion details the student perspective with regard to graduate career orientation. This is of significant importance given 33% of UK workers feel their career progression has failed to meet their expectations (CIPD, 2016), and the same report noted people from disadvantaged backgrounds felt held back because they cannot afford to invest in lifelong learning opportunities. A further report of 500 employees noted that employers view the attitude to work of applicants as more important than formal qualifications (Confederation of British Industry, 2016). All of this means that improving employability becomes of significant relevance to recent graduates as they transition from HE into the labour market (Fugate et al., 2004; McArdle et al., 2007), and their view of careers is different compared to earlier generations, although organisations may have different perceptions (Baruch, 2001). For example, Kovalenko and Mortelmans (2016) found that employees over fifty perceived age to be a structural factor of employability, indicating that views might change over time. At the national level, governments will have wider policy focused on national competitiveness. Additionally, the mobility of workers, both between organisations and physical or virtual locations is increasingly seen as desirable by industry, driving the need for a flexible and adaptive workforce (Gubler, 2011; Sullivan & Arthur, 2006). The relevance of this research comes from helping to enhance employability and national competitiveness by explaining the students' perceptions of graduate employability.

2.4.1 The Traditional Career
Hughes (1937, cited in Baruch, 2006, p.126) defined a career as

The moving perspective in which persons orient themselves in reference to the social order, and of the typical sequences and concatenations of office.

The word career originates from the Latin word 'carrus' meaning 'wheeled vehicle'. It emerged in English in the mid-16th Century from the French word 'carrière' and the Italian word 'carriera' and originally referred to a 'road' or 'racecourse'. The development of meaning over time led a career to represent the road or course taken by an individual during their working life (Oxford Advanced Learners English Dictionary, 2015). Arthur, Hall and Lawrence (1989, p.8) capture this in their definition of a career as *the evolving sequence of a person's work experiences over time.*

Organisations historically adopted a predictable, stable and predefined structure, offering an authority based hierarchical career system (Ashton & Field, 1976; Roberts, 1968; Rosenbaum, 1979; Super, 1957; Wilensky, 1961). This provided the employee with a stable career environment, as detailed in Miller and Form's (1951) Life Development Model. In accordance, the employee would follow a linear pathway of upward mobility (Driver, 1982), through hierarchical advancement and vertical career path progression, or until reaching a plateau (Levinson, Darrow, Klein, Levinson & McKee, 1978; Whyte, 1956). This progression would often occur at a single organisation, until the employee reached plateau or retirement (Wilensky, 1961; 1964). In exchange for loyalty, the organisation offered job security, often through the provision of a job for life, as part of an unwritten and unspoken agreement (Baruch 2001; Gasteiger, 2007). This notion was referred to by Levinson, Price, Munden, Mandl and Solley (1962) as a psychological contract, and as detailed by Baruch (2001), the term was subsequently developed by Kotter (1973), Schein (1980) and Nicholson and Johns (1985). Furthermore, Rousseau (1995, p.9), described a psychological contract as

Individual beliefs, shaped by the organization, regarding terms of an exchange agreement between individuals and their organizations.

Yet, this definition refers only to the employee side, whereas 'contract' means that there are two sides. Baruch and Hind (1999, p.299) define the psychological contract as

The unspoken promise, not present in the small print of the employment contract, of what the employer gives, and what employees give in return.

The general view since the end of the 20th Century is that a major shift has taken place about the nature of the psychological contract (Conway & Briner, 2005; Dries, Pepermans & Carlier, 2008; Herriot & Pemberton, 1995; Rousseau, 1995): stability, loyalty, and mutual commitment replaced with dynamism, breach of the old contract, and competence based relationships (Baruch, 2015; 2004).

Historically, lifetime employment and steady career advancement meant that organisations invested in developing a specific set of job-related skills in each of their employees (Gubler, 2011). Developing these skills helped an employee to cement their position at the organisation and achieve job security (Gasteiger, 2007). The creation of, and adherence to, the notion of career anchors facilitated the self-development of the employee, drawing on competence, motives, and values (Schein, 1985; 1978; 1975). However, the development of these tailored and specific skills meant that moving to a second career or from one organisation to another was rare (Arthur et al., 1989; Levinson, 1983). Furthermore, cars and aeroplanes were not as readily accessible or indeed affordable as they are today, with travel viewed as a luxury, undertaken by the more affluent in society. As such, people sought employment in specific, localised areas, as close as possible to their homes and families (Andresen, Al Ariss & Walther, 2012). However, the early 1990s saw globalisation, technological advancement and the evolution of societal perspectives (Gubler, 2011; Sullivan & Arthur, 2006). The contemporary career emerged as a challenger to the traditional career.

2.4.2 The Contemporary Career

The rise of contemporary career focused studies over the last twenty years is evident in career theory literature. Lee, Felps and Baruch (2014) adopted a bibliometric mapping technique to carry out a systematic review of management literature published between 1990 and 2012. Articles were included if they contained the word career in their title or abstract, providing a return of n=3,141. The systematic nature of this review sought to remove the authors' subjective view of the field, in contrast to previous reviews cited by Lee et al. and Baruch, Szucs and Gunz (2015) including: Arthur et al. (1989), Sullivan (1999), Gunz and Peiperl (2007), Baruch (2009), Baruch and Bozionelos (2011), and Inkson and Savickas (2013). The authors do however concede the subjective nature of naming and interpreting the clusters as a limitation (Lee et al., 2014, p.349). Findings relevant to this study at an individual level include a focus on degree choice and academic achievement, international careers, career choice, life opportunities, career self-management, and career adaption (Lee et al., 2014, p.348). These clusters addressing pre-work career and career development indicate the rise of contemporary career focused studies in career theory publications. Baruch et al. further support these findings by identifying career success and employability as key terms in the field alongside a multitude of terminology. Gubler, Arnold, and Coombs (2014) who identify more than a dozen contemporary career concepts put forward within the last twenty years provide

further support. However, they note that of these concepts, protean (Hall, 1976), and boundaryless (Arthur & Rousseau, 1996) are the most widely adopted.

Before addressing the boundaryless and protean career concepts, it is useful to clarify the differences between the traditional career and the contemporary career. Most crucially, the transition to work has become increasingly unpredictable (Brooks, 2009; Furlong & Cartmel, 2007) and individualised (Evans, 2007; Heinz, 2009); driven by changes within society, education and the labour market (Tomlinson, 2013). Table 6, from Gubler (2011, p.51) outlines the key differences between a traditional career and a contemporary career. A contemporary career reflects increased choice compared to previous generations. An individual can either take ownership and forge a boundaryless and protean career or relinquish ownership and align more towards a traditional career (McKeown, 2014).

	Assumptions of Traditional Career Concepts	**Assumptions of Contemporary Career Concepts**
Career environment	Stable, predictable, high levels of security	Unstable, unpredictable, low levels of security
Employment deal	Job security for loyalty (relational psychological contract; 'old deal')	Employability for performance and flexibility (transactional psychological contract; 'new deal')
Career trajectory	Vertical, mainly in one or two firms	Multi-directional, mostly in multiple firms
Skills required	Firm-specific	Transferable
Responsible for career management	Organization	Individual
Success criteria	Objective career success	Subjective career success
Training	Long-term; formal programmes	Short-term; on-the-job training
Individual is committed to…	Organization	Profession/Self

Table 6: Key Assumptions of Traditional Career Concepts (Gubler, 2011, p.51)

(Adapted from Gasteiger, 2007).

The advancement of technology has helped fuel globalisation of the workplace (Andresen et al., 2012; Baruch et al., 2015; Gajendran & Harrison, 2007). People can travel further through the availability of road and air travel and organisations can relocate, either nationally or internationally, to places with cheaper overhead costs or corporate tax incentives (Andresen et al., 2012). This evolution of organisations means that individuals often have to relocate or find an alternative employer; the challenge being compounded if the employee has a partner or family to consider (Cook, 2009; Eby, Casper, Lockwood, Bordeaux & Brinley, 2005). Of course, organisations are not alone in gaining from technological advancement. The internet has enabled increasing numbers of people to set up their own businesses, often from their own homes, drawing together both the supply-side and demand-side of the business chain (Carraher, 2005).

Economic changes underpin these technological advancements, most recently the 2007-2008 global financial crisis. As employers made record numbers of redundancies in an effort to become lean or avoid bankruptcy, many individuals found themselves without job or income (Baruch & Bozionelos, 2011). Those still employed saw their wages stagnate or decline in subsequent years, compounded by less job security and the expectation of long hours and increased job responsibility. With a contemporary career cited as offering greater work-life balance, as individuals take accountability for their own careers, aligning work activities with their own interests (Burke, Page & Cooper, 2015; Direnzo, Greenhaus & Weer, 2015), these individuals increasingly look to change career path or become self-employed.

Societal changes are likely to influence perceived career orientation; including increased lifespan, a rise in dual-career couples, movement away from the male-as-breadwinner family structure, increased labour supply, and provision of care needs for elderly relatives and children (Sullivan & Baruch, 2009; Sullivan & Crocitto, 2007). Specifically, as people live longer, they may work longer, increasing the supply of labour to the market. Additionally, there may be an increased demand for people to take a temporary leave from the labour market to care for elderly relatives or children. Whilst the provision of care is not a new phenomenon, the quantity of care required and the increasing contribution of men in the provision of this care is new. This is not to say that both males and females now provide care provision equally; in fact, female representation remains significantly greater. However, couples are increasingly opting for the male to take on care responsibilities, especially in couples where the female earns a higher salary (Sullivan & Crocitto, 2007).

Another way in which individuals are taking temporary time away from the workplace is in the pursuit of education, skill development or voluntary work, with the purpose of enhancing their CV; subsequently re-entering the workplace (Belkin, 2008; Van der Heijden, Gorgievski & Lange, 2016). This re-employability refers to either the same sector at a higher level of responsibility or, more commonly, a completely different career sector. Although Belkin makes this point in reference to individuals already in the labour market, a further application exists through increased participation in UK HE. Students are temporarily delaying their entry into the workplace with the purpose of pursuing education, skill development and WIL or voluntary work to enable subsequent entry into the labour market at an elevated position or alternative sector than would otherwise have been possible (Côté & Bynner, 2008). In turn, this fuels increased participation in HE and evidences a multi-faceted motivation for pursuing HE, expanding on purely economic motivations (Tomlinson, 2014). Whilst much of the contemporary career research addresses the role of orientation of the individual in the workplace (Baruch, 2004; Hall & Moss, 1998; Reis & Baruch, 2013), and its predictors of success (Arnold & Cohen, 2008; Arthur, Khapova & Wilderom, 2005), this research addresses the influences on career orientation with the purpose of understanding the student perspective on their future career.

Despite the focus on contemporary careers and the emergence of boundaryless and protean career theory, some scholars including Baruch (2014; 2006), Dries and Verbruggen (2012) and Murphy, Lambrechts and Huybrechts (2016) are keen to point out that the traditional career is not dead. In fact, other scholars such as Inkson, Gunz, Ganesh, and Roper (2012) go further, calling for a return to bounded, traditional careers, and the abandonment of boundaryless and protean career terminology due to an overreliance on metaphors and a lack of empirical support. Guest and Rodrigues (2014), and Rodrigues, Guest and Budjanovcanin (2016) take a different tack, calling on career theory researchers to look beyond the duality of traditional and contemporary careers. This study addresses boundaryless and protean career perceptions of undergraduates as part of a model of graduate employability factors, with the purpose of identifying which literature position holds true. Do undergraduates align to boundaryless and protean careers constructs? Do they reject these constructs in favour of traditional careers? Alternatively, do they position themselves between the two dichotomies?

2.4.3 Boundaryless Career

The conceptualisation of boundaryless career theory is attributed to DeFillippi and Arthur (1994). The construct was subsequently popularised by Arthur and Rousseau (1996) in their book *The Boundaryless Career*, with six meanings of boundaryless careers provided (Arthur & Rousseau, 1996, p.6):

(1) Like the stereotypical Silicon Valley career, that move across the boundaries of separate employers;

(2) Like those of academics or carpenters, that draw validation – and marketability- from outside the present employer;

(3) Like those of real-estate agents, that are sustained by external networks or information;

(4) That break traditional organizational assumptions about hierarchy and career advancement;

(5) That involve an individual rejecting existing career opportunities for personal or family reasons; and

(6) That are based on the interpretation of the career actor, who may perceive a boundaryless future regardless of structural constraints.

Sullivan and Arthur (2006) develop the conceptualisation of boundaryless career theory by focusing on two kinds of mobility across boundaries; physical mobility of an individual from one job, occupation, or country to another; and psychological mobility, the extent to which an individual perceives that they are able to move between these boundaries. Subsequently, a call exists to examine both types of mobility, rather than a predominant focus on physical mobility (Briscoe, Hall & Frautschy DeMuth, 2006) due to its more accessible nature for empirical study. Baruch and Reis (2016) extend the physical and psychological mobility aspects of a boundaryless career by introducing geographical and career mobility. They offer boundaryless local, boundaryless global, traditional local, and traditional global. Their key message is that global movement is not always boundaryless, and local movement is not always traditional. Mishra and Budhwar (2013) had previously highlighted the role of technology in providing virtual boundaryless global and national careers. This research will thus explore physical, psychological, geographical aspects, and career mobility as part of a boundaryless career orientation.

Baruch (1995) positioned cultural differences as a barrier to global movement. For example, based on findings from 123 semi-structured interviews of expatriates in the United Arab Emirates, Baruch and Forstenlecher (2017) found remuneration and career opportunities to be the two most important factors encouraging Westerners to relocate, but cultural differences to be the main barrier. In addition, Baruch and Reis (2014) state that women may face stronger barriers in comparison to men, giving the example of cultural barriers in The Middle East. This research will look at the moderator effect of gender on boundaryless career orientation in response to calls by Baruch and Reis, and Tomlinson (2013). Furthermore, Scurry, Blenkinsopp and Hay (2013) talk about the process of an individual negotiating with the new local culture. This links to the idea of an emergent identity that forms part of the research framework for this study (Chapter 2.2), whereby identity evolves over time based on life experiences.

Baruch and Reis (2016), and Cotton and Shen (2013) suggest that the reasons for national mobility are less clear than for international mobility. Baruch, Dickmann, Altman and Bournois (2013, p.2369) offer seven dimensions for international mobility

(i) time of exposure; (ii) intensity of international contact through work; (iii) breadth of interaction; (iv) legal context; (v) international work instigator; (vi) extent of cultural gap between an individual's country-of-origin and the context in which the international work takes place; and (vii) key cultural-related requirements of one's job/role.

Baruch and Reis offer personal development, work-life balance, and higher remuneration as possible reasons for national movement; however, they call for further studies to look at why people move nationally. The interview phase of this research will address this call by explaining the students' perceptions of push and pull factors for local, national, and international mobility.

Not all career theory scholars have embraced boundaryless career theory. For example, Inkson (2002) cited the reliance on metaphors as a potential weakness and Pringle and Mallon (2003) called for greater clarity in the literature. Additionally, Inkson (2006) and Inkson et al. (2012) continue to question the appropriateness of boundaryless career theory, citing neoliberal ideology as the driver for the pursuit of academic research. Rodrigues, Guest, Oliveira, and Alfes (2015) note that a boundaryless career attitude may not actually trigger a career move, or may not translate into a positive outcome if the organisation perceives the employee to be less committed than their colleagues. Baruch (2006) acknowledges that the traditional career is not

dead by claiming that reality often positions the individual somewhere towards the centre-ground, rather than at one end or the other of the bounded versus boundaryless dichotomy. Baruch and Reis (2016) develop this position further by stating there is no such thing as a purely boundaryless career, the terminology of boundaryless actually means less bounded in comparison to a bounded career. Baruch (2015, p.364) has proposed a framework alongside human capital theory, conceptualising labour markets as '*ecosystems*', specifically in relation to the understanding and management of careers.

This research proposes that undergraduates will perceive that holding a boundaryless career orientation is positively associated with graduate employability. That is to say, students' perceptions will reflect a movement away from a traditional bounded career towards a boundaryless career, reflecting the central ground between bounded and boundaryless dichotomies (Baruch, 2015; 2014; 2006; Baruch & Reis, 2016). The research framework (Chapter 2.2) of viewing careers and labour markets as ecosystems provides as an overarching theoretical lens to reconcile the apparent disconnect between the co-existence of traditional and boundaryless careers (Baruch, 2015). Section 2.4.4 discusses measures of a boundaryless career since these incorporate aspects of both boundaryless and protean career orientations.

Hypothesis 3 (H3): Holding a boundaryless career orientation is positively associated with graduate employability.

2.4.4 Protean Career

The Greek God Proteus could change shape at will, thus the protean careerist can change him or herself according to their own need. Hall (2004; 1996; 1976) offered the protean career, drawing on the motive of an individual to follow a particular career path, characterised by values-driven and self-directed career moves. Hall (1996) and Murphy et al. (2016, pp.10-11) highlight the *repackaging of an individual's knowledge, skills, and abilities in line with the changing work environment to remain employable*. A protean career draws on internal values such as a desire to learn (Sullivan & Baruch, 2009) and is associated with adaptability, proactivity and coping with uncertainty (Porter, Woo & Tak, 2016; Rodrigues et al., 2016). Scholars including Gubler et al. (2014) are keen to distinguish between theory, orientation, and path when discussing a protean career. Gubler et al. (2014) cite the work of Hall (2004), and Direnzo and Greenhaus (2011) to propose that a protean career orientation is whereby an individual firstly defines their own concept of a successful career and subsequently looks to

achieve this success through their actions. A need exists for individuals to react to changing circumstances within their own lives, termed kaleidoscope career by Sullivan (1999), and further developed by Mainiero and Sullivan (2006; 2005). Furthermore, as the changing nature of careers evolves (Feldman, 1999) a need arises for the individual to adapt to this changing environment (Hall, 2004). Thus, a protean career path defines the career direction of an individual, which in turn incorporates aspects of the protean career construct.

As part of an extensive literature review, Gubler et al. (2014) point out that the majority of studies have addressed protean career orientation. They go on to state that there has been some focus on a protean career path, but little focus on protean career theory, beyond its use as an introduction to studies on protean career orientation. Critics of the protean career concept include the scholar Inkson, who advocates the abandonment of the concept (Inkson et al., 2012). However, as stated by Gubler et al., drawing on work by Inkson (2006), and Arnold and Cohen (2008) even those critical of protean career theory acknowledge both the conceptual and practical importance of Hall's (1976) work. This research proposes protean career orientation to be positively associated with graduate employability. As a means to strengthen protean career literature, Gubler et al. call for scholars to address the lack of existing empirical analysis. This study responds to their call, seeking to draw together quantitative and qualitative findings with the purpose of advancing career theory understanding, as called for by Lee et al. (2014) and Baruch et al. (2015).

Hypothesis 4 (H4): Holding a protean career orientation is positively associated with graduate employability.

In order to do this, existing measures of boundaryless and protean careers must be explored. Briscoe and Hall (2006) developed a measure of boundaryless and protean career orientation, subsequently validated by Briscoe et al. (2006). This drew on two scales of boundaryless career attitudes: boundaryless mindset and organisational mobility preference and two scales of protean career attitudes: self-directed career management and values-driven predispositions, utilising a five point Likert Scale. The process of validation involved three studies (n=1,352); initial scale construction (n=298), subsequent refinement (n=561) and finally exploration of the convergent validity of the refined scales (n=493). These samples were composed of undergraduate students, part-time MBA students, and middle management and upper-level executives from a Fortune 100 manufacturing company, all from the USA.

In parallel, Baruch (2014) developed a unidimensional measure of boundaryless and protean career orientation. Consisting of seven items, this measure was likewise validated in the USA, but also in Europe, Asia and Oceania via nine samples (n=2,287). This study sought to provide a reliable and concise measure for use by academics and industry practitioners (Baruch, 2014). The unidimensional measure adopted a seven-point Likert Scale, rather than the five-point Likert Scale of the two-dimensional measure. The seven-point scale reduces participant bias but is reliant on participants to self-report accurately to this added level of detail (Baruch, 2014). This research further validates aspects of these measures as detailed in the Methodology (Chapter 3), which answers the call from career scholars including Baruch, and Herrmann, Hirschi and Baruch (2015), for empirical studies using these measures.

Chan et al. (2012) and subsequently Chan et al. (2015) have used Briscoe and Hall's (2006) measure as a basis to propose a framework targeted at undergraduate students in Singapore. However, this framework is limited to exploring motivations towards entrepreneurial or specialised professional roles, incorporating personality traits and boundaryless career orientation. As such, their direction of focus lies outside of this research, despite targeting a student population, albeit from a different geographical location; but an awareness of their progression in the field of career theory is useful.

2.4.5 Empirical Insights: Perceptions of Career Orientation

The eighteen articles included in this section provide empirical insights into career orientation (Table 7). Articles are included if they were published since The Dearing Report (1997), as detailed in the policy reform of HE section of Chapter 1. A cut-off date of 1997 also aligns with the Generation Y student cohort. Generation Y individuals were born between approximately 1983 and 2000 (Markert, 2004, p.5) and subsequently started university between 2001 and 2015. A cut-off point of 1997 offers us clarity and safeguarding of relevance, whilst offering a sufficient time-span to identify key themes and findings. Articles are included if they were published before the commencement of data collection for this research in November 2015. Articles are listed in chronological order, starting with the most recent publication.

Table 7: Career Orientation 1997 to Present Date

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Baruch et al. (2015)	Literature, Career Scholars	Career Scholars (12) Literature Review	Mixed Methods: Literature Review Performance Analysis	Career scholarship is a descriptive field dominated by metaphors. A narrow focus on career agents. Basic terms include career success and employability. A plethora of terminology, with new concepts introduced having a long shelf life. Novel mixed methods approach to help unify career studies. Includes quantitative data whereas previously most literature reviews focused on theoretical reasoning or qualitative data.
Direnzo et al. (2015)	USA, Employees	College Educated Employees (367)	Quantitative: Self-Reporting Questionnaire (Longitudinal)	Protean career orientation positively related to work-life balance. Associated with extensive career planning activities related to human capital, social capital and psychological capital. In turn, social capital and psychological capital associated with high employability, related to greater work-life balance for individuals who take a whole-life perspective on their careers.
Uy et al. (2015)	Singapore, Undergraduates	Undergraduates (750)	Quantitative: Self-Reporting Questionnaire	Findings showed that entrepreneurial alertness to opportunities partially mediates the relation of proactive personality to boundaryless career mindset and career adaptability. However, entrepreneurial alertness was not linked to self-directed or protean career attitudes.

Table 7: Career Orientation 1997 to Present Date (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Forstenlechner, Selim, Baruch and Madi (2014)	United Arab Emirates, Undergraduates	Undergraduates Labour Market (2,267)	Quantitative: Self-Reporting Questionnaire	Career exploration positively affected willingness to work in the private sector. Expectations towards state employment negatively affected it. Willingness to work in the private sector not impacted by self-perceived employability. Expectations towards state employment as well as self-perceived employability positively affected by both career exploration and self-efficacy. Self-efficacy highly impacted by career exploration.
Waters, Briscoe, Hall and Wang (2014)	Australia, Unemployed Adults	Unemployed (186)	Quantitative: Self-Reporting Questionnaire (Longitudinal Study)	Protean career orientation was significantly associated with increased self-esteem, job search activity, and re-employment. The effect of self-esteem on job search activity, mediated by protean career orientation. In addition, a significant association between protean career orientation and job improvement and career growth once re-employed. Mediated by job improvement. Protean career orientation declined once participants gained employment.

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Briscoe, Henagan, Burton and Murphy (2012)	USA, Working Adults	Working Adults (362)	Quantitative: Self-Reporting Questionnaire	Structural equation modelling demonstrated boundaryless mindset and protean career attitudes differently correlated with external support seeking, active coping, and identity awareness, which in turn differently correlated with individual work outcomes of job search behaviour, performance, career success, and psychological well-being.
Enache, Gonzalez, Castillo and Lordan (2012)	Spain	Postgraduates (167)	Quantitative: Self-Reporting Questionnaire	The study provides a translation of Briscoe, Hall, and DeMuth's (2006) Protean and Boundaryless Career Attitude Scale. Findings in Spain align with previous findings when using this scale. However, values-driven attitude scale measures two latent traits: strong core beliefs regarding one's definition of career success and individual emphasis on core personal values through work (reliance on personal values when individual and organisational values do not match).
Grimland, Vigoda-Gadot and Baruch (2012)	Israel, Managers	Public and Private Sector Managers (545)	Quantitative: Self-Reporting Questionnaire	A new model of career success. A significant effect of positive and negative social capital, the perception of organisational politics, professional vitality, and protean career attitude on internal and external career factors.

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Gubler (2011)	Europe, ICT	ICT Employees (1,708), (167), and (25)	Mixed Methods: Self-Reporting Questionnaire Semi-Structured Interviews	Thesis findings suggest that protean and boundaryless career concepts are helpful tools to examine and understand individual careers. Career success, career anchors, and career management tools help to reveal additional aspects of individual careers. One must look at the complex interplay of various levels of analysis to understand more holistically individuals and their careers.
Cocchiara, Kwesiga, Bell and Baruch (2010)	USA, Business	MBA or Specialist Management MSc Alumni (318)	Quantitative: Self-Reporting Questionnaire Student Records	Women reported less salary gain, but higher hierarchical levels and job satisfaction. Social capital and perceived discrimination indirectly affected reported career success on hierarchical level salary gain. Women earned higher grades than men on MBA programmes but found their qualification less effective at salary gain than men.

Table 7: Career Orientation 1997 to Present Date (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Briscoe and Finkelstein (2009)	USA, MBA	Part-Time MBA (212)	Quantitative: Self-Reporting Questionnaire	The relationship between boundaryless career attitudes, protean career attitudes, and organisational commitment and development opportunities explored. Only organisational mobility preference correlated (negatively) with each type of commitment. Employers should therefore not assume that protean and boundaryless orientated employees are less committed to the organisation. Offering development opportunities did not make employees with protean and boundaryless attitudes more committed to their organisation.
De Vos and Soens (2008)	Belgium, Employees	Employees (289)	Quantitative: Self-Reporting Questionnaire	Relationship model between protean career attitudes, career self-management behaviours, career insight, and career success outcomes. Results support the idea that a protean career attitude is a significant antecedent of career success and that this relationship is fully mediated by the development of career insight.

Table 7: Career Orientation 1997 to Present Date (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Baruch and Quick (2007)	USA, Retired USA Navy Admirals	Retired USA Navy Admirals (334)	Quantitative: Self-Reporting Questionnaire	The survey addressed retired Navy admirals who had needed to start a second career. Results showed a smooth transition into civilian careers. Their traditional career was associated primarily with external success, the contemporary protean career with internal success. Significant support for a career transition model. The role of the organisation proved instrumental for a successful transition.
Briscoe et al. (2006)	USA, Business	Study One (298) Undergraduate/MBA/ Managers Study Two (561) Undergraduate/MBA Study Three (493) Undergraduate/MBA	Quantitative: Self-Reporting Questionnaire	Validation of new scales for measuring protean career and boundaryless career orientation. The scales related to protean career attitudes measure self-directed career management and values-driven predispositions. The scales related to boundaryless career attitudes measure boundaryless mindset and organisational mobility preference. Validation scales measure distinct yet related constructs. Suggestions of attitudes, not personality traits, accounting for variance in results.

Table 7: Career Orientation 1997 to Present Date (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Hall and Chandler (2005)	USA, Employee	Employee (1)	Qualitative: Case Study	The paper expands understanding of the relationship between subjective and objective careers. The paper states that when a person feels a sense of calling in their career (sense of purpose to carry out this work) the subjective career takes on particular salience. Model of psychological success proposed based on a career as a calling.
Eby, Butts and Lockwood (2003)	USA, Alumni	Alumni (458)	Quantitative: Self-Reporting Questionnaire	Three criteria of career success: perceived career satisfaction, perceived internal marketability and perceived external marketability. Results found support for the importance of 'knowing why', 'knowing whom; and 'knowing how' as suggested by previous theoretical work on boundaryless career theory.
Baruch and Leeming (2001)	England (UK), MBA Graduates	MBA Graduates (344)	Quantitative: Self-Reporting Questionnaire	The clear value of an MBA. Increased managerial skills, self-confidence and several aspects of career development. MBA produces better managers and provides graduates with stronger managerial skills. Little evidence of significant salary increases except in a few cases. Existing literature provides evidence of salary benefit (Tracy and Waldfogel, 1997).

Table 7: Career Orientation 1997 to Present Date (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Wrzesniewski, McCauley, Rozin and Schwartz (1997)	USA, Employees	Employees (196) Admin Assistants (24)	Quantitative: Self-Reporting Questionnaire	People see their work as either a Job (focus on financial rewards and necessity rather than pleasure or fulfilment; not a major positive part of life), a Career (focus on advancement), or a Calling (focus on the enjoyment of fulfilling, socially useful work). Distribution found to be even across Job, Career and Calling in both samples.

The table above manifests a wealth of existing knowledge whilst simultaneously identifying gaps in the literature. These gaps include: whom do undergraduate students see as responsible for their career success? Are students increasingly taking ownership of their own careers? Is there a perception in students of a move away from traditional careers towards more boundaryless and protean careers? Moreover, what, if any, are the moderator impacts of degree subject, year of study and gender? (Section 2.6). This research aims to bridge these gaps as part of a theoretical and practical contribution.

2.4.6 Graduate Career Orientation: The Student Perspective

Society informs and drives the western education system, reflective of middle-class values (Tomlinson, 2012). On the one hand, this offers a bounded system, whereby the student progresses in a hierarchical manner, under the guidance of a tutor. On the other hand, a non-bounded system is increasingly evident. There is a diversification of offering by HE, seeking to cater for a larger range of student interests. Students have growing freedom to choose the subjects that they study, especially at university, in terms of a degree course and the individual modules. The collaborative focus on contemporary careers further informs HE (Tams & Arthur, 2011). For example, many university courses have compulsory collaborative working modules. For the purpose of modular assessment, students temporarily form into groups, whereby the assessment mark achieved by all members of the group reflects their combined efforts.

After graduation, students do not simply face a bounded versus boundaryless career choice. For example, a student may opt for a boundaryless career, driven by a change of interest during their HE studies. This can be voluntary work, internships, placements, or temporary work to explore options, to name a few. A gap year and overseas work experience are also on the wish list (Brooks, 2009). Alternatively, a student may wish to adopt a bounded career, but, on finding no job opportunities in their desired field, be forced to pursue a boundaryless career. Employers too are tailoring their graduate schemes to appeal to both bounded and boundaryless orientations. For example, a graduate scheme may be bounded to a single organisation, but boundaryless through a rotation element across different areas of the business.

Boundaryless career orientation and protean career orientation are thus becoming increasingly prevalent in a globalised, technologically advanced, knowledge-based economy. The undergraduate student is likely to be technologically well informed, or at least more

technologically aware than previous generations, having grown up surrounded by technology in both a learning and recreational capacity (Balda & Mora, 2011; Cekada, 2012; Kilber, Barclay & Ohmer, 2014). Furthermore, globalisation has seen students temporarily relocating to pursue their undergraduate studies, either from abroad or from within the UK. This willingness to mobilise in pursuit of improving one's self is more common than in previous generations, as is the desire to integrate with people from a variety of ethnic groups and nationalities (Tomlinson, 2013). In addition, the increasing levels of study-related-debt are driving graduates to seek a return on their educational investment (Esson & Ertle, 2016; Esson et al., 2013). This has seen graduates relocate to cities with an abundance of graduate employment opportunities, for example, London, which employed 24% of graduates from UK universities six months after graduation in 2014 and 2015 (Centre for Cities, 2016.) Perhaps such influences on the emerging identity of graduates entering the labour market have shaped their perspective of careers towards a contemporary career.

Much of the empirical career orientation literature has focused on MBA students, specifically in the UK (Baruch & Leeming, 2001), the USA (Briscoe & Finkelstein, 2009; Briscoe et al., 2006; Cocchiara et al., 2010), and Portugal (Santos, Ferreira & Pinho, 2017). This focus seems logical given the MBA is the qualification closest to management practice and, therefore, employees with an MBA or specialist Management MSc qualification are expected to hold significant influence and power in the labour market (Baruch et al., 2005; Baruch & Peiperl, 2000). Both MBA and specialist Management MSc participants indicate that their career orientation is contemporary, incorporating both boundaryless and protean orientations. These studies have primarily adopted a quantitative data collection approach drawing on self-reporting survey responses. Due to similarities in the type of knowledge and skills gained from a specialist Management BSc and from an MBA or specialist Management MSc, the researcher expected graduates of a first degree in a specialist Management BSc to benefit in a similar manner.

Yet, it is unclear how HE helps those who study other undergraduate subjects, from humanities, through arts and to science, offering a further contribution of this research (Section 2.6). Morrison (2014) carried out a small, qualitative study of education undergraduate students in Wales, which suggested a boundaryless and protean orientation within the sample. However, quantitative evidence was lacking to support these claims. A study by Forstenlecher et al. (2014) explored the role of career orientation of undergraduates in the United Arab Emirates in determining their willingness to work in the private or public sector. The results showed that

career exploration had a positive association with private sector employment focus. More recently, a study by Uy et al. (2015) looked at the role of career orientation of undergraduates in Singapore in determining entrepreneurial alertness. The findings stated a boundaryless career mindset affects entrepreneurial alertness, whereas a protean career attitude does not. However, none of these studies offers empirical data on the students' perceptions of their careers from a UK setting, offering a further contribution from this study.

This section has offered two hypotheses for this study:

H3: Holding a boundaryless career orientation is positively associated with graduate employability.

H4: Holding a protean career orientation is positively associated with graduate employability.

2.5 Careers Advice

Governments and employers are seeking high-quality graduate applicants, possessing the necessary human capital to flourish within a globalised, knowledge-based economy (Confederation of British Industry, 2016; Schomburg & Teichler, 2006; Teichler, 2009). To date, the quality of this pipeline of talent from universities to industry has not always fulfilled industry expectation (High Fliers, 2015; Hinchliffe & Jolly, 2011). Given that the employer, especially in the private sector, is to an extent the greatest beneficiary of the graduate talent pool, it would seem reasonable to expect some investment in collaborating with universities in the development of their students. After all, graduates have the potential to enhance organisational capital, increase competitiveness and increase profits; all crucial for organisational survival in a competitive, globalised labour market (Campbell, Coff & Kryscynski, 2012).

In Section 2.3, the literature review evidenced a dominant call for partnership accountability between the university, the student and industry for developing skills and employability (D'Este & Patel, 2007; Gault et al., 2010; Pfeffer & Fong, 2002; Poyago-Theotoky et al., 2002; Taylor & Hooley, 2014; Wickramasinghe & Perera, 2010). This had two aims: to create a lifelong learning process (Wilton, 2012) and to better align pedagogy incongruence and employability (Ashleigh et al., 2012; Bastalich et al., 2014; Bennet et al., 2015; Ojiako et al., 2014). Careers advice identifies the role of the university careers service

and faculty or subject specific careers advisors (Section 2.5.1), the employer perspective (Section 2.5.2) and the role of graduate recruiters (Section 2.5.3) in preparing students for the graduate labour market (Baruch & Leeming, 2001; Holmes, 2015; 2013).

2.5.1 The University Careers Service and Faculty or Subject Specific Careers Advisors

Accountability for implementing the UK Government HE agenda primarily lies with the University Management Team (UMT), under the direction of the Vice Chancellor (VC). In recent years, the UK Government has sought to replace state funding of HE institutions by increasing the cap on tuition fees (Section 2.8.1). This makes it ever more crucial for universities to attract new students to address the funding shortfall. The UMT seeks to enhance the attractiveness of their institution to undergraduates. One such approach is through university league tables, published annually and measuring entry standards, student satisfaction, research quality and graduate prospects, which combine to form an overall score (Mansfield, 2011). The greater the overall score, the higher the ranking position, with tables compiled at both university and individual course level. It is often the case that the greater the demand for places, the higher the entry standards. This is because universities seek to enrol the strongest performing students that they are capable of attracting. Thus, when demand for course places outstrips the supply of these places, entry-level standards increase as a method of improving the quality of undergraduates. Increasing demand for places is, therefore, crucial, often driven by student satisfaction scores, graduate prospects and, to a lesser extent at the undergraduate level, the research quality.

The careers service advisors and faculty or subject specific careers advisors (herein after referred to as 'university careers advisors'), are thus tasked by the UMT with responsibility for maximising the employment rate of graduates by increasing their students' human capital. Historically, their role has been more inward facing, focusing on students and working with them to produce cover letters, curriculum vitae and to practice and develop interview techniques. This was very much a supportive stance, with the main emphasis on the student to seek and secure employment. The UMT has more recently sought to encourage university careers advisors to expand their role. This is specifically with the aim of increasing the employability and employment of the universities' graduates, reflected in increased graduate prospects and higher league table rankings (Mansfield, 2011). University careers advisors must establish and maintain partnerships with industry. The historic ad-hoc

relationships are now becoming more formal, two-way partnerships, often managed between the university careers advisors and the graduate recruiter gatekeepers, discussed in Section 2.5.3. (Campbell et al., 2012).

These partnerships aim to produce work-ready graduates who possess the necessary human capital to thrive in the graduate labour market. Recent academic literature indicates this is a fruitful approach (Brown, 2013; Smith, 2012; Tomlinson, 2014). The graduate recruiters (Section 2.5.3) provide advice around the quality of graduate required and often provide on-campus training sessions to undergraduate students. University careers advisors continue their historic work with students, raising awareness of the importance of having a career plan after graduation, but also work with academics, encouraging them to incorporate employability skills into their course design.

One of the key ways that university careers advisors and industry partner together is through the provision of WIL. The perceived high value of WIL by employers, the UMT, and careers advisor stakeholders is evident (Smith, 2012), and The Wilson Review (2012) has encouraged university careers advisors to offer WIL opportunities to all undergraduate students. This provides the employer with an opportunity to complement the degree course contributions towards increasing the human capital of the student (Section 2.5.2). Furthermore, the literature claims that WIL develops work-ready graduates, helping to bridge the gap between academia and industry, as part of a lifelong learning process (Gupta et al., 2014; Hsieh & Hsu, 2013; Wilton, 2012). This, in turn, should make the graduate more successful, promoting university employability rankings and offering the employer a significant return on the initial WIL investment. The ability for the student to self-reflect and articulate their human capital improves, subsequently increasing the confidence of the candidate during the application process (Edwards, 2014; Jackson, 2015; Mansfield, 2011; Wilton, 2014).

University careers advisors are also increasingly collaborating with academics. Academics have historically focused on two aspects: research and teaching. They secured research grants and worked on a variety of projects, building a research portfolio with the purpose of pursuing a professorship and becoming a leading expert in their field. In addition to the research aspect, academics imparted their knowledge and experience to their students. Academics were responsible for, and had significant autonomy over, the content and structure of this educational provision. They sought to open the minds and expand the horizons of young scholars. The role of the academic has evolved and significantly expanded via UK Government

policy reforms (Giroux, 2014). Academics, as the front line service provider in the HE sector, carry responsibility for ensuring student satisfaction, developing a curriculum that integrates employability skills, delivering engaging lectures, securing research funding, and providing research outputs of the highest possible Research Excellence Framework (REF) score. The commonality of these themes is their direct impact on the league table rankings, influencing attraction of the student-consumer (Tomlinson, 2014), and subsequently placing league table performance at the top of the UMT agenda. Rousseau (2016) positions the role of the academic to help students become themselves and develop a sense of identity, including spending time in industry. Rousseau further calls on academics to prepare students to learn all their lives. While taught material may become obsolete, students must learn how to search for scientific evidence relevant to problems of practice, such that students continue to update what they know as more information becomes available. This research captures the essence of Rousseau's call for students to undertake WIL, commit to lifelong learning, and develop an emergent identity that evolves over time.

With an increased list of responsibilities resulting in an ever-increasing workload, some academics are understandably resistant to change. They cite the loss of autonomy over their degree syllabus, the additional face-time, and rising appeals against their marking judgements as examples of the shifting power dynamic (Giroux, 2014; Mascolo, 2009; Molesworth, Scullion & Nixon, 2010). Furthermore, their financial compensation has not increased relative to the increases in their job role. Other academics have embraced the change, developing partnerships with industry and seeking to embed WIL into the degree programme, viewing this as a solution to increasing the graduate prospects and satisfaction scores of their students.

In summary, university careers advisors must foster relationships and collaborate, both within their institution and externally with employers, to maximise the employability and employment outcomes of their students through tailored careers advice (Verbruggen, Dries & Van Laer, 2017). This literature review now explores the employer perspective.

2.5.2 The Employer Perspective: Attract, Hire, Develop, Retain

The employer represents the demand side of graduate employment whereby the greater the number of available graduate jobs, the greater the demand for graduates to fill these vacancies. Cai (2013) offered a conceptual framework of the employer perspective on graduate employability. This research complements such an approach by offering a conceptual model

of the student perspective. Historically, the AGR, who publish annual reports on the state of the graduate employment landscape, had shown demand for graduate level jobs to increase year on year. This trend reversed following the 2007-2008 global financial crisis, with demand not recovering to pre-recession levels until 2014. Record demand for graduate jobs occurred year-on-year from 2015, with 2015 demand up 11.9% from 2014, but the legacy of the previous seven years is still apparent today (Association of Graduate Recruiters, 2015a).

Prescott and Visscher (1980) coined the term organisational capital: the way in which an organisation accumulates information as an asset and subsequently provides a competitive advantage. This, in turn, contributes to organisational performance (Wright et al., 2014). Employers in both the public and private sectors of the UK economy, seek to attract and hire the best graduates, develop these graduates as part of a lifelong learning progression and retain these graduates to build organisational capital, the leaders of tomorrow. Logic suggests that attracting and hiring graduates is a simple task for employers. After all, the supply of graduates entering the labour market is far exceeding the demand for graduate jobs. Furthermore, each graduate is reportedly making more than twenty applications for employment (Association of Graduate Recruiters, 2015b). There is, however, a problem, as the high volume of applicants is failing to correlate to a high quality of applicant (High Fliers, 2015). This is deeply concerning and a major consideration of this thesis. With spiralling university debt and a government rhetoric that focuses on increasing participation in HE, a serious issue occurs when the subsequent output of HE fails to meet the expectations of employers (Association of Graduate Recruiters, 2014). The discussion of attracting applicants has thus shifted from a focus on volume, to a focus on quality. In fact, high quantity is bad news for the employer, since there is a significant economic cost to processing applications and assessing suitability for performing a graduate role. Furthermore, applicants of suitable quality are highly sought-after and often receive multiple job offers (McNulty, 2014). This complicates the hiring process as applicants reject, or worse, renege on contract offers, in favour of an alternative contract from a competitor organisation. So how do employers seek quality of applicant? Moreover, how do they hire these graduates ahead of their competitors?

Historically, degree classification and university entry-level grades including A Level results or equivalent UCAS points determined quality. The greater the degree classification and the higher the A Level grades or UCAS points, the higher the quality of the graduate, evidencing scholastic capital (Teichler, 2009). However, something strange was happening. The best-performing graduates in the industry were not always those with the highest grades.

In fact, in certain sectors (e.g. education & sciences), top grades were often detrimental to performance, fuelled by what Schomburg and Teichler (2006) describe as the rapid obsolescence of knowledge. So why would this be the case? Well, as detailed earlier in this chapter, wider constructs of employability capital and graduate skills, beyond just scholastic capital, have an important role to play. If graduates are to be the leaders of tomorrow in organisations, it is beneficial to have a greater representation of opinions and perspectives, simultaneously enhancing organisational capital (Clarke, 2013). One such example is PwC, a global accountancy firm and one of the largest graduate employers. PwC stated in May 2015 that it was moving away from using UCAS points to screen graduate applications (PwC in The Guardian, 2015a). PwC claimed the current system gave too much weighting to applicants with a private education, subsequently stifling diversity in their hiring cohorts. Other employers such as the Civil Service and Grant Thornton follow a flexible approach to UCAS points, but, at the time, PwC was the only recruiter to disregard them altogether (The Guardian, 2015a). However, later in 2015, Ernst & Young, a direct competitor of PwC, followed the lead of PwC by removing degree classification and UCAS point targets for their graduate applicants.

It would seem reasonable then for graduates to focus equally as much on the other aspects of human capital, as on their scholastic capital of UCAS points and degree classification. As Rospigliosi et al., (2014) postulate, the graduate's capacity to continue to self-learn is crucial, both in terms of developing human capital and in terms of signalling theory, which relates to the employers' perception of the graduate. Theoretically, then, such learning is likely to make graduates more employable and increase the quality of applicants to industry. In turn, high-quality applications could benefit industry through cost and time-saving realised during the candidate attraction and hiring process. Nevertheless, how do employers hire the best graduates ahead of their competitors? Many approaches have attempted to address this war for talent (Bills, 2003; 1988; Brown & Hesketh, 2004). Economic incentives are one option, either through a welcome bonus, increasing salary above the market rate, or offering additional benefits such as pension or health care contributions (Tholen, 2014). Another option is to offer candidates a tailored graduate scheme (Tholen, 2014). A further approach is to access the talent pipeline ahead of competitors, for example via WIL and partnerships with careers services (Section 2.5.2). For example, by reaching out to A Level students, collaborating with, or sponsoring, specific university courses, or by making hiring offers as early as possible during the recruitment season, ahead of competitors (Brown & Hesketh, 2004).

This links to a further significant benefit to the employer of offering WIL. The earlier and prolonged access to the student talent pool enables the employer to run an extended interview process, with the best performers offered a contract for a graduate level job and the weaker performers discarded without further repercussion (Wilton, 2012). This means the gatekeepers, the graduate recruiters (Section 2.5.3), can start the recruitment cycle having already partially or indeed fully met the headcount demand for next year's graduate cohort. Furthermore, because both the employer and the student have developed and experienced a partnership during the WIL, there is evidence that the retention of these graduates during a graduate scheme is higher than for those graduate hires with no previous experience of the organisation (Gault et al., 2010). It is perhaps unsurprising then that, more recently, employers and graduate recruiters have started to focus more resources on the WIL aspect of their recruitment (Gault et al., 2010). In fact, High Fliers, who publish an annual review of graduate vacancies and starting salaries at Britain's leading employers, stated in their 2015 report that 31% of graduate hires have previous work experience with the organisation, and in some sectors, for example, investment banking, this figure is as high as 74% (High Fliers, 2015).

Once the process of attracting and hiring graduates concludes, organisations then face the difficult task of talent retention (Brown & Hesketh, 2004; Dries & Pepermans, 2008; Tholen, 2014). For example, Van Harten, Knies, and Leisink (2016) found that healthcare workers sort developmental opportunities from employers through (i) challenging roles, (ii) manager support, and (iii) work-life balance. Dries, Forrier, De Vos and Pepermans (2014) call on employers to communicate clearly and to manage expectations as a mechanism for employee retention. However, organisations face a dilemma. On one hand, extant strategy theory recognises the importance to an organisation of developing the human capital of its staff, in this case, the graduates (Coff, 1997; Hall, 1993). Conversely, developing generic human capital makes the graduates more attractive to competitors, as it is often cheaper for competitors to acquire talent from other competitors, rather than to train the talent themselves. Campbell et al., (2012) address this issue by recommending that organisations develop firm-specific capital, limiting the mobility of their employees. This development of firm-specific human capital subsequently contributes to organisational capital, offering the organisation a sustained competitive advantage (Wright et al., 2014). As a result, employers seek to place the primary emphasis of a graduate scheme on forming an understanding of the organisation, rather than the development of human capital. In line with the findings of Campbell et al., employers desire universities to produce graduates who are already in possession of adequate human capital;

termed work-ready (Oliver, Freeman, Young, Yu & Verma, 2014), or work-ready plus graduates (Scott, 2014), further underpinning the importance of this research.

The employer perspective is, therefore, clear; attract and hire graduates with sufficient human capital and subsequently develop and retain these graduates as part of a lifelong learning approach (Confederation of British Industry, 2016). This, in turn, offers the individual increased firm-specific capital, and the employer increased organisational capital and increased competitiveness in a globalised, knowledge economy. One of the most influential players in this process is what Holmes (2015; 2013) refers to as the gatekeeper and what industry refers to as the graduate recruiter. This research is relevant here through its explanation of how undergraduate students perceive the role of gatekeepers in influencing their employability.

2.5.3 Graduate Recruiters

Gatekeepers are individuals with the power to decide whether a graduate applicant is offered a position within a company, or rejected, and thus are ultimately in charge of providing graduate employment opportunities (Holmes, 2015). In the context of graduate recruitment, these gatekeepers are graduate recruiters. The remit of these graduate recruiters is vast. They are scouts, marketers, assessors, and educators.

Graduate recruiters operate within a graduate recruitment cycle. This commences with the identification of the headcount demand for graduate hires from the organisation and usually takes place more than one year before these graduates commence employment. The graduate recruiters next seek to create a pipeline of talent to the organisation. As previously discussed, this is not solely about generating the volume of applicants, but rather the quality of applicants (Schomburg & Teichler, 2006; Teichler, 2009). Thus, the graduate recruiter scouts potential sources of graduate talent, establishing and maintaining partnerships with university careers advisors, and with academics on behalf of the organisation. Collaborating with universities is ever more essential, as the UK Government tasks universities with producing employable graduates (Association of Graduate Recruiters, 2015c). Furthermore, as each graduate recruiter from each organisation is seeking to generate a pipeline of talent to their organisation, competition for the most employable students is fierce.

However, what does this mean for students who are not initially employable? These students often apply to a large number of organisations, and, in some cases, through learning from repeated failure, identify improvement opportunities and subsequently are successful in

securing graduate employment. Other graduates are less successful and either diversify to a less competitive area of the labour market, take on employment that does not require a degree to access, or become temporarily unemployed (Tomlinson, 2012).

Clearly, the production of employable graduates is essential for the UK Government, employers, graduate recruiters, universities, and of course the graduates themselves. It is, therefore, concerning that, in March 2015, research carried out by Work Ready Graduates (WRG), an organisation established by Prospects, found that 47% of graduates feel unprepared for work (Association of Graduate Recruiters, 2015d). Graduate recruiters play a significant role in increasing the awareness of employment opportunities within the student population and encouraging the development of human capital (Association of Graduate Recruiters, 2015c; Smith, 2012). Graduate recruiters, therefore, travel to numerous university campuses, often early in both the recruitment cycle and academic year, between September and December. This enables the industry to deliver training and advisory sessions, as well as meet potential applicants face-to-face, accessing talent ahead of their competitors (Association of Graduate Recruiters, 2015d). Additionally, graduate recruiters will often sponsor university societies, which, in return, provide access to their membership lists, as well as additional advertising when they compete in inter-university and national or international competitions (Association of Graduate Recruiters, 2015c).

Graduate recruiters, on behalf of the industry, are increasingly working with individual academics or faculties to address the skills shortage in potential graduate applicants (Smith, 2012). This strategy seeks to embed WIL as part of course curriculum, which is of great importance given the existing misalignment between pedagogy incongruence and employability (as evidenced by Ashleigh et al., 2012; Bastalich et al., 2014; Maurer & Mawdsley, 2014; Ojiako et al., 2014). This seeks to enhance the human capital of the student making them more employable (Gupta et al., 2014; Sheepway et al., 2014; Taylor & Hooley, 2014). It also gives the organisation access to the student ahead of competitors. The student decides if they fit the organisation, the organisation effectively has an extended interview process opportunity, and thus the graduate hires made through this route are often retained by the organisation for longer (Hsieh & Hsu, 2013). Furthermore, new hires start the graduate scheme already having an understanding of the workings of the organisation, facilitating the transition from university to the workplace (Paisey & Paisey, 2010; Wilton, 2012).

Following the scouting and marketing aspects of the graduate recruitment cycle, the focus moves to assessing. The graduate recruiters provide training to the managers within their organisation and subsequently work with these managers to assess the suitability of candidates for hire to the graduate scheme. This commences each year in November and continues until the demand for graduates is satisfied, or until no further candidates remain in the application pipeline, usually by April. In a qualitative, interview-based study of thirty recruitment managers, Wilton (2014) highlighted the often subjective and shifting criteria used in the hiring process. He stated this adds a further dimension of difficulty to applicants, as different gatekeepers and employers apply differing criteria in determining their selection outcome. The successful work placement hires from the penultimate year student applicants join the organisation over the summer, from June to September, and graduate hires join in September. The graduate recruiter at this point becomes the educator, providing training to the graduates in an effort to enhance elements of human capital of benefit to the organisation. As previously discussed, the focus is on the development of firm-specific human capital to help safeguard the poaching of an organisation's graduate talent by competitors (Campbell et al., 2012; Wright et al., 2014).

Section 2.5 has evidenced the role of university careers advisors, and graduate recruiters in providing careers advice to undergraduate students.

Hypothesis 5 (H5). Receiving careers advice is positively associated with graduate employability.

Next, this research addresses moderators of gender, degree subject, and year of study (Section 2.6), before offering a conceptual model of graduate employability (Section 2.7) in response to *Research Question I.*

2.6 Moderators: Gender, Degree Subject and Year of Study

2.6.1 Gender

Gender inequality in HE, as detailed by Sharpe (1976) and Spender and Sarah (1980) has in one aspect been addressed in the last forty years, as female participation has risen and indeed overtaken male participation (Arnot, 2002; Higher Education Funding Council, 2014). However, Arnot and Mac An Ghaill (2006) are keen to point out that rather than a narrowing of the gender gap, males may in-fact be underperforming in education, driven by a crisis of masculinity. Males continue to earn more than their female peers in the labour market in the

immediate years after graduation, despite being outperformed by females during their degree studies (Sumanasiri, Ab Yajid & Khatibi, 2015; Tomlinson, 2013). The Higher Education and Research Bill (2016) calls for additional research into gender as a moderator, highlighting the importance to policy development of this research. Career literature is somewhat divided on the moderation role of gender on self-perceived employability. Rivera (2011), Tomlinson (2012) and Tholen (2014) found males to have greater self-perceived employability than females, whereas Sok, Bloome and Tromp (2013), Morrison (2014), and Jackson and Wilton (2017) reported gender to have no impact. Non-student focused studies strongly support the notion that males perform more strongly in the labour market than their female counterparts (Kirton, 2009; Pas, Peters, Eisinga, Doorewaard & Lagro-Janssen, 2011; Rodrigues et al., 2016). This study thus starts from a position of awareness that gender may moderate self-perceived employability through the following hypothesis:

Moderator I. Gender is a moderator for H1-H5, such that the relationships are stronger for males than for females.

2.6.2 Degree Subject: Cross Faculty Perceived Employability Ranking (CFPER)

An empirical Cross Faculty Perceived Employability Ranking (CFPER) study was conducted at University A (Gowar, 2015), to complement the CFWPA findings (Gowar & Donald, 2015). Two independent measures were used, firstly the Destination of Leavers from Higher Education (DLHE) and secondly Russell Group Ranking (RGR). Each course was placed into one of three categories: Priority One (P1), Priority Two (P2), or Priority Three (P3):

- **P1** is defined as below average DLHE score and in the bottom 50% of RGR.
- **P2** is defined as below average DLHE score or in the bottom 50% of RGR.
- **P3** is defined as average or above DLHE score and in the top 50% of RGR.

The results ranked the courses as follows:

- **P1**: Archaeology, Art, Music, Ocean & Earth Sciences, Philosophy, and Social Sciences.
- **P2:** Astronomy, Biological Sciences, Chemistry, Education, Civil & Environmental Sciences, Criminology, English, Geography, History, Physical Sciences, Politics, and Psychology.
- **P3:** Audiology, Computer Science, Engineering, Healthcare, Business, Law, Mathematics, Medicine, Midwifery, Modern Languages, and Nursing.

The results offered the following alignment by faculty:

- **Faculty of Business, Law & Art (P1/P3)**: Art (P1), Business (P3), Law (P3)
- **Faculty of Engineering and the Environment (P2/P3)**: Civil & Environmental Sciences (P2), Audiology (P3), Engineering (P3)
- **Faculty of Healthcare & Medicine (P3)**: Healthcare (P3), Medicine (P3), Midwifery (P3), Nursing (P3)
- **Faculty of Humanities (P1/P2/P3)**: Archaeology (P1), Music (P1), Philosophy (P1), English (P2), History (P2), Politics (P2), Modern Languages (P3)
- **Faculty of Natural & Environmental Sciences (P1/P2)**: Ocean & Earth Sciences (P1), Biological Sciences (P2), Chemistry (P2)
- **Faculty of Physical Sciences & Engineering (P2/P3)**: Astronomy (P2), Physical Sciences (P2), Computer Science (P3)
- **Faculty of Social, Human & Mathematical Sciences (P1/P2/P3)**: Criminology (P1), Social Sciences (P1), Geography (P2), Psychology (P2), Mathematics (P3)

This research addressed twenty-one subjects from five faculties:

1. **Priority 1 (P1)**
   - Archaeology
   - Art
   - Criminology, Philosophy, and Social Sciences
   - Music
   - Ocean & Earth Sciences

2. **Priority 2 (P2)**
   - Biological Sciences and Chemistry
   - Civil & Environmental Sciences and Geography
   - Education and Psychology
   - English, History, and Politics

3. **Priority 3 (P3)**
   - Business
   - Engineering
   - Law
   - Mathematics
   - Modern Languages

To date, research exploring the factors of graduate employability has focused on students from Business, Engineering, Healthcare, Law, Mathematics, Medicine, and Modern Languages (Gupta et al., 2014; Hseih & Hsu, 2013; Jackson & Chapman, 2012; Sheepway et al., 2014; Wilton, 2012, 2008). This is in part due to the more natural progression of these degree courses to specific job outcomes, and in part due to ease of access. Whilst employability outcomes for these degree disciplines are strong, it is yet unknown whether other degree disciplines perform as well. The Destination for Leavers from Higher Education (DLHE) survey, which measures employment of graduates six months after graduation, offers further support for graduates from Business, Engineering, Healthcare, Law, Mathematics, Medicine, and Modern Languages by evidencing increased employment and earning outcomes. Driven by the literature and the priority categories, this research collated degree subjects into two groups. P1 and P2 subjects formed group 1, and P3 subjects formed group 2. The findings from the CFPER and literature offer the following hypothesis:

Moderator II. Degree subject is a moderator for H1-H5, such that the relationships are stronger for P3 subjects (Business, Engineering, Law, Mathematics, and Modern Languages) than for P1 and P2 subjects (Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences)

2.6.3 Year of Study

The literature review has explored emergent identity in Section 2.2 (Holmes, 2015; 2013) and kaleidoscope career in Section 2.4 (Maniero & Sullivan, 2006, 2005; Sullivan, 1999). Both of these constructs focus on the evolution of identity through time. Intuition would suggest that undergraduates perceive themselves as more employable with each year of study, as supported by Saunders and Zuzel (2010). However, two recent empirical studies, by Qenani, MacDougall and Sexton (2014) in the USA and Jackson and Wilton (2017) in the UK, reported a negative relationship between self-perceived employability and time spent at university. Both studies speculate that, as students' progress through their university studies, they become more aware of the challenges of employability, particularly in their final year of study when looking for graduate job opportunities. This research thus offers the following hypothesis:

Moderator III. Year of study is a moderator for H1-H2, such that the relationships are stronger for penultimate year undergraduates than for final year undergraduates.

2.7 Conceptual Model of Graduate Employability Underpinned by Human Capital Theory and Contemporary Career Theory

Cultural Capital

Social Capital

Boundaryless Career

University Careers Service

Psychological Capital

H1b +

H1a +

H3 +

H1c +

Faculty or Subject Career Advisors

Human Capital

H2 +

Graduate Employability

H5 +

Careers Advice

H1d +

Scholastic Capital

H1e +

H1f +

H4 +

Graduate Recruiters

Market-Value Capital

Skills

Protean Career

Moderators
I)   Gender
II) Degree Subject
III) Year of Study

Emergent Identity
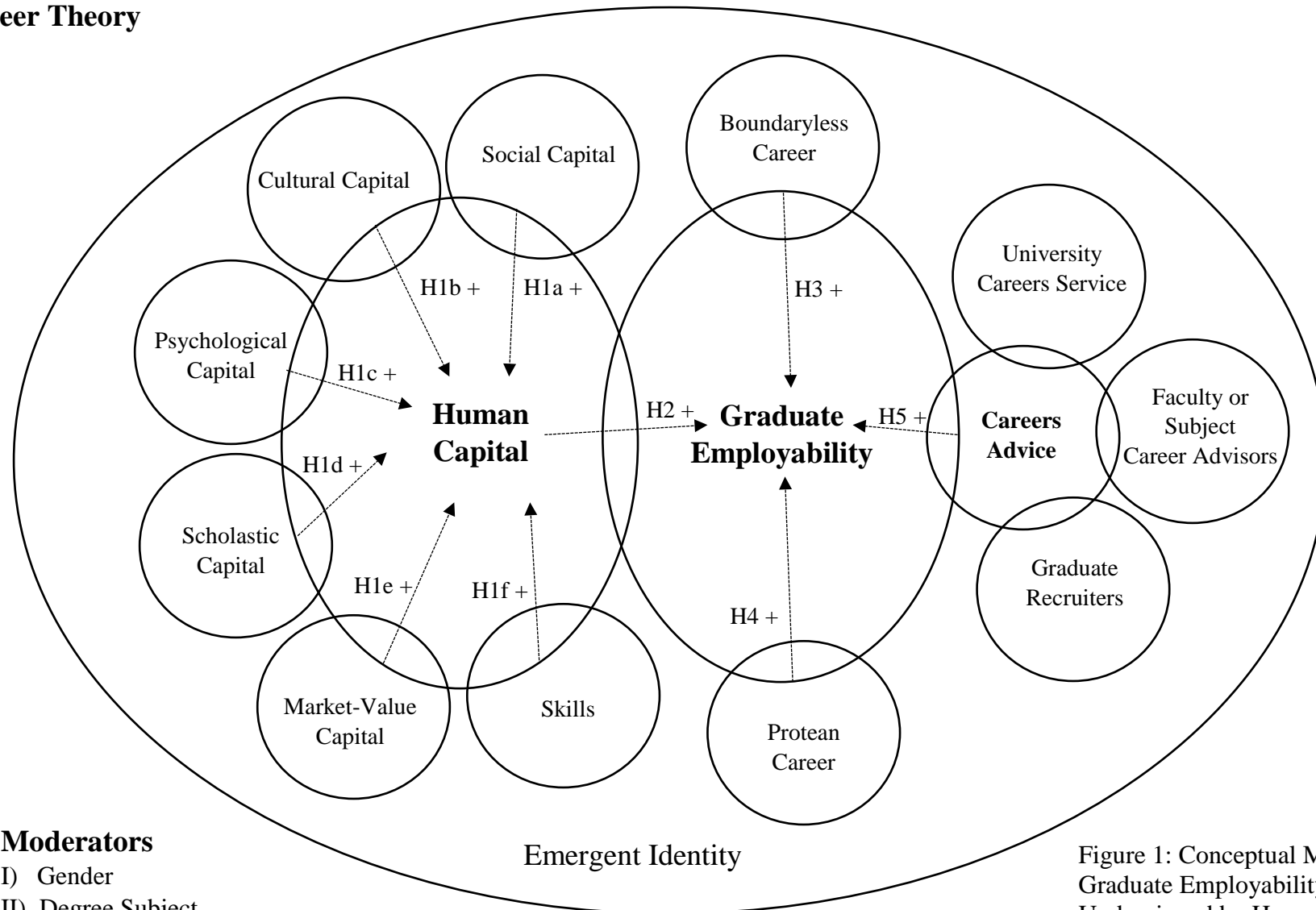
Figure 1: Conceptual Model of Graduate Employability Underpinned by Human Capital Theory and Contemporary Career Theory

2.8 Graduate Debt and Earnings

The final part of the literature review addresses *Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions.* Section 2.8.1 evidences the UK Government perspective, Section 2.8.2 provides empirical insights from macro, meso, and micro level stakeholders, Section 2.8.3 details the student perspective, and Section 2.8.4 provides The Complete University Guide 2018 earnings by degree subject at University A.

2.8.1 The UK Government Perspective

Roper, Ganesh and Inkson (2010, p.673) accuse the UK Government of pursuing a neoliberal agenda with the purpose of *freeing any societal or organizational responsibility for economic and career outcomes.*

The UK Government dealt with the fallout of the 2007-2008 global financial crisis by increasing undergraduate tuition fees to £9,000 per annum from September 2012, seeking to reduce state funding in HE institutions. For comparison, students who commenced their degree courses in September 2011 were paying £3,375 per annum. This came at a time when the previous introduction of tuition fees had seen a record number of students balancing work and learning (Yorke & Longden, 2010). In July 2015, the UK Government announced that parental income-contingent student bursaries would be replaced with loans for all students commencing undergraduate study from the academic year 2016-2017 (Summer Budget, 2015). Critics argued this move signalled the end of social mobility in HE (Sutton Trust, 2015) whereas the UK Government was keen to point out that it is unfair for the tax payer to underwrite an economic return to the student as a result of higher earning potential from pursuing HE (Summer Budget, 2015).

Student bursaries offered a mechanism for universities to represent the wider society, promoting integration and understanding through inclusiveness and respect. This is important for students, employers, and the UK Government since UK graduates will have a wider network of contacts and will compete for employment in an increasingly global and diverse graduate labour market (Holmes, 2013; Tholen et al., 2013). However, the graduate labour market still fails to reflect the diversity of graduates from HE (Sutton Trust, 2015). In addition, the removal of student bursaries and the increase in tuition fees act as a deterrent to students from backgrounds with an aversion to debt accumulation (Tholen, 2014). It is thus essential to

continue to encourage such students to apply to universities in the first place, to provide a pipeline of diverse applicants to the graduate labour market (Tomlinson, 2005). This point is overlooked by studies of prospective students (Esson & Ertle, 2016) or current students (Pick & Taylor, 2009), which report students as being more concerned with their expected return on investment in HE, rather than being dissuaded by the rising cost of tuition.

However, given the increased aversion to debt among potential students from lower income families, it is indeed feasible that social mobility will be hindered (Tholen, 2014; Tomlinson, 2005). The importance of parental economic class is further highlighted in a report published by the UK charity Save The Children (2013), titled '*Too Young To Fail*'. The report provides evidence to suggest that the life chances of an individual could be determined by age seven, influencing both their economic potential in terms of earnings and their health. If this were true, it would be reasonable to expect that students with parents from a lower economic class would perceive themselves as less employable than their peers with more affluent parents; a position also supported by Fuller et al., (2011). A study published by UCAS (2016) of sixteen thousand (n=16,000) students found that children who know they want to attend university at age ten are twice as likely to go to a selective university than someone who decides at age sixteen. The same report highlighted a correlation between the advantage of background and focus on attending university, further evidencing the challenges to applicants from a disadvantaged background.

Thus, the economic policy appears to have increased the student level of study-related-debt for pursuing HE (Esson & Ertle, 2016). In reality, since the repayment amounts on the student loan are means tested, based on graduate earnings, a large proportion of students, estimated to be 73%, are unlikely to repay their student loan in full before its shelf life expires (Garner, 2014). This will leave The Treasury to pick up the shortfall, a potential fiscal ticking-time-bomb (Sutton Trust, 2015). How will the system cope? Students will be under pressure to pay, but will also be tempted not to wish to earn too much before the date of abolition of the debt. Governments will need to find the money. The introduction of some positive and negative incentives may encourage former students to pay the debt (e.g. benefits to those who paid in full, obstacles to those who did not?). Amigo Loans (2016), highlight a further challenge of student debt, reporting that young people with a Degree, Master's, or PhD are 10% more likely to be rejected for a mortgage due to a poor credit score compared to applicants with A levels as their highest qualification.

The changing landscape of HE, driven by neo-liberalisation, means the UK Government has a vested interest in recouping as much of the student loan debt as possible. Maximising both employability and earnings of graduates is thus of significant importance. Tomlinson (2012) as part of an extensive literature review addressing graduate employability, evidenced four ways the UK Government, and indeed OECD Governments, seek to provide benefit to their respective economies. (i) The greater the earning of the graduate, the greater the return of their student loan, underwritten by The Treasury, (ii) the greater the earning potential of the graduate, the greater their tax contribution to The Treasury, (iii) graduates gaining employment quickly means a lower cost to The Treasury in terms of out of work benefits and welfare payments to the individual, and (iv) the greater the pipeline of work-ready graduates to operate in the globalised, knowledge economy, the greater the competitive advantage of the UK and OECD in the world arena.

The literature review now evidences empirical insights from macro, meso, and micro level stakeholders addressing graduate debt and earnings, before exploring the student perspective.

2.8.2 Empirical Insights: Macro, Meso and Micro Level Perceptions of Employability

The nine articles included in this section provide empirical insights into macro, meso, and micro level perceptions of graduate employability (Table 8). Articles are included if they were published since The Dearing Report (1997), as detailed in the policy reform of HE section of Chapter 1. A cut-off date of 1997 also aligns with the Generation Y student cohort. Generation Y individuals were born between approximately 1983 and 2000 (Markert, 2004, p.5) and subsequently started university between 2001 and 2015. A cut-off point of 1997 offers us clarity and safeguarding of relevance, whilst offering a sufficient time-span to identify key themes and findings. Articles are included if they were published before the commencement of data collection for this research in November 2015. A paper by Esson and Ertle (2016) is included as the paper was published online in 2015. Articles are listed in chronological order, starting with the most recent publication.

Table 8: Perceptions of Graduate Employability 1997 to 2015

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Esson and Ertl (2016)	UK (England), Prospective University Students	Year 13 Students (700)	Mixed Methods: Self-Reporting Questionnaire Focus Groups	The primary response to fee increase and study related debt is 'no point worrying'. In the short term, the degree is seen as vital to securing employment in a competitive labour market. In the long term, the income contingent nature of the student loan makes The Treasury, not the student, liable for any resultant financial loss.
Esson et al. (2013)	UK (England), Prospective University Students	Year 13 Students (700)	Mixed Methods: Self-Reporting Questionnaire Focus Groups	High levels of uncertainty amongst potential applicants regarding the costs and possible financial benefits of studying for a degree. However, attitudes towards the concept of a graduate premium have a strong influence on the propensity of applying for HE. Differences in expected cost of studying at different universities not seen as a predominant factor in participants' choice about where to apply.
De Hauw and De Vos (2010)	Belgium, Undergraduates	Undergraduate Cohort One (787) Undergraduate Cohort Two (825)	Quantitative: Self-Reporting Questionnaire	The recession is related to lower levels of optimism and lower expectations around work-life balance and social atmosphere. Expectations remain high around job content, training, career development, and financial rewards. Managers should focus resources on training and career development in millennial graduates.

Table 8: Perceptions of Graduate Employability 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Pick and Taylor (2009)	Australia, Undergraduates	Undergraduates (313)	Mixed Methods: Self-Reporting Questionnaire	The theoretical lens of framing and sense making. Definition of neo-liberalisation. The way in which students make sense of their environment reflected neo-liberal conceptions of attitudes to work and education, framed in mainly instrumental, economic terms. Neo-liberalisation ascendant but not all-pervasive.
Rothwell et al. (2008)	UK (England), Undergraduates	Undergraduates (75)	Quantitative: Self-Reporting Questionnaire	Perceptions of the strength of the university brand, the state of the external labour market and demand for degree subject. Perceptions of future employability modest, notably among those in arguably the strongest positions, suggesting self-perceptions maybe a product of relative societal expectations (positional conflict theory).

Table 8: Perceptions of Graduate Employability 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Tomlinson (2008)	UK (Wales), Undergraduates	Undergraduates (53)	Qualitative: Semi-Structured Interviews	'How do HE students view the role of their degree credentials in shaping future employment prospects?' Students perceive their academic qualifications as having a declining role in shaping employment outcomes. Academic credentials are still seen as a significant dimension of employability, but students recognised increasingly the need to add value to gain labour market advantage. Perceived to be a congested and competitive graduate labour market.
Tomlinson (2007)	UK (Wales), Undergraduates	Undergraduates (53)	Qualitative: Semi-Structured Interviews	The transition from education into the labour market involves an active process for students. The problem of employability and its management now appears to be informing students' understanding and approaches towards the labour market. Students view employability as a crucial issue, requiring negotiation and exploration. This not only involves developing their own graduate profiles and credentials, but also fostering particular attitudes.

Table 8: Perceptions of Graduate Employability 1997 to 2015 (Continued)

Researcher(s) / Year	Focus of Study	Sample (n)	Methodology	Key Findings
Ribchester and Mitchell (2004)	UK (England), Undergraduates	Undergraduates (75) Undergraduates (10)	Mixed Methods: Self-Reporting Questionnaire Semi-Structured Interviews	Students perceive there to be a close relationship between being successful in HE and greater employment outcomes. Awareness of the nature of these employment opportunities, and precisely how HE facilitates access to them, appears restricted. Information required at the very start of the degree programme, to maximise impact and chance of employability.
Glover, Law and Youngman (2002)	UK (England), Undergraduates	Cohort One Undergraduates (408) Cohort Two Undergraduates (425) Undergraduates (16)	Mixed Methods: Self-Reporting Questionnaire In-Depth Interviews	Economic motivations are more important than the pursuit of knowledge. Instrumentalism directed towards employment increasingly expected in HE courses. Graduate status alone not viewed as sufficient basis for continued personal and institutional investment and hoped for success in a highly competitive, flexible, and globally responsive environment.

The table above manifests a wealth of existing knowledge whilst simultaneously identifying gaps in the literature. These gaps include: how long do students perceive it will take to repay their student loan, assuming they have one? What income do students expect six months after graduation? Do students perceive the benefits of HE to outweigh the associated costs? Moreover, what, if any, are the moderator impacts of gender, degree subject, and year of study? (Section 2.6). This research aims to bridge these gaps as part of a theoretical and practical contribution.

2.8.3 The Student Perspective

This research contributes to an area of research that, according to Tymon (2013) and Rospigliosi et al. (2014) requires further explanation, the micro-level students' perceptions of graduate employability. Earning and debt expectations of students help to explain their perceptions of the value and return on investment of HE. This is of particular importance given that according to the Higher Education Policy Institute and Higher Education Academy (2016), 35% of 15,000 students surveyed believed HE offered poor or very poor value for money. Prospective students have increasingly sought participation in HE under the premise that such a qualification will increase their earning potential (Esson & Ertle, 2016). However, as pointed out by Glover et al., (2002), Tomlinson (2008; 2007), and Morrison (2014), the degree itself is no longer seen as sufficient by employers for securing employment in a highly competitive, flexible and globally responsive environment. Are students aware of this movement of the goal posts? In response, Ribchester and Mitchell (2004), and Rothwell et al. (2008) highlight the importance to students of receiving information at the start of their degree programme to maximise their employability potential. One might expect that increasing student fees and subsequently student debt may dissuade prospective students from pursuing HE. Fleming (2017) adopts this view by arguing that university debt is the dark side of human capital, stating that in 2014 total student debt in the US was $1.2 trillion and in the UK £2 billion, with both figures steadily growing. However, a study of pre-university sixth form students by Esson and Ertle (2016), found prospective students to be more concerned with their expected return on investment in HE. The findings draw on the conservation of resources theory (Höbfoll, 1989, p.513), a resource-orientated model

Based on the supposition that people strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources.

Current students also appear to share this viewpoint (De Hauw & De Vos, 2010; Pick & Taylor, 2009; Tomlinson, 2008). Furthermore, students, both prospective and present, place significant emphasis on the reputational capital of the university (Cultural Capital, Chapter 2.3.2). That is to say, they perceive that the higher ranked the university, either at university or degree course level, the greater their chances of securing subsequent graduate employment (Esson & Ertle, 2016; Morley, 2007; Rothwell et al., 2008). This may become increasingly important if proposed changes by the UK Government come to fruition, whereby the employability of a university's alumni significantly influence university league tables (The Guardian, 2015b).

Students increasingly raise the increased tuition fees to academics, as they seek to maximise the return on their education-based investment. Unfortunately, this can lead to a sense of entitlement from the student, either through a demand for additional contact time or pressure to inflate grades. The academic risks becoming stuck between the UMT and the student, at the mercy of NSS scores. It is, therefore, reasonable to argue that the UK Government has moved power away from the academic and given it to the students, who perceive they are now buying an education via a financial transaction. This student-as-an-educational-consumer mentality (Tomlinson, 2014; 2013) is exacerbated by the comparison of their £9,000 per annum fees with those paid by older family members, some of whom benefited from a fully UK Government funded education, with no student related debt. Current students ask why their three-year degree is now worth £27,000. Of course, the reality is that universities have actually seen their overall funding decrease as UK Government seeks to reduce its investment contributions. The students, however, are not aware of this, or, if they are, they simply reiterate the financial burden placed on them as the educational consumer.

Debt and earnings deliberately form the final section of this literature review, complementing the proposed conceptual model. Drawing on the National Student Survey (2012), Tomlinson (2014) issues a word of caution around framing research in this area purely on economic return. The researcher is keen to highlight that the student is more than an educational consumer, with a single economically driven objective for undertaking a degree: to realise a return on investment. Research by Holmes (2015; 2013) and Tomlinson proposes that student motivations for pursuing HE are multifaceted, seeking to develop a graduate identity. *Research Question III* advances work by Holmes and Tomlinson, and helps to maintain a holistic approach to explain and understand the students' perceptions of graduate employability (Clarke, 2017; Tymon, 2011).

Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions.

2.8.4 The Complete University Guide 2018: Earnings by Degree Subject at University A

Table 9 provides evidence of the data submitted by University A to The Complete University Guide (2018) of earnings by degree subject at University A. The reported earnings are for full-time, domestic students who graduated in July 2015, in full-time employment, and who stated their earnings six months after graduation in January 2016. Earnings are provided for graduates in all employment categories (All), and for graduates in graduate-level employment only (Graduate Only), with the difference reported in the final column (Variance). The overall reported earnings determine the ranking of degree subjects. However, the methodology excludes students in further education, or not in employment six months after graduation. Therefore, earnings are only reflective of students able to secure full-time employment six months after graduation, rather than of all students who hold a degree in the specific degree subject. Furthermore, the results do not account for variance in earnings over the working life of a graduate from a given degree subject, and thus offer a snapshot in time view only.

Table 9: The Complete University Guide 2018 (University A)

Degree Subject	All	Graduate Only	Variance
Engineering	£26,522	£26,556	£34
Mathematics	£24,471	£24,734	£263
Business	£23,781	£24,357	£576
Politics	£22,197	£24,855	£2,658
Social Sciences	£22,197	£24,855	£2,658
Philosophy	£22,025	£22,634	£609
Law	£20,769	£22,441	£1,672
Chemistry	£20,512	£21,221	£709
Geography	£20,484	£21,445	£961
Modern Languages	£20,461	£21,913	£1,452
Archaeology	£19,671	£23,032	£3,361
Biology	£19,538	£21,452	£1,914
Education	£19,400	£21,900	£2,500
English	£19,472	£20,372	£900
Psychology	£19,117	£20,185	£1,068
Ocean & Earth Sciences	£19,000	£20,100	£1,100
History	£18,537	£20,398	£1,861
Art	£15,811	£17,128	£1,317
Music	£14,705	£15,288	£583

2.9 Chapter Summary

The literature review addressed *Research Question I: What are the factors of graduate employability?* Section 2.1 addressed graduate employability and existing conceptual models, Section 2.2 focused on the research framework of human capital and contemporary career theory, and Section 2.3 on human capital. Section 2.4 explored contemporary careers, including boundaryless and protean career constructs, and Section 2.5 covered careers advice. Section 2.6 offered moderators of gender, degree subject, and year of study. The conceptual module (Section 2.7) offered the following hypotheses and moderators in relation to addressing *Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?*

H1a. Social capital is a factor of human capital.

H1b. Cultural capital is a factor of human capital.

H1c. Psychological capital is a factor of human capital.

H1d. Scholastic capital is a factor of human capital.

H1e. Market-value capital is a factor of human capital.

H1f. Skills are a factor of human capital.

H2. Developing human capital is positively associated with graduate employability

H3. Holding a boundaryless career orientation is positively associated with graduate employability.

H4. Holding a protean career orientation is positively associated with graduate employability.

H5. Receiving careers advice is positively associated with graduate employability.

Moderator I. Gender is a moderator for H1-H5, such that the relationships are stronger for males than for females.

Moderator II. Degree subject is a moderator for H1-H5, such that the relationships are stronger for P3 subjects (Business, Engineering, Law, Mathematics, and Modern Languages) than for P1 and P2 subjects (Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences).

Moderator III. Year of study is a moderator for H1-H2, such that the relationships are stronger for penultimate year undergraduates than for final year undergraduates.

The literature review concluded by exploring *Research Question III*: *The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions* (Chapter 2.8).

Chapter 3: Methodology

3.1 Introduction and Research Paradigm

This chapter evidences the process taken to address *Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?,* and *Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions*. The literature review identified three dominant philosophical paradigms within the broader context of management, education, psychology, and sociology literature. Appendix B provides an overview of (i) positivism, (ii) phenomenology, and (iii) pragmatism.

This research adopted pragmatism as the philosophical position, to explain the students' perceptions of graduate employability, bridging management and educational research agendas within career theory. Gerald (2013) captures the suitability of the philosophical approach for this study, positioning pragmatism in educational research as focusing on a changing universe through *the practical application of ideas by acting on them to actually test them in human experience*. Examples of papers in the literature review adopting a mixed methods approach include Helyer and Corkill (2015), Edwards (2014), Taylor and Hooley (2014), Wilton (2014), Finch et al. (2013), and Stanley and Marsden (2012). In particular, pragmatism supports a mixed methods approach, driven by the research questions.

Section 3.2 evidences application of pragmatism as the research paradigm through the adoption of a pragmatic, sequential explanatory mixed methods research design, underpinned by the literature review (Chapter 2). Additionally, justification is provided for a mixed methods approach, for the decision to lead with a quantitative, two-wave first stage, and for the decision to run the quantitative and qualitative stages sequentially rather than concurrently. Section 3.3 evidences the research sample for the quantitative phase. Section 3.4 discusses the ethical considerations of the research, and Sections 3.5 and 3.6 present the variables and moderators (phase one) and interview questions (phase two). The interview questions were derived from the literature review (Chapter 2) and the quantitative results (Chapter 4). However, the interview questions are included within the methodology chapter to facilitate readability, with references to Chapters 2 and 4 as necessary. Section 3.7 discusses the preparation of data for analysis and Section 3.8 provides a chapter summary.

3.2 Research Design

A pragmatic, sequential explanatory mixed methods design (Creswell, 2015; 2003) facilitated quantitative methods of stage one to be explained by qualitative methods of stage two with the purpose of adding depth and obtaining a more comprehensive understanding of the students' perceptions of graduate employability factors. This directly responded to calls evidenced in the literature review by Edwards (2014) and Wilton (2014) for a mixed methods study incorporating a two wave quantitative stage to explain the students' perceptions of graduate employability. Stage one adopted an objective ontology, a realist epistemology and a deductive 'top-down' theory-testing approach. This incorporated a quantitative two-wave study, using self-reporting questionnaires as the instrument for data collection, and provided a mechanism for testing reality through statistical analysis. Subsequently, stage two adopted a subjective ontology and a non-realist epistemology with the purpose of adding depth to the study by explaining the quantitative findings. This incorporated a qualitative study using structured, open-question interviews as the instrument for data generation. Stage two adopted an inductive approach explaining the experiences, perceptions, opinions, feelings, and knowledge of the student participants with the purpose of providing deeper detail and meaning to the findings (Patton, 2015). This choice underpins the mixed methods methodology and a desire to adopt a method that offered valid and reliable answers to the research questions and hypotheses (Thomas, 2003). There is an acknowledgement that the two stages of this research operated within a single pragmatic philosophical framework to explain the students' perceptions of graduate employability. Further validity for this study came from parallel units of analysis across both stages (Creswell, 2015), represented by students from across twenty-one subject areas of a single university.

An alternative approach is a sequential exploratory mixed methods research design, whereby a quantitative study explores the initial qualitative findings (Benton & Craib, 2011; Creswell, 2015). This approach is appropriate for scholars exploring a new field, of which little is known. However, as evidenced in the literature review, the proposed conceptual model develops existing conceptual models of graduate employability. Additionally, research has explored the student view of HE and the graduate labour market, albeit heavily confined to students from Business, Engineering, Healthcare, Law, Mathematics, Medicine, and Modern Languages degree courses (Gupta et al., 2014; Hsieh & Hsu, 2013; Jackson & Chapman, 2012; Sheepway et al., 2014). The abundance of existing literature meant it was neither appropriate nor necessary to 're-invent the wheel' by leading with a qualitative study and thus application

of an explanatory sequential design better fitted the purpose of the research. This approach increased the theoretical and practical contributions of this study.

Critics of the mixed methods approach (Burrell & Morgan, 1983) highlight two positions (i) pluralism for pluralism's sake, and (ii) the occurrence of 'paradigm wars', leading to paradigm incommensurability. These two critiques are now addressed and defended within the context of this research, starting with (i) pluralism for pluralism's sake. Whilst Bryman (2006) views mixed methods as a fad, and it is likely the approach is used incorrectly at times (Bryman, 2007), this study did not adopt pluralism for pluralism's sake. Appendix B highlights the benefits of a quantitative phase to validate a conceptual model of graduate employability, and a qualitative phase to explain the students' perceptions of graduate employability. In particular, the qualitative phase enables unexpected findings from the quantitative phase to be explained, and missing items to be identified, which provides a deeper understanding. The pluralist stance seeks to address ongoing discussions of paradigm incommensurability (Burrell & Morgan, 1983), by applying research paradigms to the nature of the phenomenon of study rather than seeking commitment to a fixed singular paradigm (Cavaye, 2008; Jackson & Keys, 1984). Pluralism, in this case, helped to obtain a more comprehensive view of the research problem, with the subsequent qualitative stage providing tailored engagement with the students contextually within the research environment. This added further clarity, credibility, and reduced the risk of common method bias or false causality assumptions (Benton & Craib, 2011; Lincoln & Guba, 1985). Thus, the explanation of the students' perceptions of graduate employability benefits from pluralism, allowing rejection of the critique of pluralism for pluralism's sake.

Next, focus moves to critique (ii) the occurrence of 'paradigm wars', leading to paradigm incommensurability. Paradigm wars occur when two philosophically distinct research methods combine, whereby conflicting assumptions may lead to conflicting findings (Creswell, 2003). However, a pragmatic philosophy rejects the either/or choice of paradigm wars (Taskakkori & Teddlie, 2010). Whilst a concurrent mixed methods design would have condensed the time period required for data collection, the sequential mixed methods design offers a richer understanding of the students' perceptions of graduate employability, helping to address Burrell and Morgan's (1983) concerns of paradigm wars and paradigm incommensurability. Through using the qualitative phase to explain the quantitative findings, this research gains the benefits of methodological triangulation – specifically the notion that triangulation strengthens a study through the combination of methods (Creswell, 2015) - whilst

reducing the risks of paradigm wars (Patton, 2015, drawing on earlier work of Donald Campbell). A pragmatic philosophy helps to provide a fuller explanation of the students' perceptions of graduate employability, resulting in deeper theoretical and practical contributions. The feasibility of the practical contributions from a pragmatic approach facilitates implementation in the real world. This research, therefore, rejects the critique of paradigm incommensurability. Figure 2 (next page) provides an overview of the pragmatic, sequential explanatory design of students' perceptions of graduate employability, and Appendix C evidences the researcher position.

The final focus of this section addresses the two-wave aspect of the quantitative data collection. Wave one and wave two each represent a cross-sectional study containing multiple variables at a specific point in time (penultimate and final year of undergraduate study). The results from these two waves enable the hypotheses deduced from the literature review to be either supported or rejected. Furthermore, the two cross-sectional studies offer a greater number of data points and a higher level of understanding than a single cross-section study. However, a two-wave research design study cannot be presented as a longitudinal study (Ployhart & Vandenberg, 2010). For a study to be considered longitudinal, it must have a minimum of three waves, and each of these waves must make a prediction of data for the subsequent wave in order to examine predictors of change over time. Due to resource constraints of time and money, it was not feasible to carry out a longitudinal study for this specific research. This was not considered to be problematic as the three research questions could be answered based on the two-wave design. The limitation of common method bias or false causality assumptions from a two-wave design was reduced through a qualitative stage of interviews to follow-up on unexpected findings from the quantitative stage, as previously discussed in this section (Benton & Craib, 2011; Lincoln & Guba, 1985). In the future, this study could be converted from a two-wave, cross-sectional study, to a three-wave, longitudinal study. The third wave could follow students after graduation into the labour market to see how their emergent identity and views continue to evolve over time. Subsequent waves of data could also be collected over time as resources permitted. A challenge to this could be maintaining access to participants and the dropout rate of participants with each subsequent wave (Baruch & Holtom, 2008). The linking and prediction of data between waves could add further contribution to theory and practice. Chapter 8.3 presents a further discussion of the opportunities for future research through converting this two-wave, cross-sectional study into a longitudinal study.

A Sequential Explanatory Design of Students' Perceptions of Graduate Employability

Literature Review & Pre-Studies of University A
Cross Faculty Work Placement Audit (CFWPA)
Cross Faculty Perceived Employability Ranking (CFPER)
Conceptual Model of Graduate Employability (*Research Question I*)

INFORMS

QUANTITATIVE	**Wave One & Wave Two Questionnaires (Deductive)**	
Academic Years *2015/2016 & 2016/2017*	Procedures	Products
	Pilot Study	*Results Database*
Wave One *(1,355)*	*Data Collection*	*Statistical Analysis Report*
	Data Cleaning	*32 Item Model (Wave 1 & 2)*
Wave Two *(387)*	*Data Analysis*	*61 Item Model (Wave 2)*

EXPLAINED BY

QUALITATIVE	**Interviews (Inductive)**	
Academic Year *2016/2017*	Procedures	Products
	Data Generation	*Interview Transcripts*
	Transcription	*List of Codes*
Participants *(38)*	*Thematic Analysis*	*Themes*
	Interpretation	*Model*

INFERENCES DRAWN

FINDINGS	**Validated Model of Graduate Employability (*Research Question II*)**
	Benefits Verses Costs of Higher Education (*Research Question III*)

Notation Adapted From Creswell (2015) and Morse (2003).

Figure 2: An Explanatory Sequential Design of Research Questions I-III.

3.3 Research Sample

The first phase of the pragmatic, sequential explanatory mixed methods approach adopted a quantitative two-wave study, offering reliability and general applicability (Benton & Craib, 2011). This reflected the literature's call for validation of a new conceptual model of graduate employability, representing the views of undergraduates prior to entry into the graduate labour market (Hsieh & Hsu, 2013; Klein & Fowles, 2009; Sheepway et al., 2014; Wilton, 2012). Stage two of this research adopted qualitative, structured interviews as the final phase of the pragmatic, sequential explanatory mixed methods design. The purpose of this was to gain deeper understanding, clarity, and contextualisation, based on the inferred findings of the quantitative data from stage one (Patton, 2015). This approach included explaining patterns and unexpected outcomes from hypotheses in the quantitative stage and is advocated by Creswell (2003), Gorard (2004), and Benton and Craib (2011). This approach is compatible with a pragmatic philosophy as elements of a positivist and a phenomenological philosophy are brought together to explain the students' perceptions of graduate employability, as previously discussed in Sections 3.2 and 3.3.

3.3.1 Quantitative Research Sample

Wave one of quantitative data collection invited participation from n=4,651 penultimate year students from across five target faculties at University A. The five faculties provided twenty-one subjects across the three priority areas as identified from the CFPER (Chapter 2.6.2). Group one covered P1 and P2 subjects of Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences. Group two covered P3 subjects of Business, Engineering, Law, Mathematics, and Modern Languages.

The Faculty of Healthcare and Medicine (P3): Healthcare (P3), Medicine (P3), Midwifery (P3), and Nursing (P3) at University A was not included in this research due to saturation of these particular undergraduates in existing literature (Chapter 2), and the faculty composed solely of P3 subjects (Section 2.6.2). Furthermore, these undergraduates differ from other undergraduates at University A, since their courses are up to five years in duration and often targeted at very specific employment outcomes post-graduation. The Faculty of Physical Sciences and Engineering (P2/P3): Astronomy (P2), Physical Sciences (P2), and Computer

Science (P3) were used for the pilot study (Appendix D), again because of significant prior coverage as identified in the literature review (Chapter 2).

Wave one invited each of the n=4,651 penultimate year students within the target faculties of University A to participate in a self-reporting questionnaire (Questionnaire A) distributed between November 2015 and March 2016 in the academic year 2015/2016. Appendix E evidences the participation information sheet, Appendix F the consent form and Appendix G Questionnaire A. Questionnaires were distributed online, in-person via university lectures, and via the university careers advisors to provide maximum coverage and awareness. Focus now moves to the benefits and limitations of each of these methods of distribution.

Online distribution of questionnaires enabled all of the target population to have an opportunity to participate. During enrolment at University A, students receive a university email address, and course content delivery makes use of various online platforms and mediums. This meant that barriers to online questionnaire approaches around access to technology or competence in using technology did not offer cause for concern. However, students at University A receive a high volume of email requests for participation in surveys. This has led to survey fatigue, whereby students feel so inundated by requests to participate in research surveys that they start to ignore all such requests. This research partly addressed this barrier through sending an initial email (November 2015), a follow-up email (December 2015) and a final email (February 2016), with the hope of engaging a further segment of the target population with each iteration.

The opportunity for the researcher to distribute paper-based questionnaires during university lectures provided access to a captive audience, with the likelihood of improved response rates in comparison to online surveys (Baruch & Holtom, 2008; Wilton, 2012). However, this approach required permission from lecturers to have access to their students during class time and was considerably more time-consuming to the researcher than sending out an online link. The researcher thus targeted lecture slots during February and March 2016. This time slot avoided university examinations that take place in January. The researcher's appearance in-person to request the students to complete the questionnaire risked bias or influence. To minimise this, the researcher provided the same participant information briefing to each class and this information was identical to the information provided via the online survey (Appendix E). A further limitation of attending student lectures was that often attendance was around n=40 students at a time, although this varied from n=10 to n=150

depending on the subscription to the specific course module. Paper-based surveys also had to be inputted manually to enable statistical analysis to be conducted.

The university careers service facilitated the data collection process, recognising the importance and contribution of the study to shaping employability strategy at University A. Students who attended careers advice meetings between January 2016 and March 2016 and students who attended the University Careers Fair in February 2016 received paper copies of the questionnaire. A limitation here was the distribution of questionnaires only to students actively engaged in considering their post-studies employability. However, it was important to reflect the work of the university careers advisors, and the online link ensured that all of the target population had an opportunity to participate in this study.

The researcher subsequently invited participants of Questionnaire A in their final year of undergraduate study in the academic year 2016/2017, to participate in wave two of this research between November 2016 and December 2016. Each student received an email with a link to an online version of Questionnaire B (Appendix H) using the email address provided during completion of Questionnaire A. Student university email address provided a linked anonymity identifier between Questionnaire A and B. This ensured confidentiality of data whilst facilitating the two-wave aspect of this study (discussed under Ethical Considerations 3.4.1). Separate objective data of UCAS points, representing degree entry level grades, was used to help address the issue of common method bias and to reduce the impact of self-reporting or overestimation of perceived self-ability by undergraduate students.

A probability based, quota sample applied to each of the five faculties, offering 5% margin of error and 95% confidence in the results. The total population and quota achieved for each of the five faculties were as follows:

1. Faculty of Business, Art & Law (n=906; n=270)
2. Faculty of Engineering and the Environment (n=721; n=251)
3. Faculty of Humanities (n=923; n=272)
4. Faculty of Natural & Environmental Sciences (n=907; n=271)
5. Faculty of Social, Human and Mathematical Sciences (n=1,194; n=291)

One thousand three hundred and fifty-five (n=1,355) penultimate year undergraduate students from University A completed Questionnaire A, from a total population of four thousand six hundred and fifty-one (n=4,651), representing a wave one response rate of 29.13%. Response rates for paper-based data collection (637/700, 91.00%) were considerably higher than for

online data collection (718/4651, 15.44%), as expected based on guidance from career theory literature (Baruch & Holtom, 2008; Wilton, 2012).

Of the one thousand three hundred and fifty-five participants in wave one, one thousand two hundred and fifty-five provided an email address, of which one thousand two hundred and fifteen (n=1,215) were valid, to enable participation in wave two of the quantitative data collection. Three hundred and eighty-seven (n=387) final year undergraduate students from University A completed Questionnaire B, representing a wave two response rate of 31.85%. These response rates are typical of quantitative studies in career theory and accepted in social science as offering 95% confidence, 5% margin of error (Jackson, 2010; Tomlinson, 2012; Wilton, 2012). This offered a large sample for performing statistical analysis based on a comparison of quantitative studies from the literature review detailed in Chapter 2. Two of the most widely cited participation based papers in management research also support the achieved figures (Baruch, 1999; Baruch & Holtom, 2008).

3.3.2 Qualitative Research Sample

The second phase of the pragmatic, sequential explanatory mixed methods approach aimed to yield in-depth student responses about their *experiences, perceptions, opinions, feelings and knowledge* concerning the graduate labour market (Patton, 2015, p.14). This qualitative phase adopted structured interviews, using open-ended questions, derived from the quantitative findings of stage one (Chapter 4). This approach provided a greater understanding of the students' perceptions of graduate employability, which was appropriate for explaining phenomena undergoing constant change (Gioia, Corley & Hamilton, 2013), and directly responded to calls for scholars to *engage with those living the phenomenon and attempt to understand it from their perspective* (Corley, 2015, p.2). Appendix I and J evidence the participant information sheet and the consent form for the interviews. The qualitative phase adopted a non-probability, purposive sampling method, specifically targeting final year undergraduates from across five faculties and twenty-one subject areas previously identified in Chapter 2.6.2 and Section 3.3.1 (Patton, 2015). An equal number of male and female participants were targeted, with a maximum of four participants from any degree subject area, and full coverage across priority one and two, and priority three subject groups. Coverage of these subject and priority areas further contributes by informing policy and career planning strategy at the subject, university, government and OECD levels. Interview transcripts helped to build a code set and to develop and define themes via thematic analysis (Section 3.7 and

Chapter 5). This section of the methodology now outlines the participant numbers and methods used for conducting the interviews.

Over the last twenty-five years, academics have attempted to offer guidance on the number of interviews required for saturation (Adler & Adler, 2012; Becker, 2012; Brinkmann & Kvale, 2015; Creswell, 2012; 2007; Francis et al., 2010; Marshall, Cardon, Poddar & Fontenot, 2013; Morse, 1994). However, Saunders and Townsend (2016; 2015) conducted the largest analysis to date, examining two hundred and forty-eight studies published in organisation and workplace journal articles between 2010 and 2013. They found that only 81% of studies reported their sample size and only 4.2% reached saturation. The average number of interviews to reach saturation was 32.5. Whilst these numbers help to represent studies in the field, and attempts to provide empirical guidance to qualitative research may be well intended, following any particular set number of interviews would compromise the integrity of the qualitative phase of this research. Saunders and Townsend acknowledge this limitation and recommend that, when considering sample size for reaching saturation in qualitative, interview-based studies, sample size should be determined on a case-by-case basis. This research adhered to their advice. Participant numbers for this research increased until saturation was reached at the category level, in accordance with guidance by Suddaby (2006), Corbin and Strauss (1990), and Strauss and Corbin (1990) for result verification. Thirty-eight participants were required to reach saturation, as detailed and evidenced in Chapter 5.1.

Twenty-nine interviews took place in person at University A (76%) and nine by telephone (24%). The telephone approach was used where students were not based at the main campus or where students were currently on a semester abroad. This ensured representation of all degree subjects, whilst the majority of interviews conducted in person ensured validity. No differences were found in responses based on the interview method adopted. Interviews ranged from 22 minutes to 43 minutes, with an average length of 29 minutes. By conducting the interviews at University A or by telephone, this helped to put the students at ease due to familiarity with the research environment. Furthermore, to try to prevent students from giving the answers they felt the researcher might want to hear, the researcher stated prior to the interview that there were no right or wrong answers and that all opinions were valid. The researcher introduced and concluded each interview in the same manner, and asked the same base set of questions in the same order (Section 3.6 & Appendix M).

3.4 Ethical Considerations

Section 3.4 evidences the quantitative (Section 3.4.1) and qualitative (Section 3.4.2) ethical considerations for this research.

3.4.1 Quantitative Ethical Considerations

The researcher submitted ethical documents to the institutional review board of University A, for the quantitative two-wave study (ID: 14811). The application covered areas including a description of the study, Questionnaire A, Questionnaire B, ethical considerations, participant information sheet, debriefing form, risk assessment, and point of contact in case of queries or complaints. The institutional review board approved the documents without modification.

A key consideration of the two-wave element of the quantitative study was the need for a linked anonymity identifier. Participation needed to remain anonymous, while enabling the return to participants of wave one, to request participation in wave two. To address this, participants of wave one were asked to enter their university email address, but not any part of their name or any other contact details. A list of email addresses was held in a way that did not link an individual email address to an actual individual wave one response. This approach was favoured over collecting the unique student ID of the participant, as students were more likely to know their university email address, and furthermore, this facilitated distribution of wave two directly to their email inbox. Use of a password-protected computer for storing electronic data and a locked filing cabinet for the original paper-based responses ensured confidentiality and compliance with the institutional code of ethics.

Questionnaire-based studies at University A tend to offer incentives for participation, most commonly in the form of vouchers or a chance to win electronic devices including iPads. Whilst these incentives increase response rates, they were not appropriate for this research. Two of the questions look at economic perceptions, in terms of clearing student loan and predicted earnings six months after graduation. Offering any kind of economic incentive for participation was highly likely to create bias in the results, towards those motivated economically, thus failing to provide a fair coverage and reflection of the student perspective. Appendix B further evidences the researcher position as a key ethical consideration across both aspects of the pragmatic, sequential explanatory mixed methods design.

A criticism of this study, specifically in terms of a questionnaire based approach, states that students may not reliably know their views and perceptions of the graduate labour market because they may not have prior or sufficient experience of the graduate labour market to be suitably informed. However, in response to such criticism, this study seeks to gain an understanding of the student perspective, as they perceive the graduate labour market and their own employability. This, in turn, highlights the alignment or otherwise of students' perceptions with those of other stakeholders. Even if students' perceptions appear contradictory to positions of other actors, there is a need to highlight such discrepancies, to facilitate a bridging of this gap. Equally, alignment of perceptions could evidence a more collaborative approach, although it is imperative to note that alignment of perceptions does not necessarily mean alignment of objectives or strategies across actors.

3.4.2 Qualitative Ethical Considerations

The researcher submitted ethical documents to the institutional review board of University A, for the qualitative, structured-interviews (ID: 23987). The application covered areas including a description of the study, structured interview questions, ethical considerations, participant information sheet, debriefing form, risk assessment, and point of contact in case of queries or complaints. The institutional review board approved the documents without modification.

Interviews were conducted in person at University A or by telephone, to try to make the participants feel as relaxed as possible within their own daily environment. In an effort to minimise bias, the same researcher conducted all interviews and asked the same interview questions (Section 3.6 & Appendix M). Each participant provided informed consent prior to participation in the interview and additionally had the opportunity not to answer specific questions, or to end participation at any time. As part of the debriefing process, students were asked not to discuss the interview questions with other students until completion of all interviews. This sought to reduce bias where students on the same course or from the same house participated in the interviews. The researcher altered the real names of the interview participants to ensure confidentiality and anonymity. Furthermore, the electronic transcripts were kept on a password-protected computer to ensure confidentiality and compliance with the institutional code of ethics. The interview transcripts were only accessed by the lead researcher and by the supervision team who represented researcher two and three in the thematic analysis process (Section 3.10).

3.5 Variables and Moderators

Section 3.5 addresses the quantitative stage of data collection. A 32-item two-wave model addressed the following pre-validated variables from existing literature, under eight category headings:

1. **Social Capital**: 1-item measure (Baruch et al., 2005), addressing *H1a.*
2. **Cultural Capital**: 1-item measure (Esson et al., 2013), addressing *H1b.*
3. **Psychological Capital**: 1-item measure (Baruch et al., 2005), addressing *H1c.*
4. **Scholastic Capital**: 8-item measure (Baruch et al., 2005; Jackson & Chapman, 2012), addressing *H1d.*
5. **Market-Value Capital**: 9-item measure (Purcell, Elias, Davies & Wilton, 2005), addressing *H1e.*
6. **Skills**: 7-item measure (Jackson & Chapman, 2012), addressing *H1f.*
7. **Employability**: 3-item measure (Rothwell & Arnold, 2007), addressing *H2.*
8. **Objective Data**: 2-item measure (Esson et al., 2013).

Two additional categories provided moderation and linked anonymity:

9. **Moderators**: Gender, Degree Subject, and Year of Study, addressing *Moderators I, II and III*.
10. **Code Number**: Student University Email for linked anonymity.

One further category addressed debt and earnings as part of *Research Question III*.

11. **Debt and Earnings** (Baruch, 2014; Esson et al., 2013).

Based on the findings of wave one, further items were added to wave two to offer a stand-alone 61-item model, under ten category headings:

1. **Social Capital**: 7-item measure (Baruch et al., 2005; Steinfield, Ellison & Lampe, 2008), addressing *H1a.*
2. **Cultural Capital**: 11-item measure (Esson et al., 2013; Jaeger, 2010), addressing *H1b.*
3. **Psychological Capital**: 5-item measure (Cook et al., 1981), addressing *H1c.*
4. **Scholastic Capital**: 9-item measure (Baruch et al., 2005; Esson et al., 2013; Jackson & Chapman, 2012), addressing *H1d.*
5. **Market-Value Capital**: 9-item measure (Purcell et al., 2005), addressing *H1e.*
6. **Skills**: 7-item measure (Jackson & Chapman, 2012), addressing *H1f.*
7. **Protean Career**: 7-item measure (Baruch, 2014; Baruch et al., 2005), addressing *H4.*

8. **Careers Advice**: 3-item measure (Holmes, 2015), addressing *H5*.
9. **Employability**: 3-item measure (Rothwell & Arnold, 2007), addressing *H2-H5*.

One additional category provided moderation and linked anonymity:

10. **Moderators**: Gender, Degree Subject, and Year of Study, addressing *Moderators I, II and III*.

One additional category provided objective data:

11. **Objective Data**: UCAS, Bursary, Degree Classification

One final category addressed the boundaryless concept

12. **Boundaryless**: 4-item measure (Briscoe & Hall, 2006), addressing *H3*.

Moderation and mediation were explored by Alwin and Hauser (1975), and Judd and Kenny (1981). Moderator variables determine 'when' a relationship between an independent and a dependent variable takes place, in addition to the extent that this relationship is positive or negative. In contrast, mediator variables address 'how' or 'why' a specific occurrence takes place (Baron & Kenny, 1986). It is crucial that both reliable and valid measures underpin mediation analysis (Baron & Kenny, 1986; James & Brett, 1984). In response to this, academics including Stone-Romero and Rosopa (2011) have more recently been cautious of the methods proposed by Baron and Kenny. Furthermore, MacKinnon, Coxe and Baraldi (2012) highlight the number of variables that are not included in mediation-based research and subsequently question the extent to which generalisations of the observed results can be undertaken. By drawing on a large sample size, adopting a two-wave approach, and subsequently using follow-up interviews for further explanation of findings, this research offers reliable and valid mediators and moderators (MacKinnon, 2015; MacKinnon et al., 2012). Appendix K and Appendix L detail each individual variable, by category, including reference, question, measure, and rationale, for the 32-item two-wave model and for the 61-item stand-alone model.

3.6 Interview Questions

Section 3.6 addresses the qualitative stage of data collection by evidencing the interview questions asked of participants, alongside justification for the inclusion of each question based on the literature review (Chapter 2) and quantitative results (Chapter 4). Appendix M provides a summary of the interview questions.

1. What does the term employability mean to you?

The literature review adopted Rothwell and Arnold's (2007) definition of employability, and Vanhercke et al.'s (2014) definition of perceived employability. The inclusion of this question at the start of the interview facilitated comparisons between the literature definitions and the students' definitions.

2. What factors do you perceive as important to enhance your employability?

The literature review underpinned a conceptual model of graduate employability, quantitatively tested via a two-wave study. This question was posed to ensure that additional factors of employability not evidenced in the literature were considered. Furthermore, the skills reported by students facilitated a comparison of the skills deduced from the literature review.

3. What challenges do you see in finding a job after university?

The literature review offered a number of challenges to students' finding a job after university, for example, the volume of graduates entering the graduate labour market. This question continued the approach of questions one and two in examining the alignment or otherwise between career theory literature and the students' perceptions of graduate employability.

4. Just remind me, what degree course are you studying? What difference do you think there may be between studying different degree subjects and perception of employability?

This question further explained the impact of degree subject on the perception of employability, hypothesised as a moderator from the literature review and statistically evidenced as a moderator in the quantitative results.

5. How would you expect your UCAS points or university bursary status to influence your perceived employability?

UCAS points and university bursary status were included as objective data in the quantitative study. However, the quantitative results indicated no influence of UCAS points or university bursary status on perceived employability. This question enabled validation of this position, given the contradiction with the expectation from career theory literature that UCAS points (Teichler, 2009) and university bursary status (Esson et al., 2013) would influence perceived employability.

6. How do you think that your social networks – like your family, friends, or society memberships – influence your employability?

Career theory literature identifies social networks as an important employability factor (Lee, 2009). The quantitative results supported correlation with employability, but the mean score for social networks was neutral. Perhaps social networks become more important after time spent in the labour market in relation to future career moves, rather than for entry-level graduate roles. Alternatively, students might not be aware of the importance of social networks, or perhaps they hope that social networks are not of importance. Additional clarification and explanation was required and therefore this question was included in the interviews.

7. Have you made use of the careers service or graduate recruiters during your university studies? If Yes: What positive and negative experiences did you have? If No: Why? What could the careers service and graduate recruiters do to improve your employability?

The literature review identified careers advice as a significant aspect of employability. Although the quantitative results evidenced significant correlation between careers advice and employability, the regression model impact was $r = 0.005$ (0.5%) and the mean score was neutral. This was despite University A winning multiple awards for its careers advice, and for the employability of its graduates. This interview question addressed and looked to explain this possible mismatch of perceptions.

8. What do you think are some of the barriers to undertaking a work placement during your degree studies?

The Wilson Review (2012) stated that all undergraduates should have the opportunity to undertake a work placement as part of their degree studies. However, despite University A offering work placements to all undergraduates, the uptake of work placement opportunities remains low. Passmore (2014) found that 92% of students stated the importance of having opportunities for placements, work experience, or internships, but only 27% of the students at University A undertook them. The quantitative results supported the findings of the perceived importance of work placements, therefore this question offers an opportunity to explain the barriers that students face, or perceive they face.

9. Would you rather work for a single organisation or move around multiple organisations? If single organisations: Why for a single organisation – and locally, nationally or internationally based? If move around: Why move around – and locally, nationally or internationally?

The literature review focused on career mobility through boundaryless career orientation. However, the quantitative results showed no influence of a boundaryless career orientation on perceived employability. This question enabled a greater understanding of career mobility as perceived by students entering the labour market. For example, does a lack of exposure to the labour market prohibit students from having an informed view on their career mobility?

10. How would you expect gender to influence employability?

The literature review identified gender as a potential moderator of perceived employability, however, the quantitative results found limited support. This question offered further insight into the students' perceptions of gender on perceived employability.

11. How would you expect your year of study to influence employability?

Career theory literature indicated that perceived employability increases with each year of study. However, the quantitative two wave findings did not support this position, or at best offered a dichotomy of yes and no. This interview question expanded these findings, to clarify the moderation, if any, of each additional year of study on perceived employability.

12. Do you think you will be able to repay your university debt?

Undergraduates and graduates have historically believed they will repay their university student debt. However, the participants of this study represent one of the first cohorts of students to experience tuition fees of £9,000 per annum. The quantitative results suggest that the majority of students no longer believe it will be feasible to repay their debt. This interview question further explained the students' perceptions of university debt.

13. Do you think the benefits of higher education outweigh the associated costs?

With increased fees and increased participation in HE, do current students still feel that the benefits of HE outweigh the costs, or have perceptions changed?

3.7 Preparing Data for Analysis

Section 3.7 evidences the quantitative (Section 3.7.1) and qualitative (Section 3.7.2) preparation of data for analysis. Chapter 4 provides the quantitative results and Chapter 5 the treatment of qualitative data.

3.7.1 Quantitative Data Preparation

The quantitative data was collected, collated, and subsequently coded, ready for analysis in SPSS. Incomplete responses were removed from the study, although responses where a valid university email address was not provided, were included in wave one, but were unable to be used in wave two. The data was coded using the coding sheets in Appendix N (Questionnaire A) and Appendix O (Questionnaire B). Systematic deduction of the quantitative results occurred in accordance with Boone and Boone (2012). This included descriptive statistics, intercorrelations, Cronbach's alpha measure of reliability, factor analysis, regression modelling, and moderation. This provided a thirty-two item model based on results from wave one and wave two, and a sixty-one item model based on results from wave two only. The sixty-one item model included the thirty-two items from wave one, and an additional twenty-nine items added based on initial findings from wave one. Chapter 4 provides the quantitative results in preparation for analysis in Chapter 6.

3.7.2 Qualitative Data Preparation

The next stage of the pragmatic, sequential explanatory mixed methods approach focused on conducting interviews. The interview questions looked to explain twelve areas (Section 3.6 and Appendix M). Chapter 5 addresses the treatment of qualitative data in full. A brief overview is provided here for reference. Thematic analysis followed the six phases, as identified by Braun and Clarke (2006, p.35):

familiarising yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.

However, an iterative approach to the six phases was favoured over a linear approach, to enhance the richness and depth of the findings (Clarke & Braun, 2013). The recorded interviews were transcribed and loaded into NVivo to facilitate thematic analysis, as NVivo offered transparency, flexibility, the ability to code data, and ability to retrieve data quickly (Corbin & Strauss, 2015; Miles & Huberman, 1994).

To reduce the bias of thematic analysis being conducted by a single researcher, a second researcher conducted thematic analysis on a sample of 10% of the interview transcripts (Saldaña, 2015). These four transcripts represented all three subject categories (P1/P2/P3) and both genders (male/female). A third researcher carried out a comparison of the themes, sub-themes, and codes induced from the sample transcripts with those induced from all transcripts. This provided additional integrity to the findings and helped to clarify understanding, as well as explaining twelve factors from the literature review and quantitative results via twenty-three themes, and one hundred and seventy-seven codes. In accordance with Javadi and Zarea (2016), the researcher's interpretation of the codes and subsequent themes was considered more important than the frequency with which the student participants cited codes. Each theme had internal homogeneity, the data inside the theme was related, and external heterogeneity, the themes themselves were distinct from each other (Boyatzis, 1998). The semantic nature of the themes meant that coding helped to show patterns and represent the richness of the entire data set, by explaining the students' perceptions of graduate employability. The aim was to theorise the importance of patterns and of their wider meanings (Boyatzis, 1998; Morse & Field, 1995). A limitation of thematic analysis is that it does not follow the account of a single student. However, this research is looking at the students' perceptions as a collective and the combined accounts of different students helped to build an overall picture to explain their views.

3.8 Chapter Summary

The methodology chapter comprised of eight sections, with section 3.1 providing an introduction and overview of the research paradigm. Section 3.2 evidenced application of pragmatism as the research paradigm through the adoption of a pragmatic, sequential explanatory mixed methods research design, underpinned by the literature review (Chapter 2). This section provided justification for a mixed methods approach, for the decision to lead with a quantitative first stage, and for the decision to run the quantitative and qualitative stages sequentially rather than concurrently. Section 3.3 detailed the research sample for the quantitative (two-wave questionnaire) and qualitative (interview) stages. Section 3.4 discussed the ethical considerations for the study, incorporating both stages of the mixed methods design. Section 3.5 (variables and moderators) addressed the quantitative phase, and Section 3.6 (interview questions) addressed the qualitative phase. The interview questions were derived from the literature review (Chapter 2) and the quantitative results (Chapter 4). However, the interview questions are included within the methodology chapter to facilitate readability, with

references to Chapters 2 and 4 as necessary. Section 3.8 details how the quantitative and qualitative results were prepared for analysis.

A key purpose of the methodology chapter was the justification for a pragmatic, sequential explanatory mixed methods research design (Sections 3.1 and 3.2). A brief summary of the justification is provided here, firstly addressing the research philosophy. Gerald (2013) captures the suitability of the philosophical approach for this study, positioning pragmatism in educational research as focusing on a changing universe through *the practical application of ideas by acting on them to actually test them in human experience*. This research thus adopted pragmatism as the philosophical position, to explain the students' perceptions of graduate employability, bridging management and educational research agendas within career theory. The application of the research paradigm and research design to the research questions offers integrity to the research and maximises the theoretical and practical contributions. Through adopting a pragmatic philosophy, this research explains and represents the student voice in graduate employability discourse, offering feasible contributions contextualised within the real world.

Secondly, the research design is justified, in response to critics of a mixed methods approach citing mixed methods either as a fad or as pluralism for pluralism's sake (Bryman, 2007; 2006). Section 3.1 and Appendix B highlighted the offerings and limitations of a quantitative or qualitative approach in the context of this research, and Section 3.2 evidenced the benefits and limitations of a sequential or concurrent approach. Mixed methods drew on elements of both quantitative and qualitative design with the purpose of explaining the students' perceptions of graduate employability. The quantitative phase offered validation of a conceptual model of graduate employability, and the qualitative phase facilitated deeper explanation of the literature review and quantitative findings. This, in turn, addressed Research Questions II and III, and provided a mechanism for investigating and subsequently explaining unexpected findings. A sequential mixed methods approach was preferred to a concurrent mixed methods approach to enable the qualitative stage to explain and further explore the quantitative stage. Although this meant the research took longer to conduct, it also provided a more robust contribution, both to career theory research, and to practical applications in the real world – discussed in Chapter 7.

Chapter 4: Quantitative Results

4.1 Introduction and Quantitative Participants

Chapter 4 provides an overview of the quantitative results. One thousand three hundred and fifty-five (n=1,355) penultimate year undergraduate students from University A completed Questionnaire A, from a total population of four thousand six hundred and fifty-one (n=4,651), representing a response rate of 29.13%. Response rates for paper-based data collection (637/700, 91.00%) were considerably higher than for online data collection (718/4651, 15.44%), as expected based on guidance from the literature discussed in Chapter 3. The data offered 95% confidence, 5% margin of error. Of the one thousand three hundred and fifty-five participants in wave one, one thousand two hundred and fifty-five provided an email address, of which one thousand two hundred and fifteen (n=1,215) were valid, to enable participation in wave two of the quantitative data collection. Three hundred and eighty-seven (n=387) final year undergraduate students from University A completed Questionnaire B, representing a response rate of 31.85% (Table 10). The data offered 95% confidence, 5% margin of error.

Table 10: Participant Characteristics (n=387)

Characteristics	n	%
Male	253	65.4
Female	134	34.6
P1 or P2	255	65.9
P3	132	34.1
Overall	387	100

The quantitative results addressed *Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?* Section 4.2 provides a summary of the statistics for the two-wave, thirty-two item model of human capital and employability with moderators of gender, degree subject, and year of study (Appendix K). Additionally, twenty-nine items were added to Questionnaire B, offering a stand-alone, sixty-one item model based on wave two results only, with moderators of gender and degree subject (Appendix L). This model focused on human capital, careers advice, career orientation, and employability, with summary statistics provided in Section 4.3. An audit trail of the statistics for the thirty-two item model (Section 4.4) and the sixty-one item model (Section 4.5) is then offered at a more granular level. To complement the two models and to address *Research Question III: The*

trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions; data was collected on expected earnings, expected debt, and the perceived benefit of HE versus the associated costs (Section 4.6). The quantitative results chapter concludes with a summary (Section 4.7).

4.2 Thirty-Two Item Model of Graduate Employability: Summary

Section 4.2 provides a summary of the statistics for the thirty-two item model of graduate employability, with Section 4.4 offering a full audit trail. Summary statistics in this section include descriptive statistics, intercorrelations, and Cronbach's alpha reliability (Section 4.2.1), factor analysis for human capital (Section 4.2.2), and regression results (Section 4.2.3).

4.2.1 Descriptive Statistics and Intercorrelations

Table 11 provides the means, standard deviations, and intercorrelations for gender, degree subject, human capital and employability for wave one (n=387). [a]Gender: 0 = Male, 1 = Female. [b]Degree Subject: 0 = P3, 1 = P1/P2. Cronbach's alpha reliability scores appear on the diagonal for human capital and employability. *p<.01 (2-tailed).

Table 11: Descriptive Statistics and Intercorrelations (Wave One)

Variables	Mean	SD	1	2	3	4
1. Gender[a]	0.65	0.48				
2. Degree Subject[b]	0.65	0.48	0.13*			
3. Human Capital	5.50	0.57	-0.07*	0.03	0.88	
4. Employability	4.35	1.10	-0.16*	0.03	0.25*	0.66

Table 12 provides the means, standard deviations, and intercorrelations for gender, degree subject, human capital and employability for wave two (n=387). [a]Gender: 0 = Male, 1 = Female. [b]Degree Subject: 0 = P3, 1 = P1/P2. Cronbach's alpha reliability scores appear on the diagonal for human capital and employability. *p<.01 (2-tailed).

Table 12: Descriptive Statistics and Intercorrelations (Wave Two)

Variables	Mean	SD	1	2	3	4
1. Gender[a]	0.65	0.48				
2. Degree Subject[b]	0.65	0.48	0.13*			
3. Human Capital	5.66	0.56	-0.03*	0.04	0.86	
4. Employability	4.42	1.11	0.02*	-0.02*	0.28*	0.71

4.2.2 Factor Analysis for Human Capital (First and Second Order)

Tables 13 and 14 show the outcomes of first order factor analysis for wave one and wave two at the individual item level (varimax rotated component matrix). This provides the scales of social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills (Table 15).

Table 13: First Order Factor Analysis for Human Capital (Wave One)

Human Capital	Item	1	2	3	4	5	6
Social Capital	1	**0.73**	0.21	-0.03	0.07	0.06	-0.03
Cultural Capital	2	-0.08	**0.73**	0.09	0.14	0.06	0.11
Psychological Capital	3	0.37	0.12	**0.53**	0.14	-0.01	0.05
Scholastic Capital	4	0.09	0.12	0.25	**0.78**	0.14	-0.07
	5	-0.06	0.26	-0.02	**0.68**	0.03	0.07
	6	0.18	0.19	0.07	**0.75**	0.22	-0.10
	7	0.04	-0.02	0.01	**0.75**	0.12	0.09
	8	0.13	-0.03	0.29	**0.57**	0.28	0.24
	9	0.15	-0.01	0.25	**0.67**	0.21	0.06
	10	0.10	0.08	-0.04	**0.65**	0.05	0.08
	11	0.21	-0.12	0.34	**0.59**	-0.01	0.24
Market-Value Capital	12	0.09	0.04	0.20	0.02	**0.60**	0.28
	13	0.24	0.29	0.07	0.02	**0.44**	0.11
	14	0.11	0.37	0.13	0.05	**0.77**	0.10
	15	-0.02	0.31	0.07	0.21	**0.82**	0.10
	16	0.01	0.33	0.21	0.12	**0.81**	0.08
	17	-0.03	0.24	0.08	0.17	**0.83**	0.02
	18	-0.01	0.22	0.04	0.12	**0.84**	0.14
	19	0.02	0.16	0.11	0.15	**0.86**	0.10
	20	-0.01	0.19	0.07	0.13	**0.81**	0.12
Skills	21	-0.03	0.08	0.44	-0.02	0.04	**0.53**
	22	-0.06	0.04	0.25	0.20	0.02	**0.66**
	23	0.04	0.11	0.53	-0.07	0.16	**0.54**
	24	0.08	0.02	-0.08	0.02	0.15	**0.77**
	25	0.04	0.08	-0.01	0.10	0.11	**0.77**
	26	0.19	0.01	-0.09	0.13	0.13	**0.77**
	27	0.05	0.05	-0.11	0.12	0.13	**0.75**

Table 14: First Order Factor Analysis for Human Capital (Wave Two)

Human Capital	Item	1	2	3	4	5	6
Social Capital	1	**0.65**	0.04	-0.21	0.02	0.21	0.01
Cultural Capital	2	0.13	**0.78**	0.12	0.17	-0.04	0.02
Psychological Capital	3	0.13	0.02	**0.64**	0.42	0.02	0.01
Scholastic Capital	4	0.14	0.23	0.11	**0.75**	0.10	0.06
	5	0.08	-0.09	0.04	**0.67**	0.26	0.01
	6	0.06	0.01	0.03	**0.86**	0.12	-0.03
	7	0.16	0.06	-0.01	**0.77**	0.01	0.08
	8	0.07	0.43	0.02	**0.59**	0.23	0.17
	9	0.13	0.35	-0.04	**0.70**	0.06	0.04
	10	0.13	-0.04	0.04	**0.66**	0.18	0.12
	11	0.18	0.37	0.27	**0.41**	-0.03	0.07
Market-Value Capital	12	0.05	0.09	0.34	0.01	**0.89**	0.16
	13	0.03	-0.03	0.04	0.04	**0.77**	0.02
	14	0.05	0.09	0.34	0.01	**0.89**	0.16
	15	0.11	0.07	0.11	0.04	**0.84**	0.03
	16	0.04	0.08	0.13	0.06	**0.79**	0.04
	17	0.01	-0.07	0.01	0.24	**0.83**	0.10
	18	0.08	0.24	0.04	0.06	**0.78**	0.02
	19	0.05	0.08	0.22	0.16	**0.75**	0.05
	20	-0.01	0.05	0.29	0.11	**0.67**	0.12
Skills	21	0.11	0.15	0.04	-0.21	0.15	**0.69**
	22	0.08	-0.06	0.04	-0.01	0.06	**0.76**
	23	0.04	0.44	-0.02	-0.18	0.10	**0.58**
	24	-0.05	-0.03	0.13	0.18	0.01	**0.83**
	25	-0.01	0.10	-0.01	0.11	0.06	**0.83**
	26	-0.01	0.10	0.17	0.32	0.01	**0.72**
	27	-0.06	-0.19	0.04	0.21	0.01	**0.76**

Table 15 shows the outcomes of second order factor analysis for wave one and wave two. In both waves, social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills, are a single factor of human capital.

Table 15: Second Order Factor Analysis for Human Capital

Human Capital	1 (Wave 1)	1 (Wave 2)
Social Capital	0.48	0.55
Cultural Capital	0.51	0.64
Psychological Capital	0.63	0.74
Scholastic Capital	0.84	0.77
Market-Value Capital	0.70	0.53
Skills	0.96	0.71

4.2.3 Regression

Table 16 shows a two-step regression of control variables (gender and degree subject), and employability indicators (human capital) for perceived employability of the 32-item model. The results for wave one and wave two show an adjusted R^2 variance of 8%. b represents the standardised coefficients Beta. Multicollinearity was not present in the regression model as the tolerance and variance inflation factor values were within the acceptable range of 0.1 and 2.5 (Hair, Black, Babin & Anderson, 2010). First order linear auto-correlation was not present as the Durbin Watson test in SPSS gave results within the acceptable range of 1.5 and 2.5 (Podsakoff, Mackenzie, Lee & Podsakoff, 2003).

[a]Gender: 0 = Male, 1 = Female. [b]Degree Subject: 0 = P3, 1 = P1/P2. *p<.004.

Table 16: Regression of Perceived Employability (32-Item Model)

Predictors	Wave One		Wave Two	
	b		b	
	Step 1	Step 2	Step 1	Step 2
Step 1: Control Variables				
Gender[a]	-0.16*	-0.14*	0.03	0.04
Degree Subject[b]	0.05	0.04	-0.03	-0.04
Step 2: Employability Indicators				
Human Capital		0.24*		0.29*
R^2	0.03	0.09	-0.01	0.08
Adjusted R^2	0.02	0.08	-0.01	0.08

4.3 Sixty-One Item Model of Graduate Employability: Summary

Section 4.3 provides a summary of the statistics for the sixty-one item model of graduate employability, with Section 4.5 offering a full audit trail. Summary statistics in this section include descriptive statistics, intercorrelations, and Cronbach's alpha reliability (Section 4.3.1), factor analysis (Section 4.3.2), and regression results (Section 4.3.3).

4.3.1 Descriptive Statistics and Intercorrelations

Table 17 provides the means, standard deviations, and intercorrelations for gender, degree subject, human capital, careers advice, career ownership, and employability for wave two only (n=387). [a]Gender: 0 = Male, 1 = Female. [b]Degree Subject: 0 = P3, 1 = P1/P2. Cronbach's alpha reliability scores appear on the diagonal for human capital and employability. *$p<.01$ (2-tailed).

Table 17: Descriptive Statistics and Intercorrelations

Variables	Mean	SD	1	2	3	4	5	6
1. Gender[a]	0.65	0.48						
2. Degree Subject[b]	0.65	0.48	0.13*					
3. Human Capital	5.17	0.46	-0.03*	0.04	0.85*			
4. Careers Advice	4.06	1.20	-0.02*	0.05	0.34*	0.84*		
5. Protean Career	5.36	0.67	0.15*	-0.01	0.31*	0.20*	0.68*	
6. Employability	4.42	1.11	0.02*	-0.02	0.29*	0.17*	0.61*	0.71

4.3.2 Factor Analysis

Table 18 shows the outcomes of first order factor analysis for human capital at the individual item level (varimax rotated component matrix). This provides the scales of social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills for use in the second order factor analysis.

Table 18: First Order Factor Analysis for Human Capital

Human Capital	Item	1	2	3	4	5	6
Social Capital	1	**0.29**	-0.01	0.21	0.06	0.13	-0.03
	2	**0.83**	0.06	-0.11	-0.04	0.04	-0.06
	3	**0.86**	0.09	-0.07	-0.05	0.07	-0.11
	4	**0.79**	0.11	0.04	0.04	-0.03	-0.04
	5	**0.60**	0.08	0.14	0.10	-0.09	-0.05
	6	**0.28**	0.03	0.03	0.11	0.06	0.03
	7	**0.21**	0.07	-0.07	0.17	0.08	0.04

Human Capital	Item	1	2	3	4	5	6
Cultural Capital	8	-0.13	**0.33**	0.04	0.11	-0.09	-0.02
	9	-0.10	**0.54**	0.26	-0.04	0.15	0.19
	10	0.16	**0.50**	-0.06	-0.13	-0.12	-0.09
	11	0.09	**0.46**	-0.05	0.07	0.13	-0.09
	12	0.08	**0.70**	0.08	0.08	0.08	0.13
	13	0.05	**0.57**	0.09	0.01	-0.06	0.27
	14	0.04	**0.67**	0.16	0.04	0.16	-0.05
	15	0.09	**0.68**	0.05	0.15	0.16	0.09
	16	-0.05	**0.46**	0.30	0.09	0.02	0.18
	17	0.13	**0.68**	-0.04	0.01	0.03	0.17
	18	-0.10	**0.67**	0.01	0.14	0.18	0.14
Psychological Capital	19	0.03	0.08	**0.62**	0.19	-0.02	-0.02
	20	-0.06	0.09	**0.53**	0.26	-0.08	0.19
	21	-0.03	0.10	**0.75**	0.09	-0.01	0.10
	22	-0.20	-0.07	**0.64**	-0.03	-0.10	0.19
	23	0.06	0.11	**0.70**	-0.05	0.04	0.16
Scholastic Capital	24	0.10	-0.04	0.02	**0.26**	0.09	0.07
	25	-0.01	0.08	0.08	**0.68**	0.21	-0.01
	26	0.05	-0.13	-0.02	**0.16**	0.02	0.01
	27	0.05	-0.02	0.14	**0.75**	0.03	0.08
	28	0.04	-0.07	0.10	**0.58**	0.22	0.15
	29	0.01	0.09	-0.01	**0.70**	0.09	0.06
	30	-0.09	0.07	0.09	**0.67**	0.20	0.13
	31	-0.02	-0.05	-0.08	**0.28**	-0.01	0.07
	32	-0.17	0.18	0.03	**0.22**	0.09	0.02
Market-Value Capital	33	-0.04	-0.04	0.05	-0.01	**0.43**	0.15
	34	0.11	-0.02	0.01	0.02	**0.30**	0.04
	35	-0.04	-0.04	0.05	-0.01	**0.43**	0.15
	36	-0.08	0.07	0.03	0.03	**0.29**	0.03
	37	0.05	0.07	0.09	0.05	**0.78**	0.03
	38	0.02	0.16	-0.01	0.22	**0.81**	0.08
	39	-0.06	0.16	-0.03	0.08	**0.78**	0.02
	40	0.09	-0.02	-0.01	0.18	**0.74**	0.05
	41	-0.05	-0.05	-0.03	0.11	**0.73**	0.12
Skills	42	-0.02	0.11	0.03	-0.15	0.12	**0.69**
	43	-0.18	0.03	0.06	0.01	0.05	**0.74**
	44	-0.14	0.11	0.06	-0.15	0.10	**0.58**
	45	0.01	0.01	0.16	0.15	0.03	**0.81**
	46	-0.01	0.01	0.14	0.10	0.07	**0.82**
	47	0.09	-0.01	0.06	0.26	0.04	**0.71**
	48	-0.06	0.07	0.03	0.16	0.01	**0.75**

Table 19 shows the outcomes of a revised first order factor analysis at the individual item level (varimax rotated component matrix). Individual items below 0.4 have been removed to improve reliability (Items 1, 6, 7, 8, 24, 26, 31, 32, 34, 36). This provides the revised scales of social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills for use in the second order factor analysis (Table 20).

Table 19: Revised First Order Factor Analysis for Human Capital

Human Capital	Item	1	2	3	4	5	6
Social Capital	2	**0.82**	0.03	-0.12	-0.07	0.07	-0.04
	3	**0.83**	0.03	-0.09	-0.08	0.09	-0.10
	4	**0.86**	0.03	0.04	0.10	-0.02	-0.04
	5	**0.75**	0.01	0.15	0.20	-0.07	-0.04
Cultural Capital	9	-0.03	**0.72**	0.28	0.05	0.08	0.19
	10	0.23	**0.50**	-0.06	-0.03	-0.13	-0.08
	11	0.22	**0.52**	-0.04	0.05	0.13	-0.09
	12	0.09	**0.73**	0.08	0.07	0.04	0.12
	13	0.15	**0.54**	0.08	-0.01	-0.04	0.27
	14	-0.03	**0.68**	0.16	-0.03	0.19	-0.05
	15	0.04	**0.72**	0.04	0.12	0.14	0.08
	16	-0.12	**0.73**	0.22	0.04	0.06	0.20
	17	0.20	**0.50**	-0.08	0.03	0.07	0.20
	18	-0.09	**0.74**	-0.01	0.09	0.13	0.14
Psychological Capital	19	0.05	-0.07	**0.62**	0.21	0.01	-0.01
	20	-0.06	0.01	**0.55**	0.13	-0.06	0.18
	21	0.05	0.07	**0.76**	0.14	-0.01	0.10
	22	-0.17	0.33	**0.67**	0.02	0.06	0.18
	23	0.02	-0.07	**0.70**	-0.13	0.04	0.16
Scholastic Capital	25	-0.09	-0.05	0.04	**0.69**	0.22	-0.02
	27	0.07	0.09	0.14	**0.79**	0.04	0.07
	28	0.09	0.11	0.12	**0.70**	0.27	0.18
	29	0.07	-0.02	-0.01	**0.80**	0.11	0.07
	30	-0.07	0.11	0.08	**0.67**	0.17	0.11
Market-Value Capital	33	-0.06	0.12	0.03	0.04	**0.84**	0.14
	35	-0.06	0.12	0.03	0.04	**0.84**	0.14
	37	0.06	0.07	0.09	0.03	**0.79**	0.03
	38	0.02	0.06	0.01	0.17	**0.82**	0.07
	39	0.02	-0.02	-0.01	0.12	**0.80**	0.03
	40	0.04	0.05	-0.01	0.13	**0.78**	0.06
	41	-0.05	0.11	-0.03	0.10	**0.74**	0.12
Skills	42	-0.01	-0.09	0.04	-0.12	0.12	**0.70**
	43	-0.17	0.12	0.07	0.01	0.01	**0.75**
	44	-0.07	-0.12	0.11	0.04	0.08	**0.59**
	45	-0.05	0.10	0.15	0.09	0.03	**0.81**
	46	-0.02	-0.05	0.14	0.10	0.11	**0.83**
	47	0.08	0.24	0.05	0.27	0.07	**0.72**
	48	-0.06	0.16	0.01	0.09	0.02	**0.75**

Table 20 shows the outcomes of second order factor analysis. Social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills, are a single factor of human capital.

Table 20: Second Order Factor Analysis for Human Capital

Human Capital	1
Social Capital	0.55
Cultural Capital	0.67
Psychological Capital	0.52
Scholastic Capital	0.670
Market-Value Capital	0.62
Skills	0.57

Table 21 shows the outcomes of first order factor analysis. This confirms the scale of careers advice from the three individual items.

Table 21: First Order Factor Analysis for Careers Advice

Item	1
1	0.89
2	0.89
3	0.82

Table 22 shows the outcomes of first order factor analysis. This confirms the scale of protean career from the seven individual items.

Table 22: First Order Factor Analysis for Protean Career

Item	1
1	0.59
2	0.51
3	0.76
4	0.64
5	0.46
6	0.60
7	0.54

Table 23 shows the outcomes of first order factor analysis. This confirms the scale of employability from the three individual items.

Table 23: First Order Factor Analysis for Employability

Item	1
1	0.71
2	0.84
3	0.84

4.3.3 Regression

Table 24 shows a four-step regression of control variables (gender and degree subject), and employability indicators (human capital, careers advice, and protean career) for perceived employability of the 61-item model. The employability indicators are displayed as three separate steps to offer transparency, and this does not affect the overall Adjusted R^2 variance of 38%. b represents the standardised coefficients Beta. Multicollinearity was not present in the regression model as the tolerance and variance inflation factor values were within the acceptable range of 0.1 and 2.5 (Hair, Black, Babin & Anderson, 2010). First order linear auto-correlation was not present as the Durbin Watson test in SPSS gave results within the acceptable range of 1.5 and 2.5 (Podsakoff, Mackenzie, Lee & Podsakoff, 2003).

[a]Gender: 0 = Male, 1 = Female. [b]Degree Subject: 0 = P3, 1 = P1/P2. *p<.004.

Table 24: Regression of Perceived Employability (61-Item Model)

Predictors	b			
	Step 1	Step 2	Step 3	Step 4
Step 1: Control Variables				
Gender[a]	0.03	0.04	0.04	0.06
Degree Subject[b]	-0.03	-0.04	-0.04	-0.02
Step 2: Employability Indicators				
Human Capital		0.30*	0.27*	0.11*
Step 3: Employability Indicators				
Careers Advice			0.08	0.02
Step 4: Employability Indicators				
Protean Career				0.58*
R^2	0.01	0.09	0.09	0.38
Adjusted R^2	-0.01	0.08	0.08	0.38

4.4 Thirty-Two Item Model of Graduate Employability: Audit Trail

The thirty-two item two-wave model (Appendix K) offered twenty-seven items of human capital encompassing social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills. The model further offered two items of objective data (UCAS Points and Bursary Status) and three items of graduate employability. Moderators of gender, degree subject, and year of study were addressed, and participation included three hundred and eighty-seven (n=387) undergraduates in their penultimate (wave one) and subsequently final (wave two) year of study. This model also formed the basis of an extended sixty-one item model (Section 4.5) and provided questions for further explanation in the qualitative stage (Chapter 5).

This section complements Section 4.2 to ensure a full and transparent audit trail of the quantitative results for the thirty-two item model. Section 4.4.1 presents descriptive statistics of median, mean, and standard deviation at a more granular level in accordance with Boone and Boone (2012). Section 4.4.2 maps the means, Cronbach's alpha reliabilities, second order factors of human capital, and correlations to offer a visual representation and validation of the conceptual model. Section 4.4.3 offers a visual representation of the hierarchical regression model provided in Section 4.2.3. Finally, moderator graphs are offered in Section 4.4.4.

4.4.1 Descriptive Statistics

Table 25 provides the median scores for each of the items in the thirty-two item model for wave one. Median scores are provided for the overall data, and then for gender (female and male) and degree subject (P1/P2 and P3).

Table 25: Wave One Median Comparison by Item

Category	Item	Overall	Female	Male	P1/P2	P3
Social Capital	1	4.00	4.00	4.00	4.00	4.00
Cultural Capital	2	5.00	5.00	5.00	6.00	5.00
Psychological Capital	3	6.00	6.00	6.00	6.00	5.50
Scholastic Capital	4	5.00	5.00	6.00	5.00	5.00
	5	5.00	6.00	5.00	5.00	5.00
	6	5.00	5.00	5.00	5.00	5.00
	7	6.00	6.00	6.00	6.00	6.00
	8	6.00	6.00	6.00	6.00	6.00
	9	6.00	6.00	6.00	6.00	6.00
	10	6.00	6.00	6.00	6.00	6.00
	11	6.00	6.00	6.00	6.00	6.00
Market-Value Capital	12	6.00	6.00	6.00	6.00	6.00
	13	5.00	5.00	5.00	5.00	5.00
	14	5.00	5.00	5.00	5.00	5.00
	15	5.00	5.00	5.00	5.00	5.00
	16	5.00	5.00	5.00	5.00	5.00
	17	6.00	6.00	6.00	6.00	6.00
	18	6.00	6.00	6.00	6.00	6.00
	19	6.00	6.00	6.00	6.00	6.00
	20	6.00	6.00	6.00	6.00	6.00
Skills	21	6.00	6.00	6.00	6.00	6.00
	22	6.00	6.00	6.00	6.00	6.00
	23	6.00	6.00	6.00	6.00	6.00
	24	7.00	7.00	7.00	7.00	7.00
	25	6.00	7.00	6.00	6.00	7.00
	26	7.00	7.00	7.00	7.00	7.00
	27	7.00	7.00	6.00	7.00	7.00
Employability	28	5.00	5.00	5.00	5.00	5.00
	29	3.00	3.00	4.00	3.00	4.00
	30	5.00	5.00	6.00	5.00	5.00
UCAS	31	n/a	n/a	n/a	n/a	n/a
Bursary	32	n/a	n/a	n/a	n/a	n/a

Table 26 provides the median scores for each of the items in the thirty-two item model for wave two. Median scores are provided for the overall data, and then for gender (female and male) and degree subject (P1/P2 and P3).

Table 26: Wave Two Median Comparison by Item

Category	Item	Overall	Female	Male	P1/P2	P3
Social Capital	1	4.00	4.00	4.00	4.00	4.00
Cultural Capital	2	5.00	5.00	5.00	5.00	5.00
Psychological Capital	3	6.00	6.00	6.00	6.00	6.00
Scholastic Capital	4	5.00	5.00	6.00	6.00	5.00
	5	6.00	6.00	6.00	6.00	6.00
	6	5.00	5.00	6.00	5.00	5.00
	7	6.00	6.00	6.00	6.00	6.00
	8	6.00	6.00	6.00	6.00	6.00
	9	6.00	6.00	6.00	6.00	6.00
	10	6.00	6.00	6.00	6.00	6.00
	11	6.00	6.00	6.00	6.00	6.00
Market-Value Capital	12	6.00	6.00	6.00	6.00	6.00
	13	5.00	5.00	5.00	5.00	5.00
	14	6.00	6.00	6.00	6.00	6.00
	15	5.00	5.00	5.00	5.00	5.00
	16	5.00	5.00	5.50	5.00	5.00
	17	5.00	5.00	5.00	5.00	5.00
	18	5.00	5.00	5.00	5.00	5.00
	19	6.00	6.00	6.00	6.00	6.00
	20	6.00	6.00	6.00	6.00	6.00
Skills	21	6.00	6.00	7.00	6.00	6.50
	22	7.00	7.00	7.00	7.00	7.00
	23	6.00	6.00	6.50	6.00	6.00
	24	7.00	7.00	7.00	7.00	7.00
	25	7.00	7.00	7.00	7.00	7.00
	26	7.00	7.00	7.00	7.00	7.00
	27	7.00	7.00	7.00	7.00	7.00
Employability	28	5.00	5.00	5.00	5.00	5.00
	29	3.00	3.00	3.00	3.00	3.00
	30	5.00	6.00	5.00	5.00	6.00
UCAS	31	n/a	n/a	n/a	n/a	n/a
Bursary	32	n/a	n/a	n/a	n/a	n/a

Table 27 provides the mean and standard deviation for each factor of human capital for wave one and for wave two.

Table 27: Thirty-Two Item Model Mean and Standard Deviation by Category

Category	Wave One		Wave Two	
	Mean	SD	Mean	SD
Social Capital	4.00	1.49	3.89	1.55
Cultural Capital	5.24	1.19	5.11	1.27
Psychological Capital	5.32	1.55	5.47	1.62
Scholastic Capital	5.28	0.88	5.53	0.86
Market-Value	5.46	0.83	5.40	0.86
Skills	5.56	0.59	6.49	0.51
Human Capital	5.50	0.57	5.66	0.56
Employability	4.35	1.10	4.42	1.11

4.4.2 Thirty-Two Item Model of Graduate Employability (n=387)

Figure 3 shows a visual representation and validation of the thirty-two item model of graduate employability. The mean scores are shown for each of the six factors of human capital for waves one and two. The second order factor analysis scores are shown against each of the arrows from the six factors of human capital. For human capital and employability, the mean scores and Cronbach's alpha reliability scores are shown for waves one and two. Correlations are shown between human capital and employability, and between UCAS and employability for waves one and two. Bursary status did not statistically correlate with employability. A breakdown of the 32 items is provided, along with moderators of gender, degree subject, and year of study.

Thirty-Two Item Model of Graduate Employability (N=387)

Figure 3: Thirty-Two Item Model of Graduate Employability

Text within the figure:

Social
4.00/3.89

Cultural
5.24/5.11

UCAS

32 Items
Human Capital: 27
Social Capital: 1
Cultural Capital: 1
Psychological Capital: 1
Scholastic Capital: 8
Market-Value Capital: 9
Skills: 7
Employability: 3
UCAS: 1
Bursary: 1

0.51
0.64

0.48
0.55

0.11
0.12

Psychological
5.32/5.47

0.63
0.74

**Human
Capital**
Alpha: 0.88/0.86
Mean: 5.50/5.66

Employability
Alpha: 0.66/0.71
Mean: 4.35/4.42

0.25
0.28

Scholastic
5.28/5.53

0.84
0.77

0.96
0.71

0.01
0.00

0.70
0.53

Market-Value
5.46/5.40

Skills
5.56/6.49

Bursary

Correlations Significant (P<0.01)
Except UCAS/Employability (P<0.05)
Bursary/Employability (Fails P 0.87)

Moderators
I)   Gender
II) Degree Subject
III) Year of Study

Emergent Identity

4.4.3 Hierarchical Regression Models

Table 28 offers a one-step model, showing human capital to have a variance on employability of 18.3% in wave one and 13.7% in wave two. *p<.001

Table 28: Hierarchical Regression Model (32-Item Model)

Predictors	Wave One	Wave Two
	b	b
	Step 1	Step 1
Step 1: Employability Indicators		
Human Capital	0.13*	0.14*
R^2	0.19	0.15
Adjusted R^2	0.18	0.14

Figure 4 shows a visual representation of the hierarchical regression table. The data presented shows the statistically significant amount of explained variance of human capital on employability, after accounting for all other variables in wave one and wave two. The figures inside the boxes represent the R^2 value for the specific scale, while the figures above the arrows represent the cumulative R^2 value. The overall model represents the R^2 value for all participants. The model was then run by filtering data by Gender: 0 = Male, 1 = Female, and Degree Subject: 0 = P3, 1 = P1/P2.

Figure 4: Thirty-Two Item Regression Models (Next Page)

Overall Wave One Regression Model: 32 Items

| Human Capital +0.183 | +0.183 → | Employability |
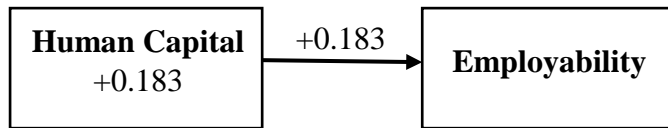
Overall Wave Two Regression Model: 32 Items
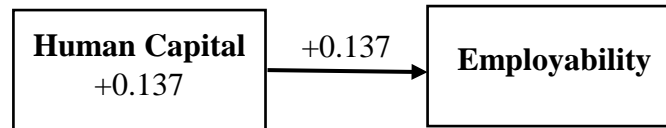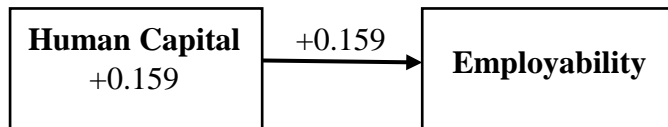
| Human Capital +0.137 | +0.137 → | Employability |

Female Wave One Regression Model: 32 Items

| Human Capital +0.159 | +0.159 → | Employability |

Female Wave Two Regression Model: 32 Items

| Human Capital +0.129 | +0.129 → | Employability |

Male Wave One Regression Model: 32 Items

| Human Capital +0.207 | +0.207 → | Employability |

Male Wave Two Regression Model: 32 Items

| Human Capital +0.157 | +0.157 → | Employability |

P1/P2 Wave One Regression Model: 32 Items

| Human Capital +0.129 | +0.129 → | Employability |

P1/P2 Wave Two Regression Model: 32 Items

| Human Capital +0.111 | +0.111 → | Employability |

P3 Wave One Regression Model: 32 Items
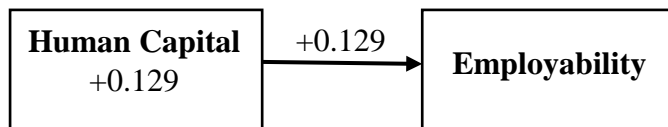
| Human Capital +0.264 | +0.264 → | Employability |
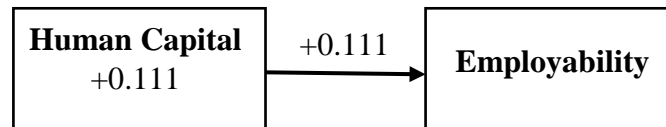
P3 Wave Two Regression Model: 32 Items
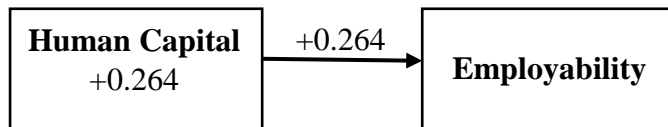
| Human Capital +0.165 | +0.165 → | Employability |
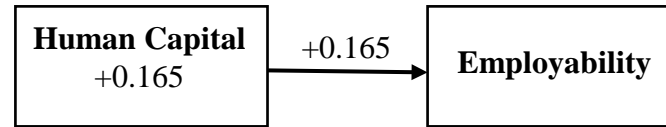
4.4.4 Moderator Graphs

Figure 5 offers a graph showing the moderation of gender for human capital on employability for wave one, based on the data provided in Section 4.2.3.

Figure 5: Thirty-Two Item Model, Human Capital / Employability Moderation by Gender (Wave One)
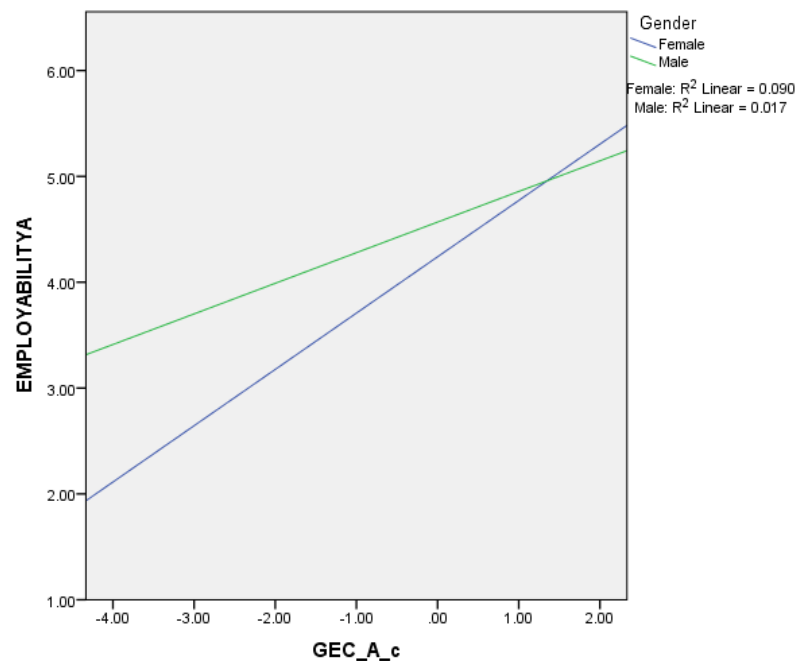
Figure 6 offers a graph showing the moderation of gender for human capital on employability for wave two, based on the data provided in Section 4.2.3.

Figure 6: Thirty-Two Item Model, Human Capital / Employability Moderation by Gender (Wave Two)
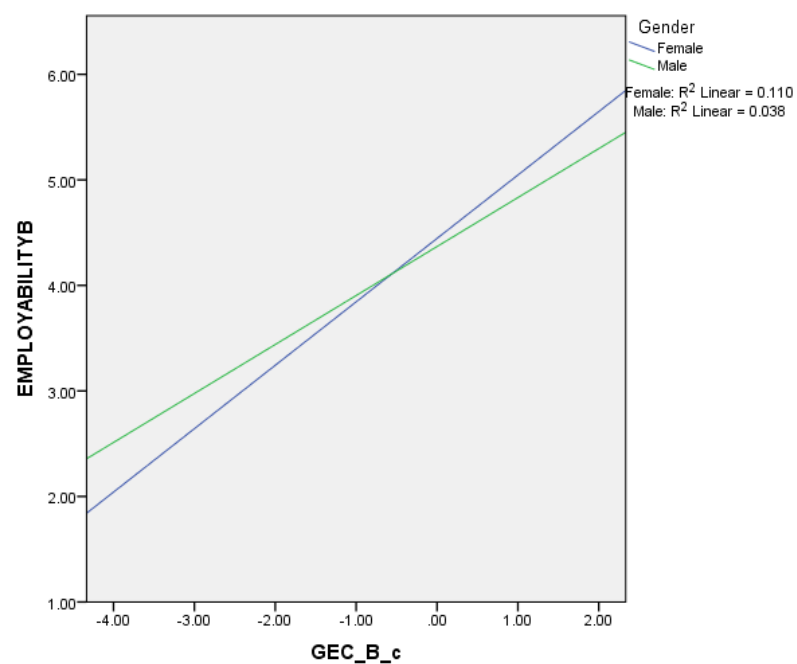
Figure 7 offers a graph showing the moderation of degree subject for human capital on employability for wave one, based on the data provided in Section 4.2.3.

Figure 7: Thirty-Two Item Model, Human Capital / Employability Moderation by Degree (Wave One)
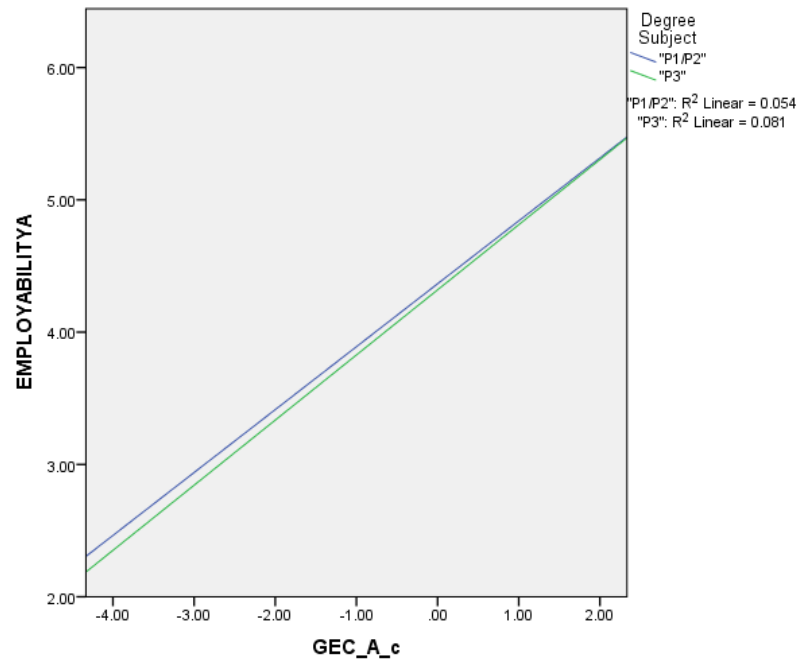
Figure 8 offers a graph showing the moderation of degree subject for human capital on employability for wave two, based on the data provided in Section 4.2.3.

Figure 8: Thirty-Two Item Model, Human Capital / Employability Moderation by Degree (Wave Two)
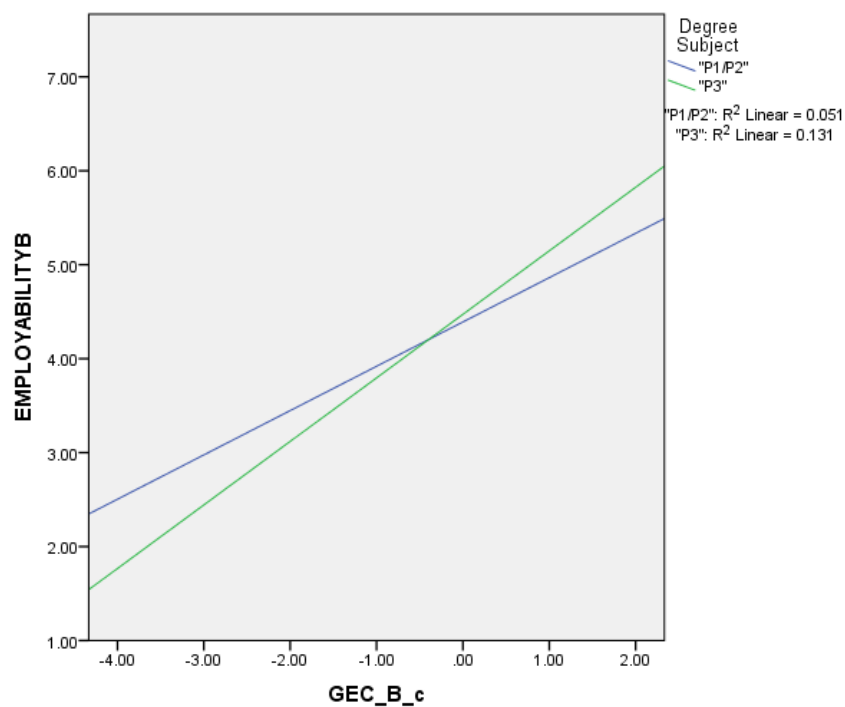
4.5 Sixty-One Item Model of Graduate Employability: Audit Trail

The sixty-one item stand-alone model (Appendix L) offered forty-eight items of human capital encompassing social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills. The model offered seven items of protean career, three items of careers advice, and three items of graduate employability. Moderators of gender and degree subject were addressed and participation included three hundred and eighty-seven (n=387) undergraduates in their final year of study. This model provided questions for further explanation in the qualitative stage (Chapter 5).

This section complements Section 4.3 to ensure a full and transparent audit trail of the quantitative results for the sixty-one item model. Section 4.5.1 presents descriptive statistics of median, mean, and standard deviation at a more granular level in accordance with Boone and Boone (2012). Section 4.5.2 maps the means, Cronbach's alpha reliabilities, second order factors of human capital, and correlations to offer a visual representation and validation of the conceptual model. Section 4.5.3 offers a visual representation of the hierarchical regression model provided in Section 4.3.3. Finally, moderator graphs are offered in Section 4.5.4.

4.5.1 Descriptive Statistics

Table 29 provides the median scores for each of the items in the sixty-one item model. Median scores are provided for the overall data, and then for gender (female and male) and degree subject (P1/P2 and P3).

Table 29: Sixty-One Item Model Median Comparison by Item

Category	Item	Overall	Female	Male	P1/P2	P3
Social Capital	1	4.00	4.00	4.00	4.00	4.00
	2	3.00	2.50	4.00	3.00	2.50
	3	3.00	3.00	3.00	3.00	3.00
	4	2.00	2.00	3.00	2.00	2.00
	5	3.00	3.00	4.00	3.50	3.00
	6	4.00	4.00	5.00	5.00	4.00
	7	4.00	4.00	4.00	4.00	4.00
Cultural Capital	8	5.00	5.00	5.00	5.00	5.00
	9	6.00	6.00	6.00	6.00	6.00
	10	3.00	3.00	3.00	3.00	3.00
	11	4.00	4.50	4.00	4.50	4.50
	12	5.00	5.00	5.00	5.00	5.00
	13	6.00	6.00	6.00	6.00	6.00
	14	5.00	5.00	5.00	5.00	5.00
	15	4.00	4.00	4.00	4.50	4.00

Table 29: Sixty-One Item Model Median Comparison by Item (Continued)

Category	Item	Overall	Female	Male	P1/P2	P3
Cultural Capital	16	6.00	6.00	6.00	6.00	6.00
	17	6.00	6.00	6.00	6.00	6.00
	18	6.00	6.00	6.00	6.00	6.00
Psychological Capital	19	5.00	5.00	5.00	5.00	5.00
	20	6.00	6.00	6.00	6.00	6.00
	21	5.00	5.00	5.00	5.00	5.00
	22	6.00	6.00	5.00	6.00	6.00
	23	6.00	6.00	6.00	6.00	6.00
Scholastic Capital	24	5.00	5.00	6.00	6.00	5.00
	25	6.00	6.00	6.00	6.00	6.00
	26	5.00	5.00	6.00	5.00	5.00
	27	6.00	6.00	6.00	6.00	6.00
	28	6.00	6.00	6.00	6.00	6.00
	29	6.00	6.00	6.00	6.00	6.00
	30	6.00	6.00	6.00	6.00	6.00
	31	6.00	6.00	6.00	6.00	6.00
	32	5.00	5.00	5.00	5.00	5.00
Market-Value Capital	33	6.00	6.00	6.00	6.00	6.00
	34	5.00	5.00	5.00	5.00	5.00
	35	6.00	6.00	6.00	6.00	6.00
	36	5.00	5.00	5.00	5.00	5.00
	37	5.00	5.00	5.00	5.00	5.00
	38	5.00	5.00	5.00	5.00	5.00
	39	5.00	5.00	5.00	5.00	5.00
	40	6.00	6.00	6.00	6.00	6.00
	41	6.00	6.00	6.00	6.00	6.00
Skills	42	6.00	6.50	6.00	6.00	6.50
	43	7.00	7.00	6.00	7.00	7.00
	44	6.00	6.00	7.00	6.00	6.00
	45	7.00	7.00	7.00	7.00	7.00
	46	7.00	7.00	7.00	7.00	7.00
	47	7.00	7.00	7.00	7.00	7.00
	48	7.00	7.00	7.00	7.00	7.00
Protean	49	6.00	6.00	6.00	6.00	6.00
	50	6.00	6.00	6.00	6.00	6.00
	51	5.00	5.00	5.00	5.00	5.00
	52	5.00	5.00	5.00	5.00	5.00
	53	6.00	6.00	6.00	6.00	6.00
	54	5.00	6.00	6.00	5.00	6.00
	55	5.00	5.00	5.00	5.00	5.00
Careers Advice	56	4.00	4.00	4.00	4.00	4.00
	57	4.00	4.00	4.00	4.00	4.00
	58	4.00	4.00	4.00	4.00	4.00

Category	Item	Overall	Female	Male	P1/P2	P3
Employability	59	5.00	5.00	5.00	5.00	5.00
	60	3.00	3.00	4.00	3.00	3.00
	61	5.00	6.00	6.00	5.00	6.00
Boundaryless	n/a	4.00	4.00	4.00	4.00	4.00
	n/a	3.00	3.00	3.00	3.00	3.00

Table 30 provides the mean and standard deviation for each scale in the model. Social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills are factors of human capital.

Table 30: Sixty-One Item Model Mean and Standard Deviation by Category

Category	Mean	SD
Social Capital	3.39	1.06
Cultural Capital	5.04	0.65
Psychological Capital	5.31	0.86
Scholastic Capital	5.40	0.79
Market-Value	5.40	0.86
Skills	6.49	0.51
Human Capital	5.17	0.46
Careers Advice	4.06	1.20
Protean	5.36	0.67
Employability	4.42	1.11
Boundaryless	3.87	1.26

4.5.2 Sixty-One Item Model of Graduate Employability (n=387)

Figure 9 shows a visual representation and validation of the sixty-one item model of graduate employability. The Cronbach's alpha reliability and mean scores are shown for each of the six factors of human capital. The second order factor analysis scores are shown against each of the arrows from the six factors of human capital. For human capital, careers advice, protean career and employability, the Cronbach's alpha reliability and mean scores are shown. Correlations are shown between human capital, careers advice, protean career, and employability. A breakdown of the sixty-one items is provided, along with moderators of gender and degree subject.

Sixty-One Item Model of Graduate Employability (N=387)
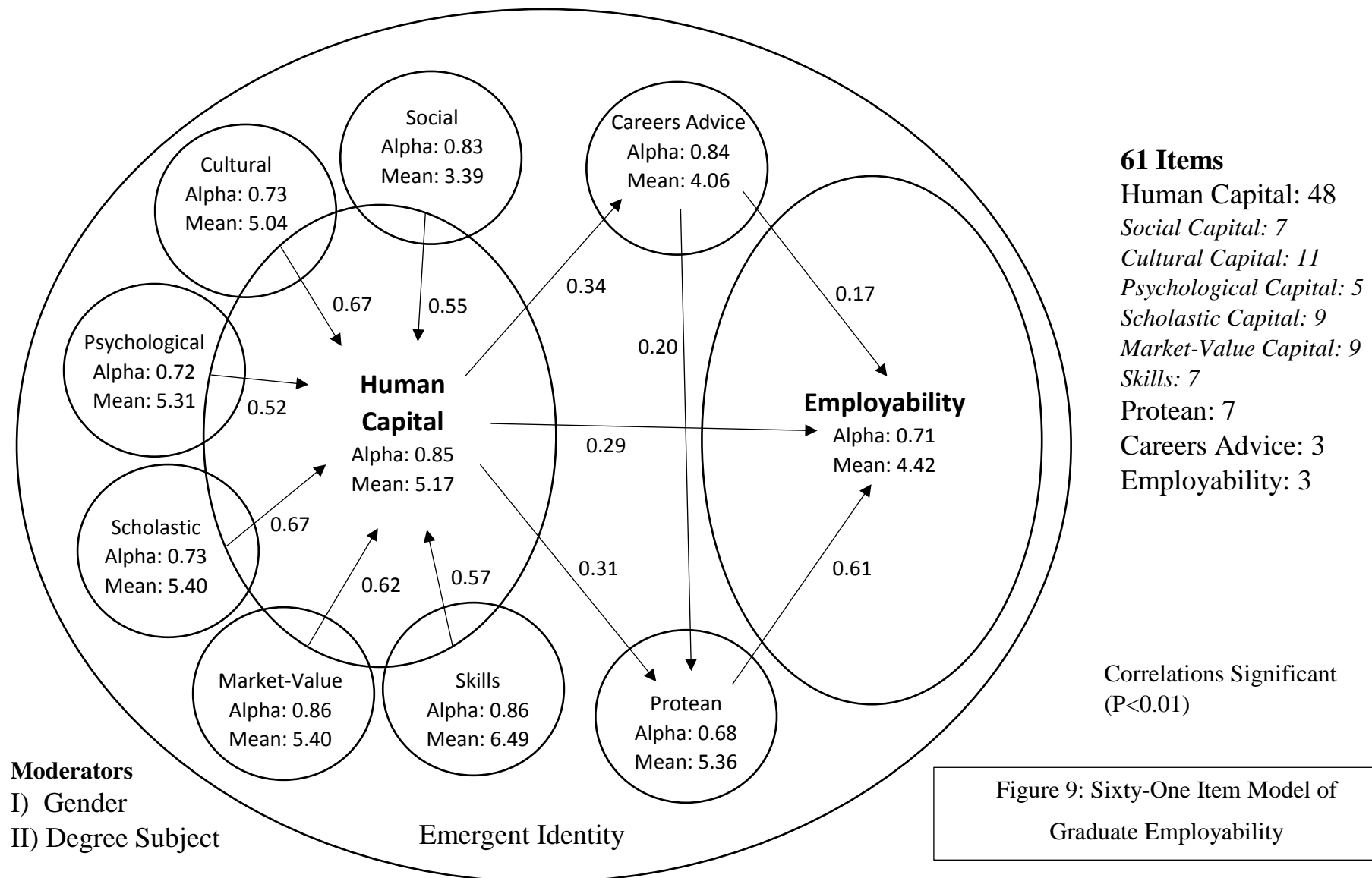
Figure 9: Sixty-One Item Model of Graduate Employability

61 Items
Human Capital: 48
Social Capital: 7
Cultural Capital: 11
Psychological Capital: 5
Scholastic Capital: 9
Market-Value Capital: 9
Skills: 7
Protean: 7
Careers Advice: 3
Employability: 3

Correlations Significant
(P<0.01)

Moderators
I) Gender
II) Degree Subject

4.5.3 Hierarchical Regression Models

Table 31 shows a three-step model of human capital, careers advice, and career ownership. The Adjusted R^2 value shows the cumulative variance for each step of the model, with an overall variance of 37.9% for human capital, careers advice, and career ownership on employability. Adjusted R^2 is a modified version of R^2 based on the number of predictors in the model. The Adjusted R^2 increase for each step shows that the new step improves the model more than would be expected by chance, offering increased reliability. Multicollinearity was checked using the collinearity diagnostic in SPSS. Multicollinearity is considered to be present when tolerance values are less than 0.1 and the variance inflation factor exceeds 2.5 (Hair, Black, Babin & Anderson, 2010). Multicollinearity was not present in the regression model as the tolerance and variance inflation factor values were within this acceptable range. First order linear auto-correlation was checked using the Durbin Watson test in SPSS. The results were within the accepted range of 1.5 and 2.5, indicating that no first order linear auto-correlation was present (Podsakoff, Mackenzie, Lee & Podsakoff, 2003). *$p<.001$

Table 31: Hierarchical Regression Model (61-Item Model)

Predictors	b		
	Step 1	Step 2	Step 3
Step 1: Employability Indicators			
Human Capital	0.29*	0.27*	0.11*
Step 2: Employability Indicators			
Careers Advice		0.08*	0.04*
Step 3: Employability Indicators			
Protean Career			0.57*
R^2	0.16	0.17	0.38
Adjusted R^2	0.15	0.16	0.38

Table 32 shows the moderator influences on the hierarchical regression model.

[a]Gender: 0 = Male, 1 = Female. [b]Degree Subject: 0 = P3, 1 = P1/P2. *p<.004.

Table 32: Hierarchical Regression Model by Moderator (61-Item Model)

Predictors	Male			Female			P3			P1/P2		
	b			b			b			b		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Step 1: Employability Indicators												
Human Capital	0.22*	0.22*	0.06*	0.33*	0.29*	0.14*	0.31*	0.24*	0.10*	0.28*	0.28*	0.12*
Step 2: Employability Indicators												
Careers Advice		0.02*	-0.01*		0.11*	0.04*		0.19*	0.10*		0.01*	-0.04*
Step 3: Employability Indicators												
Protean Career			0.67*			0.50*			0.61*			0.54*
R^2	0.22	0.21	0.47	0.16	0.16	0.36	0.18	0.22	0.47	0.16	0.15	0.35
Adjusted R^2	0.21	0.20	0.49	0.15	0.15	0.34	0.17	0.21	0.46	0.15	0.14	0.34

Figure 10 shows a visual representation of the hierarchical regression tables. The figures inside the boxes represent the R^2 value for the specific scale, while the figures above the arrows represent the cumulative R^2 value.

Figure 10: Sixty-One Item Regression Models (Next Page)

Overall Regression Model: 61 Items
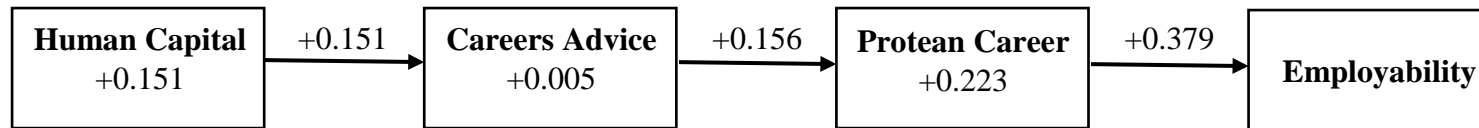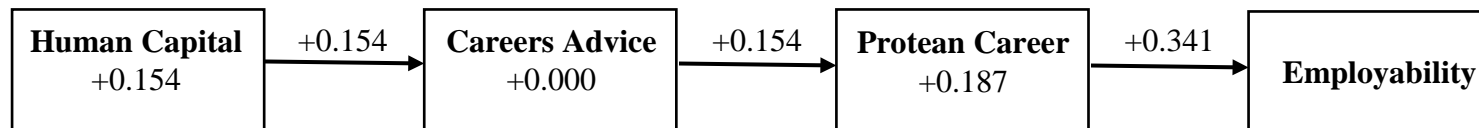
| **Human Capital** +0.151 | $\xrightarrow{+0.151}$ | **Careers Advice** +0.005 | $\xrightarrow{+0.156}$ | **Protean Career** +0.223 | $\xrightarrow{+0.379}$ | **Employability** |

Female Regression Model: 61 Items

| **Human Capital** +0.154 | $\xrightarrow{+0.154}$ | **Careers Advice** +0.000 | $\xrightarrow{+0.154}$ | **Protean Career** +0.187 | $\xrightarrow{+0.341}$ | **Employability** |

Male Regression Model: 61 Items

| **Human Capital** +0.205 | $\xrightarrow{+0.205}$ | **Careers Advice** -0.001 | $\xrightarrow{+0.204}$ | **Protean Career** +0.289 | $\xrightarrow{+0.493}$ | **Employability** |

P1/P2 Degree Subject Regression Model: 61 Items

| **Human Capital** +0.145 | $\xrightarrow{+0.145}$ | **Careers Advice** -0.003 | $\xrightarrow{+0.142}$ | **Protean Career** +0.193 | $\xrightarrow{+0.335}$ | **Employability** |

P3 Degree Subject Regression Model: 61 Items

| **Human Capital** +0.165 | $\xrightarrow{+0.165}$ | **Careers Advice** +0.047 | $\xrightarrow{+0.212}$ | **Protean Career** +0.247 | $\xrightarrow{+0.459}$ | **Employability** |
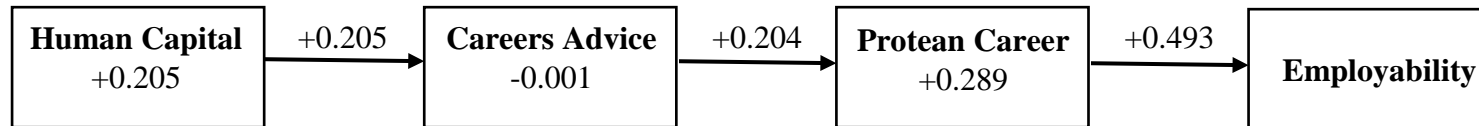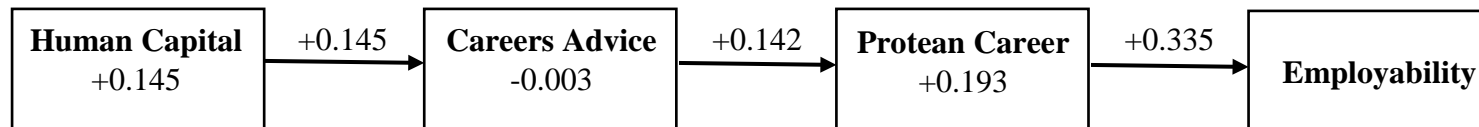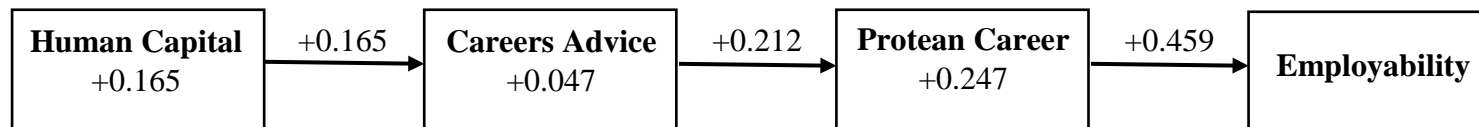
4.5.4 Moderator Graphs

Figure 11 offers a graph showing the moderation of gender for human capital on employability, based on the data provided in Section 4.3.3.

Figure 11: Sixty-One Item Model, Human Capital / Employability Moderation by Gender
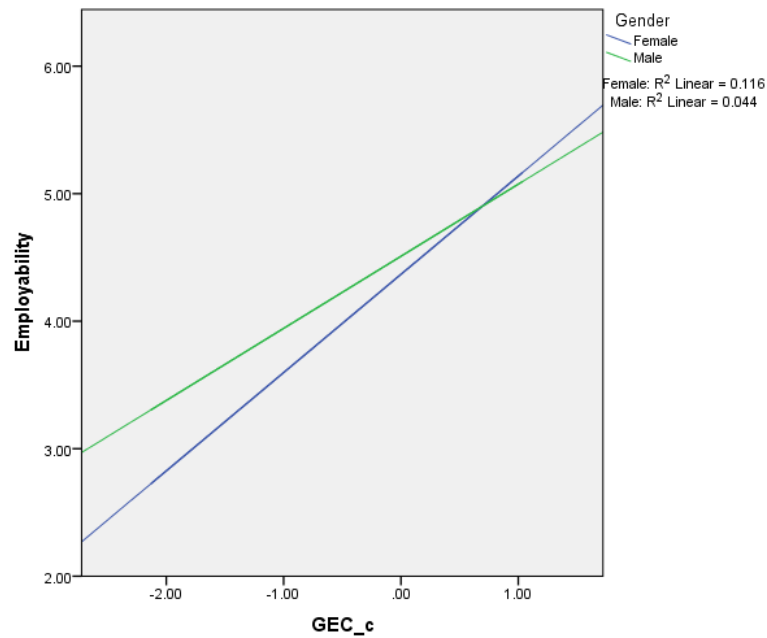
Figure 12 offers a graph showing the moderation of degree subject for human capital on employability, based on the data provided in Section 4.3.3.

Figure 12: Sixty-One Item Model, Human Capital / Employability Moderation by Degree Subject
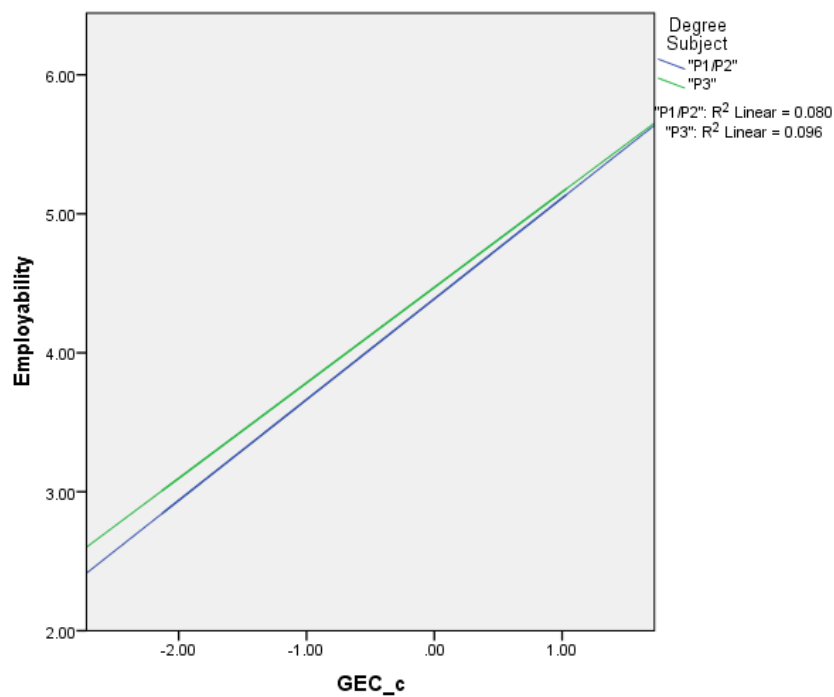
Figure 13 offers a graph showing the moderation of gender for careers advice on employability, based on the data provided in Section 4.3.3.

Figure 13: Sixty-One Item Model, Careers Advice / Employability Moderation by Gender
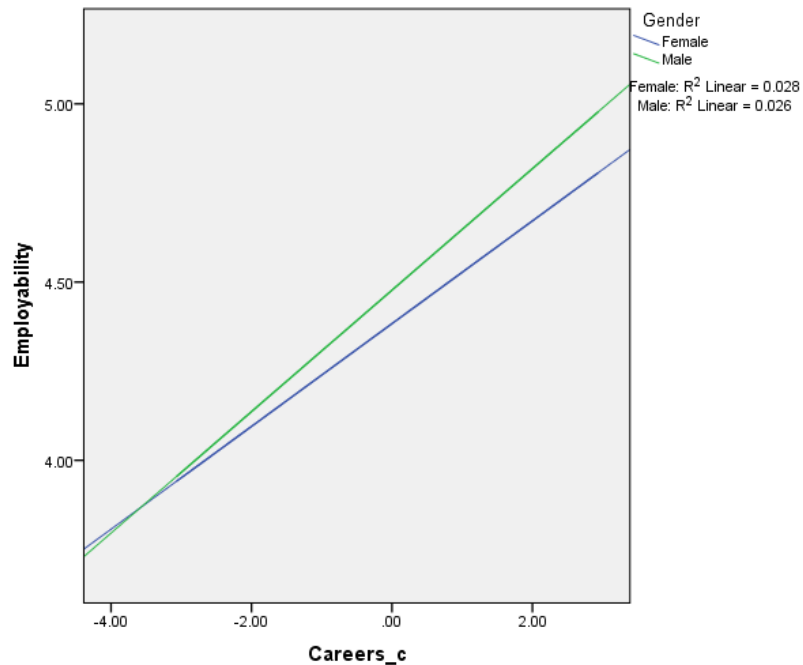
Figure 14 offers a graph showing the moderation of degree subject for careers advice on employability, based on the data provided in Section 4.3.3.

Figure 14: Sixty-One Item Model, Careers Advice / Employability Moderation by Degree Subject
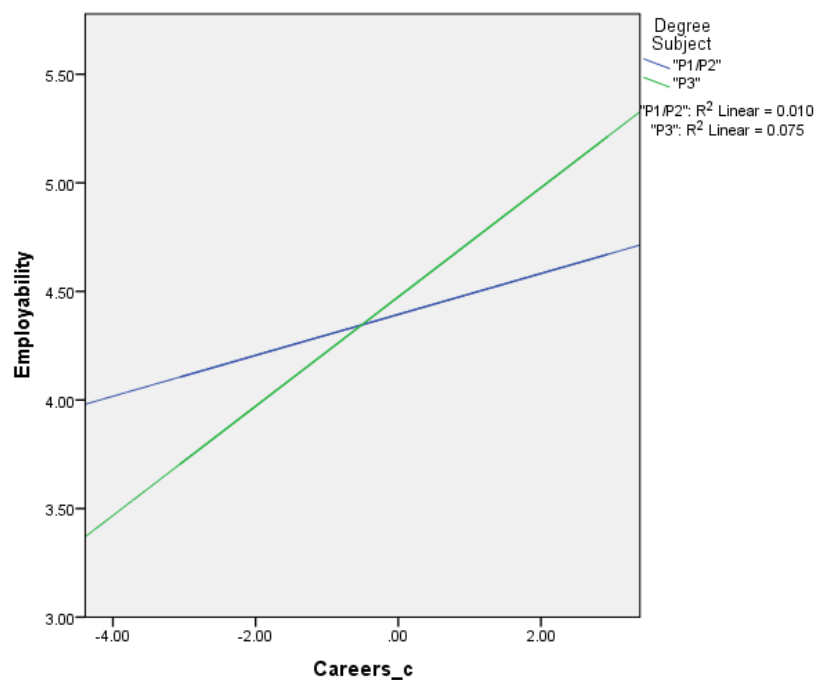
Figure 15 offers a graph showing the moderation of gender for protean career on employability, based on the data provided in Section 4.3.3.

Figure 15: Sixty-One Item Model, Protean Career / Employability Moderation by Gender
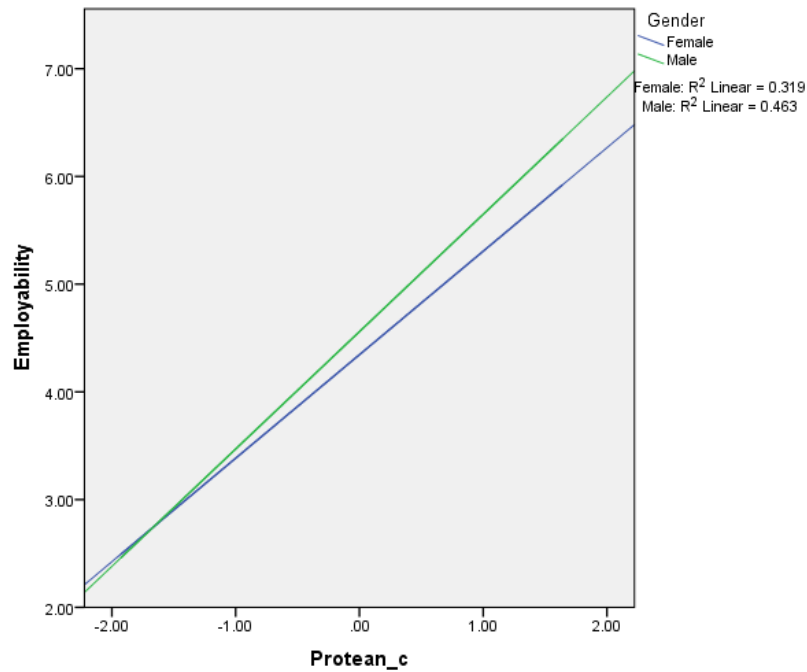
Figure 16 offers a graph showing the moderation of degree subject for protean career on employability, based on the data provided in Section 4.3.3.

Figure 16: Sixty-One Item Model, Protean Career / Employability Moderation by Degree Subject
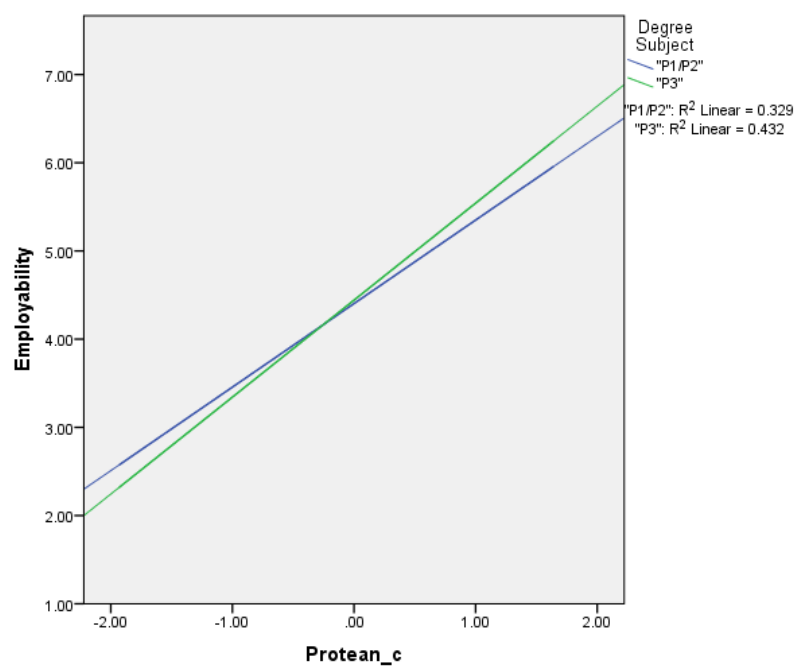
4.6 Earnings, Debt and Return on Investment from Higher Education

This section details expected earnings (wave one and wave two), expected debt repayment (wave one and wave two), and the perceived value of HE in comparison to the associated costs (wave two only).

4.6.1 Expected Earnings

Figure 17 shows the expected earnings reported in wave one by penultimate year students (n=387). The median was £20,000 to £24,000, with a skewness of 2.667.

Figure 17: Wave One Expected Earnings
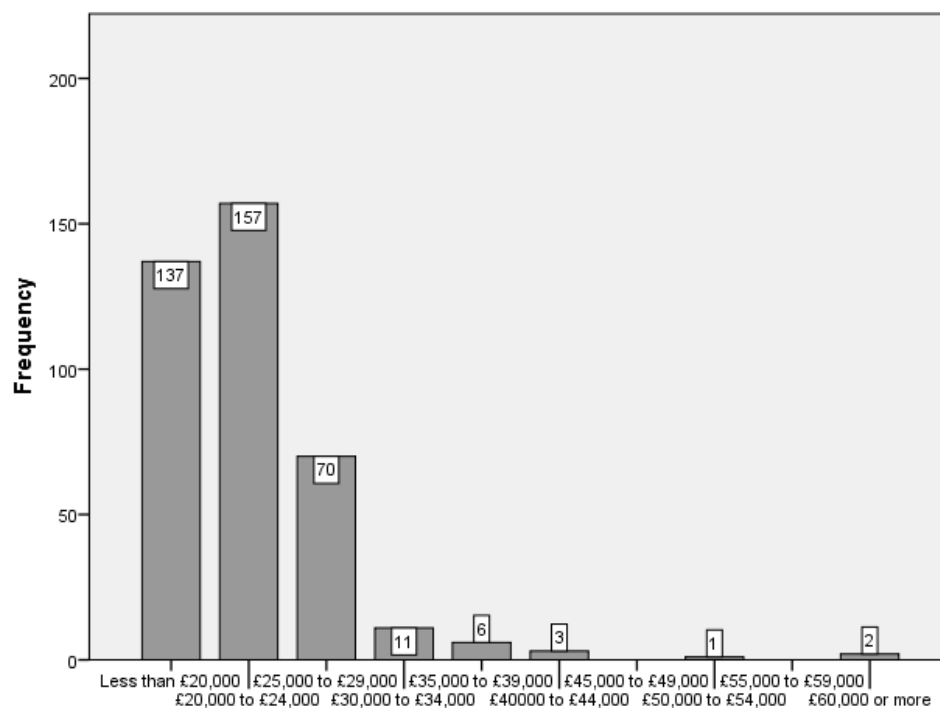
Figure 18 shows the expected earnings reported in wave two by final year students (n=387). The median was £20,000 to £24,000, with a skewness of 2.269.

Figure 18: Wave Two Expected Earnings
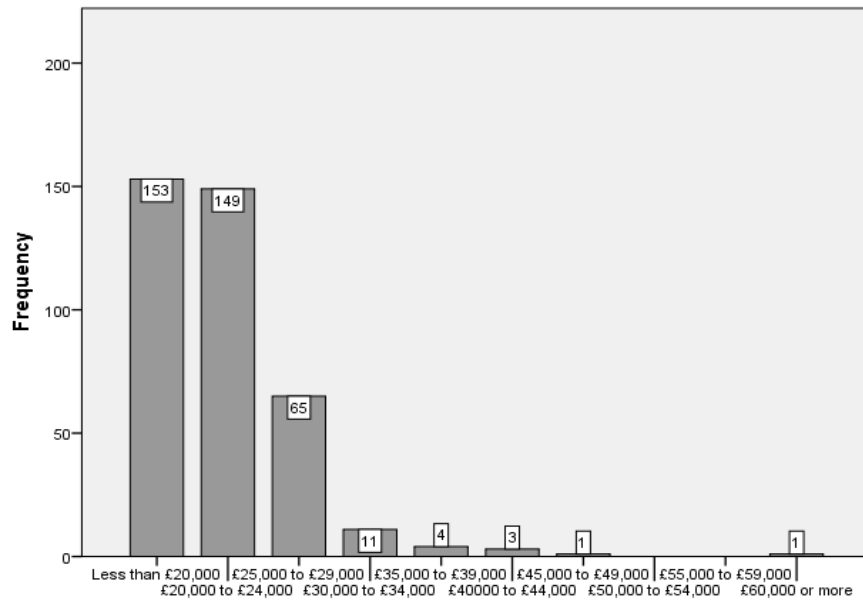
4.6.2 Expected Debt Repayment

Figure 19 shows the expected debt repayment in wave one by penultimate year students (n=387). The median was 16-25 years, with a skewness of 0.766.

Figure 19: Wave One Expected Debt Repayment
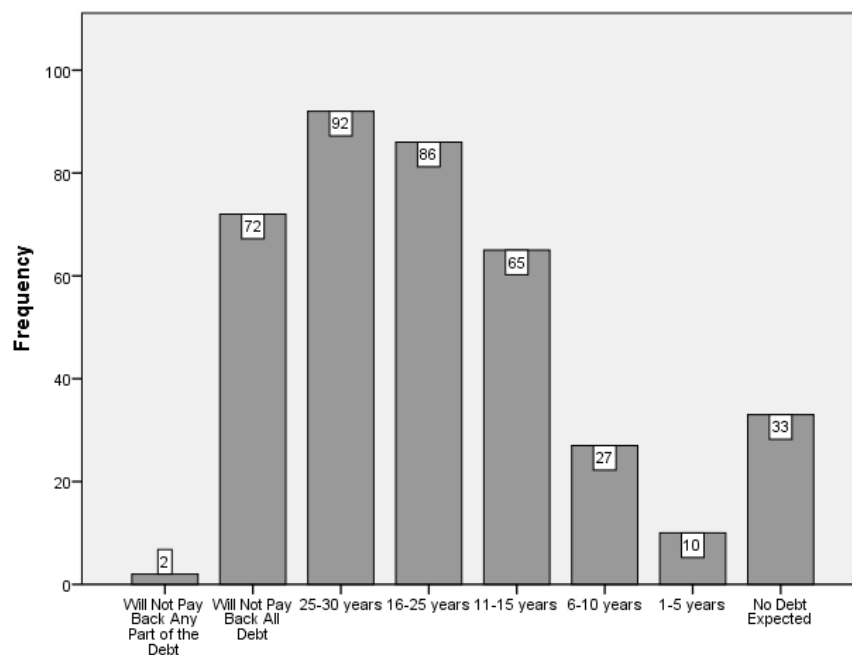
Figure 20 shows the expected debt repayment in wave two by final year students (n=387). The median was 25-30 years, with a skewness of 0.488.

Figure 20: Wave Two Expected Debt Repayment
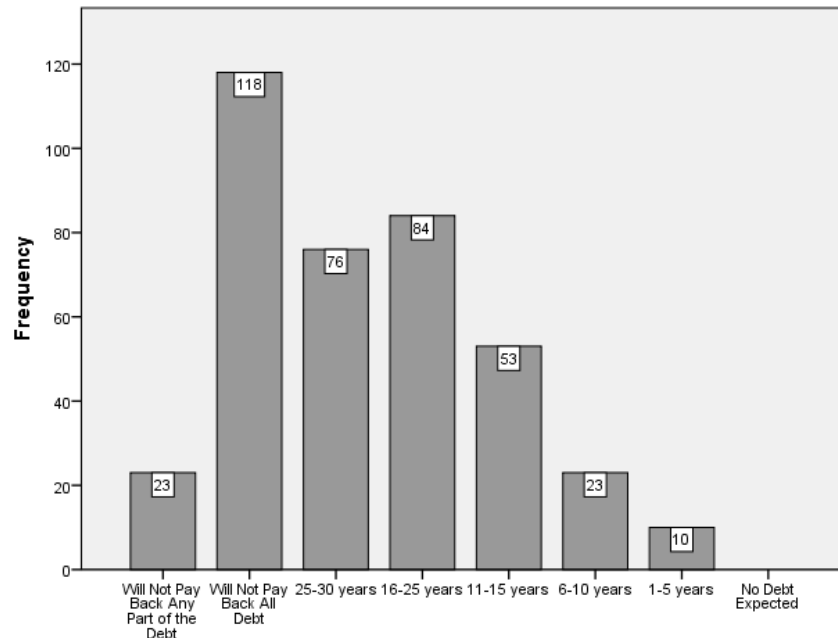
4.6.3 Benefits of Higher Education v Associated Costs (Wave Two Only)

Figure 21 shows the perceived benefits of HE versus the perceived costs of HE in wave two by final year students (n=387). The median was Agree, with a skewness of -1.103.

Figure 21: Wave Two Benefits of HE Outweigh Associated Costs
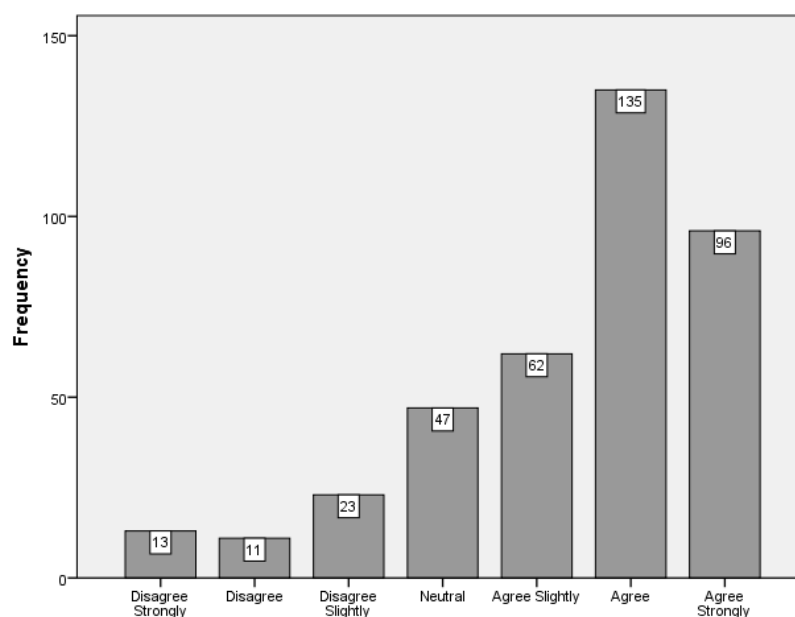
4.7 Chapter Summary

The quantitative results addressed *Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?* Section 4.2 provided a summary of the statistics for the two-wave, thirty-two item model of human capital and employability with moderators of gender, degree subject, and year of study (Appendix K). Additionally, twenty-nine items were added to Questionnaire B, offering a stand-alone, sixty-one item model based on wave two results only, with moderators of gender and degree subject (Appendix L). This model focused on human capital, careers advice, career orientation, and employability, with summary statistics provided in Section 4.3. An audit trail of the statistics for the thirty-two item model (Section 4.4) and the sixty-one item model (Section 4.5) was then offered at a more granular level. To complement the two models and to address *Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions*; data was collected on expected earnings, expected debt, and the perceived benefit of HE versus the associated costs (Section 4.6). The next chapter evidences the treatment of qualitative data before analysis and contribution of all findings are discussed in Chapter 6.

Chapter 5: Treatment of Qualitative Data

5.1 Introduction and Qualitative Participants

This chapter reports the treatment of qualitative data by applying the thematic analysis process outlined in the methodology (Chapter 3). The purpose of the qualitative interviews phase of the sequential explanatory mixed methods design (Chapter 3.3) was to test the validity of the findings and to help clarify understanding by explaining twelve factors from the literature review (Chapter 2) and quantitative results (Chapter 4). These twelve factors of the students' perceptions of graduate employability are (a) perceived employability construct, (b) challenges to finding a job after university, (c) degree subject, (d) objective data, (e) social networks, (f) meso level actors, (g) work placement barriers, (h) career mobility, (i) gender, (j) year of study, (k) university debt, and (l) costs and benefits of higher education. Appendix M provides a summary of the interview questions and Chapter 3.6 the justification for inclusion of each question in addressing these twelve areas. Factors (a) to (j) addressed *Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?;* and factors (k) and (l) addressed *Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions.*

Interviews took place in person at University A (n=29, 76%) and by telephone (n=9, 24%). The telephone approach was used where students were not based at the main campus or where students were currently on a semester abroad. This ensured representation of all degree subjects, whilst the majority of interviews conducted in person ensured validity. No differences were found in responses based on the interview method adopted. Interviews ranged from 22 minutes to 43 minutes, with an average length of 29 minutes. Overall saturation was achieved around thirty interviews, with the representation of degree subjects (P1/P2/P3) and gender (Male/Female) achieved at thirty-eight. Table 33 shows saturation by factor and Chapter 3.3.2 provides additional information on the research sample. Table 34 shows degree subject representation and Table 35 the individual participant characteristics of gender and degree subject.

Table 33: Interview Saturation

Saturation	
Factor 1: 30	Factor 7: 27
Factor 2: 28	Factor 8: 26
Factor 3: 23	Factor 9: 27
Factor 4: 22	Factor 10: 25
Factor 5: 24	Factor 11: 21
Factor 6: 26	Factor 12: 29

Table 34: Degree Subject Representation

Degree Subjects	Overall	Male	Female
P1 & P2	26	13	13
Archaeology & Music (P1)	*4*	*2*	*2*
Art (P1)	*3*	*1*	*2*
Criminology, Social Sciences & Philosophy (P1)	*2*	*1*	*1*
Ocean & Earth Sciences (P1)	*3*	*1*	*2*
Biological Sciences (P2)	*3*	*2*	*1*
Chemistry (P2)	*3*	*2*	*1*
Civil & Environmental Sciences & Geography (P2)	*3*	*1*	*2*
Education & Psychology (P2)	*2*	*1*	*1*
English, History & Politics (P2)	*3*	*2*	*1*
P3	12	6	6
Business (P3)	*3*	*2*	*1*
Engineering (P3)	*2*	*2*	*0*
Law (P3)	*3*	*1*	*2*
Mathematics (P3)	*2*	*1*	*1*
Modern Languages (P3)	*2*	*0*	*2*
TOTAL	38	19	19

Table 35: Participant Characteristics by Gender and Degree Subject

ID	Gender	Degree Subject	Category
1	Female	Oceanography	Ocean & Earth Sciences
2	Female	Music	Archaeology & Music
3	Female	Oceanography	Ocean & Earth Sciences
4	Female	Biology	Biological Sciences
5	Female	Psychology	Education & Psychology
6	Male	Education	Education & Psychology
7	Male	Music	Archaeology & Music
8	Male	Politics	English, History & Politics
9	Female	Law	Law
10	Female	Art	Art

Table 35: Participant Characteristics by Gender and Degree Subject (Continued)

ID	Gender	Degree Subject	Category
11	Female	Geography	Geography & Environmental Science
12	Male	Biology	Biological Sciences
13	Female	Geography	Geography & Environmental Science
14	Female	Art	Art
15	Male	Engineering	Engineering
16	Male	Law	Law
17	Male	Chemistry	Chemistry
18	Male	Engineering	Engineering
19	Female	Archaeology	Archaeology & Music
20	Female	Law	Law
21	Female	Social Sciences	Social Sciences & Philosophy
22	Male	Art	Art
23	Male	Business	Business
24	Female	Modern Languages	Modern Languages
25	Female	Chemistry	Chemistry
26	Male	Geography	Geography & Environmental Sciences
27	Male	Chemistry	Chemistry
28	Male	Business	Business
29	Female	Modern Languages	Modern Languages
30	Male	Biology	Biological Sciences
31	Male	Mathematics	Mathematics
32	Male	Philosophy	Social Science & Philosophy
33	Female	English	English, History & Politics
34	Female	Business	Business
35	Male	Music	Music
36	Male	Oceanography	Ocean & Earth Sciences
37	Male	History	English, History & Politics
38	Female	Mathematics	Mathematics

5.2 Treatment of Data: Thematic Analysis

This section evidences the six phases of thematic analysis as offered by Braun and Clarke (2006, p.35): *familiarising yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report*. Baruch and Forstenlechner (2017), provide an example of a career theory paper reflecting the thematic analysis approach adopted in this study. Although the six phases are reported in a linear approach in this chapter, an iterative approach was favoured to enhance the richness and depth of the findings (Clarke & Braun, 2013).

5.2.1 Phase 1: Familiarising with the Data

The first step involved transcribing the thirty-eight interviews into separate Word documents. This provided the researcher with an opportunity to listen to the interviews again whilst transcribing them. The second step involved reading through each of the transcribed interviews to check for validity, to immerse the researcher into the data, and to colour code the interviews to facilitate content analysis. Next, each of the thirty-eight transcripts was loaded into the software NVivo 11. A word frequency query provided a very high-level overview of the data ready for phase two.

5.2.2 Phase 2: Generating Initial Codes

The researcher started by reducing the information in the transcript of interview one through the generation of initial codes. This included creating an outline for each new code to ensure consistency when identifying the same code across the thirty-eight transcripts. The researcher then coded each subsequent interview, returning to previous interviews as necessary to refine codes. This evidences an example of the iterative approach taken, where continued familiarisation with the data facilitated the generation and refinement of codes. Eventually, one hundred and seventy-seven distinct codes were identified across the twelve factors of explanation from the literature review (Chapter 2) and quantitative results (Chapter 4). The codes are shown in the thematic maps (Section 5.3) and summarised at the end of this chapter (Section 5.4). An example of a typical code is *competition for jobs*, which was applied whenever participants referred to facing competition for jobs in the interview transcripts. For example, participant 10: *the ultimate problem is too many people, too few jobs*; participant 21: *I know there's a lot of jobs available but there's always competition with other graduates*; and participant 23: *I think one of the factors is the market is very intense with graduates.*

5.2.3 Phase 3: Searching for Themes

The next phase involved searching for themes across the one hundred and seventy-seven codes. In accordance with Javadi and Zarea (2016), the researcher's interpretation of the codes and subsequent themes was considered more important than the frequency with which the student participants cited codes. This led to the initial identification of forty-seven themes.

5.2.4 Phase 4: Reviewing Themes

Boyatzis (1998) states that each theme should have internal homogeneity, the data inside the themes is related, and external heterogeneity, the themes themselves are distinct from each other. This led to the removal of twenty-four themes, which were integrated into existing identified themes. Twenty-three themes and seventeen sub-themes remained, adhering to internal homogeneity and external heterogeneity. In addition, a member of the supervision committee took four transcripts, representing a 10% sample. The supervisor independently completed phases one to four of thematic analysis, again evidencing the iterative approach to the six phases. An additional member of the supervision committee compared the codes, themes, and sub-themes generated by the two researchers to validate the themes and sub-themes proposed.

5.2.5 Phase 5: Defining and Naming Themes

The next phase of thematic analysis required each of the twenty-three themes to be defined and named. Additional familiarisation with the data and a review of the codes that generated each theme was undertaken. The iterative process led to the following names and definitions. Each theme evidences the link to the factor of explanation from the literature review and quantitative results, and to a specific research question (RQ).

Theme 1: Definition of Employability. Factor (a), RQ II.

This theme presents the students' perceptions of the definition of employability, to enable comparison with the definitions offered by other stakeholders of graduate employability.

Theme 2: Factors of Employability. Factor (a), RQ II.

This theme presents the factors that students' perceive as important for graduate employability. These factors can be compared with factors in the literature to assess the extent to which alignment occurs across the various stakeholders.

Theme 3: Personal Barriers. Factor (b), RQ II.

This theme looks at the challenges that students perceived to finding a job after university, in terms of their own barriers. An understanding of the personal barriers can help provide better, more tailored employability support to students.

Theme 4: Market Barriers. Factor (b), RQ II.

This theme looks at the challenges that students perceive to finding a job after university in terms of market barriers. An understanding of the perceived market barriers can help employers, in terms of policy development and strategy, to support students applying for graduate roles.

Theme 5: Degree Type. Factor (c), RQ II.

This theme incorporates two sub-themes (a) *Specialist Degree,* and (b) *Generalist Degree*. This theme contributes to career theory literature by validating existing studies, which predominantly focus on participants from specialist degrees, and by explaining the views of generalist degree students, an often under-represented population in undergraduate studies.

Theme 6: UCAS Points. Factor (d), RQ II.

This theme looks at the students' perceptions of UCAS points or pre-university education as an influence on employability, enabling the inclusion of international students' views. This theme offers a mechanism for explaining the mismatch between career theory literature and the quantitative results.

Theme 7: Bursary Status. Factor (d), RQ II.

This theme looks at the students' perceptions of university bursary status on employability. This theme offers a mechanism for explaining the mismatch between career theory literature and the quantitative results.

Theme 8: Family and Friends. Factor (e), *RQ II.*

This theme addresses the perceived role of family and friends on employability. This contributes by explaining the role of family and friends as part of students' social networks.

Theme 9: Society Membership. Factor (e), *RQ II.*

This theme addresses the perceived role of being a member of university societies on employability. This contributes by explaining the role of society membership as part of students' social networks.

Theme 10: Barriers to Society Membership. Factor (e), *RQ II.*

This theme addresses the perceived barriers to being a member of university societies. This contributes by explaining why some students are not members of societies during their time at

university, despite literature indicating that extracurricular activities can enhance employability.

Theme 11: Lecturers. Factor (e), *RQ II.*

This theme addresses the perceived role of lecturers on employability. This contributes by explaining the role of lecturers as part of students' social networks.

Theme 12: Careers Service. Factor (f), RQ II.

This theme incorporates four sub-themes (a) *Communication Methods*, (b) *Job Application Support*, (c) *Links with Employers*, and (d) *Future Opportunities*. This theme captures the different methods of communication and job application support that students perceive the careers service to provide. This offers a practical contribution by identifying existing best practice. The theme further addresses links with employers and future opportunities. The practical contribution comes from identifying gaps in existing services offered and helps to foster a collaborative approach between the careers service, employers, and graduate recruiters, to better prepare students for the graduate labour market.

Theme 13: Graduate Recruiter Current Contributions. Factor (f), RQ II.

This theme incorporates two sub-themes (a) *Current Contributions*, and (b) *Future Opportunities*. This theme identifies the current contributions and future opportunities for graduate recruiters to enhance students' perceived employability. This offers a contribution to career theory by establishing the perceived role of graduate recruiters and addressing calls for greater collaboration between universities and employers through the meso level graduate recruiters.

Theme 14: Personal Barriers. Factor (g), RQ II.

This theme encapsulates the personal barriers as perceived by students to undertaking work placements during their degree studies. This theme contributes to career theory, where work placement discourse is dominated by the benefits of work placements and calls for greater participation. The practical contribution comes through offering advice for future policy and decision-making, tasked with enhancing student participation in work placements.

Theme 15: Organisational Barriers. Factor (g), RQ II.

This theme encapsulates the organisational barriers as perceived by students to undertaking work placements during their degree studies. This theme contributes to theory by highlighting

the perceived organisational barriers, and to practice by offering advice for future policy decision-making, tasked with enhancing student participation in work placements.

Theme 16: Mobility by Organisation. Factor (h), RQ II.

This theme incorporates two sub-themes (a) *Single Organisation*, and (b) *Multiple Organisations.* This theme addresses the students' perceptions of working either for a single organisation or for multiple organisations during their career. This helps to develop boundaryless career theory by explaining the students' appetite for career mobility across organisations.

Theme 17: Mobility by Location. Factor (h), RQ II.

This theme encapsulates two sub-themes (a) *Local and National Mobility,* and (b) *International Mobility.* This theme addresses the desire of students to work both locally and nationally, or internationally following graduation. This helps to develop boundaryless career theory by explaining the students' appetite for career mobility by location and explaining the inconclusive quantitative results.

Theme 18: Gender Pipeline Challenges. Factor (i), RQ II.

This theme identifies the challenges as perceived by students of gender pipelines from primary school to secondary school, to university, and into the labour market. This contributes to theory by explaining gender disparities in undergraduate degree courses and in the labour market. Practically, this theme provides areas of focus for governments, schools, universities, and employers when attempting to increase gender representation.

Theme 19: Employer Issues. Factor (i), RQ II.

This theme identifies the issues as perceived by students that employers need to address in terms of gender representation. This contributes to theory by explaining gender disparities in organisations, and practically by identifying strategies that employers can take to improve gender representation on their graduate schemes.

Theme 20: Final Year Employability. Factor (j), RQ II.

This theme encapsulates two sub-themes (a) *More Employable*, and (b) *Less Employable.* Students reported two opposing perceptions of their employability in their final year in comparison to previous years of undergraduate study. From a theory perspective, this helps to validate the proposed conceptual model. From a practical perspective, governments and universities could use the positive findings to encourage university degree applications by

highlighting the array of contributions to enhanced employability. The negative findings provide a mechanism for informing government and HE policy, and for managing expectations.

Theme 21: Repayment Expectations Factor (k), RQ III.

This theme encapsulates three sub-themes (a) *Will Not Repay*, (b) *Will Repay*, and (c) *Unknown Factors.* This theme identifies the factors that students perceive will determine the feasibility of repaying their student debt. The theme contributes to career theory literature by indicating a marked departure from previous studies, with the majority of students perceiving it will not be possible to repay their student debt in full. The practical contribution comes in terms of guiding future HE policy and funding strategies across the OECD, and by representing the views of some of the first cohort of students to pay £9,000 per year in undergraduate tuition fees.

Theme 22: Costs. Factor (l), RQ III.

This theme explains the costs of HE as perceived by students. This contributes to theory and practice by seeking to ensure the perceived costs of HE do not exceed the perceived benefits. This should continue to be a consideration in future strategic decision making by governments and universities across the OECD.

Theme 23: Benefits. Factor (l), RQ III.

This theme explains the benefits of HE as perceived by students. This contributes to theory and practice by seeking to ensure the perceived benefits of HE outweigh the perceived costs. This should continue to be a consideration in future strategic decision-making by governments across the OECD. Universities could use the benefits identified as part of the process of attracting prospective students to undergraduate study.

5.2.6 Phase 6: Producing the Report

The final phase of thematic analysis was to document phases one to five. The documentation was produced in parallel with the five stages, to provide a clear audit trail for the research and to promote reliability of the treatment of qualitative data. The report captured the iterative nature of the six phases, with the final version of the report representing the final iteration of the thematic analysis. Figure 22 evidences the final data structure based on guidance and notation by Gioia et al. (2013, p.21). Section 5.3 then provides the thematic maps. Chapter 6 incorporates the treatment of qualitative data in this chapter, via the six phases of thematic analysis, to present the findings and discussion.

1st Order Concepts	2nd Order Themes	Aggregate Dimensions
• The ability to get a job • Standing out from the crowd • Competitive labour market	Definition	Perceived Employability Construct
• Qualifications and skills • Work experience and extracurricular activities • Taking ownership of own career	Factors	
• Lack of experience • Application process and financial situation • The transition from HE to the labour market	Personal Barriers	Challenges to Finding a Job
• Competition for jobs • Location and salary of jobs • Organisational culture	Market Barriers	
• Technical or transferable skills • Clear job role or no clear job role • Perceived as harder or softer degree subject	Degree Type (Specialist v Generalist)	Degree Subject
• No direct impact on perceived employability • Facilitates access to university (hygiene factor) • Degree more important	UCAS Points	Objective Data
• No direct impact on perceived employability • Facilitates access to university (hygiene factor) • Linked to social capital e.g. family and friends	Bursary Status	
• Setting aspirations and sharing experience • Passing on networks • Awareness of job opportunities	Family and Friends	Social Networks
• Building networks • Skill development • Well rounded individual	Society Membership	
• Lack of time or family commitments • Living away from campus • Personality e.g. shyness or motivation	Barriers to Society Membership	
• Knowledge of industry and key contacts • Awareness of work placement opportunities • Awareness of graduate job opportunities	Lecturers	

1st Order Concepts	2nd Order Themes	Aggregate Dimensions
• Current communication methods • Job application support and employer links • Opportunities for future improvement	Careers Service	Meso Level Actors
• Current contributions • Job application support and employer links • Opportunities for future improvement	Graduate Recruiters	
• Difficulty finding and securing placement • Undecided on career path and lack of experience • Increased length of degree and placement timing	Personal Barriers	Work Placements Barriers
• Length of application process • Placement needs to add value • Pay, location and VISA restrictions	Organisational Barriers	
• Single organisation or multiple organisations • Career progression and financial incentives • Work-life balance and happiness	Mobility by Organisation	Dimensions of Career Mobility
• Local and national or international mobility • Family, friends, and language barrier • Travel, location of jobs, networks, and skills	Mobility by Location	
• Target primary and secondary school pupils • Self-worth and confidence in females • Taking time out to have children	Gender Pipeline Challenges	Gender Influence
• Gender representation on hiring committees • Gender pay gap and maternity pay • Gender targets or no gender targets	Employer Issues	
• More employable or less employable • Degree, extracurricular, and work experience • Volume of graduates, lack of jobs, and rejection	Final Year Employability	Year of Study Influence
• Will not repay: volume of debt and interest • Will repay: bursary, lower fees, or higher salary • Unknown factors e.g. earnings, and health	Repayment Expectations	University Debt

1st Order Concepts	2nd Order Themes	Aggregate Dimensions

- Tuition fees: Need clear reason for HE
- Debt putting people off HE
- Volume of graduates (increased participation)

⟹ Costs

- Degree certificate, skills, and self-development
- Increased earnings potential and access to jobs
- Friends, networks, and university reputation

⟹ Benefits

Costs and Benefits of HE

Figure 22: Data Structure (Notation from Gioia et al., 2013, p.21)

5.3 Thematic Maps

This section evidences the twenty-three thematic maps, and one hundred and seventy-seven codes, grouped by the twelve factors of explanation.

5.3.1 Factor (a): Perceived Employability Construct

Theme 1
Definition

- Ability to be Employed
- Stand Out from the Crowd
- Competitive Labour Market

Theme 2
Factors

- Academic Qualifications
- Hard Skills
- Transferable Skills
- Work Experience
- Extra-curricular Activities
- Networking
- Ownership of own Career
- Confidence
- Motivation
- Application Process

Figure 23: Thematic Map (Themes One and Two)

5.3.2 Factor (b): Challenges to Finding a Job

Theme 3
Personal Barriers

- Lack of Experience
- Finding Jobs Advertised
- Application Process
- Financial Situation
- HE to Workplace Transition
- Age
- Health

Theme 4
Market Factors

- Competition for Jobs
- Location of Jobs
- Salary
- Culture

Figure 24: Thematic Map (Themes Three and Four)

5.3.3 Factor (c): Degree Type

Sub-Theme 5a

Specialist Degree

Vocational or Technical Skills

Clear Job Role

Perceived as a Harder Degree

Sub-Theme 5b

Generalist Degree

Transferable Skills

No Clear Job Role

Viewed as a Softer Degree

Figure 25: Thematic Map (Theme Five)

5.3.4 Factor (d): Objective Data

Theme 6

UCAS Points

No Impact on Employability

Facilitates Access to University

Degree More Important

Removed From Application

Hygiene Factor / Barrier to Entry

Theme 7

Bursary Status

No Impact on Employability

Facilitates Access to University

Increased Motivation

Linked to Social Capital

Figure 26: Thematic Map (Themes Six and Seven)

5.3.5 Factor (e): Social Networks

Theme 8

Family and Friends

| Setting Aspirations | Awareness of Job Opportunities |
| Setting Aspirations | Sharing Experience |

Theme 9

Society Membership

| Networking | Skill Development |

Well Rounded Individual

Theme 10

Barriers to Society Membership

| Lack of Time | Family Commitments |
| Living away from University Campus | Personality (Shyness) |

Motivation

Theme 11

Lecturers

| Knowledge of Industry | Work Placement Opportunities |

Job Opportunities

Figure 27: Thematic Map (Themes Eight, Nine, Ten and Eleven)

5.3.6 Factor (f): Meso Level Actors

Sub-Theme 12a

Careers Service: Communication

My Careers Portal	Email Updates
Posters	Social Media

Sub-Theme 12b

Careers Service: Job Application

Cover Letter	Personal Statement	CV
Psychometric Test	Assessment Centre	Careers Guidance

Sub-Theme 12c

Careers Service: Employer Links

Careers Fairs	Work Placement Scheme
Networking Events	Catalogue of Employers

Sub-Theme 12d

Careers Service: Opportunities

Tailored Support	Narrow Down Options	Partnership with Lecturers
Increase Awareness of Services	Compulsory Participation	Engage Students More
Beyond Main Campus	Expand Coverage of Companies	Rejection Support

Sub-Theme 13a

Graduate Recruiter: Contributions

Careers Fairs	Careers Talks
Building Networks	Job Application Support

Sub-Theme 13b

Graduate Recruiter: Opportunities

Awareness of Jobs Available	Job Application Support

Figure 28: Thematic Map (Themes Twelve and Thirteen)

5.3.7 Factor (g): Work Placement Barriers

Theme 14

Personal Barriers

Difficulty Finding a Placement	Difficulty Securing a Placement	Lack of Existing Experience
Undecided on Career Path	Travel and Living Costs	Transition from Uni to Work to Uni
Increased Length of Degree	Too Much Stress with Degree	Timing of Placements
Motivation		

Theme 15

Organisational Barriers

Length of Application Process	Availability of Placements
Placements Needs to Add Value	Placements Sometimes Not Paid
Location	VISA Restrictions

Figure 29: Thematic Map (Themes Fourteen and Fifteen)

5.3.8 Factor (h): Career Mobility

Sub-Theme 16a

Single Organisation

Settle in One Location	Job Security
Financial Incentives	Career Progression
If Happy Would Stay	If Good Life Balance Would Stay
If Had Career Prospects Would Stay	

Sub-Theme 16b

Multiple Organisations

To Avoid Boredom	Changing Life Circumstances
Diversity of Experience	Career Progression
Larger Network of Contacts	Money Driven
Status Driven	Portfolio Career

Sub-Theme 17a

Local and National Mobility

Family and Children	Friends
Small Strong Network	Easier to Adjust
Living with Parents (Finances)	Location of Job Opportunities
Desire to Live in a City	Would Stay in Same Region

Avoid Language Barrier

Sub-Theme 17b

International Mobility

Meet New People	Opportunity to Travel
Due to Location of Job Opportunities	Due to Competitive Labour Market
Depends on Country	Develop New Skills
For a Short Time	While Still Young
If for Dream Job	Higher Salary

Brexit

Figure 30: Thematic Map (Themes Sixteen and Seventeen)

5.3.9 Factor (i): Gender

Theme 18

Gender Pipeline Challenges

Gender Balance Variance by Degree Subject	Primary & Secondary Pupils
Self-Worth and Confidence in Females	Exposure to Role Models of Same Gender

Taking Time Out to Have Children

Theme 19

Employer Issues

Gender Pay Gap	Gender Representation when Hiring
Awareness of Issues in Specific Sector	Support Female Employees with Children
Gender Targets or No Gender Targets	Variation by Country of Discrimination

Figure 31: Thematic Map (Themes Eighteen and Nineteen)

5.3.10 Factor (j): Year of Study

Sub-Theme 20a

More Employable

University Degree	University Clubs and Societies
University Reputation	Work Experience
Increased Confidence	Increased Aspirations

Career Ownership

Sub-Theme 20b

Less Employable

Volume of Graduates	Lack of Jobs Available

When Rejected for Job
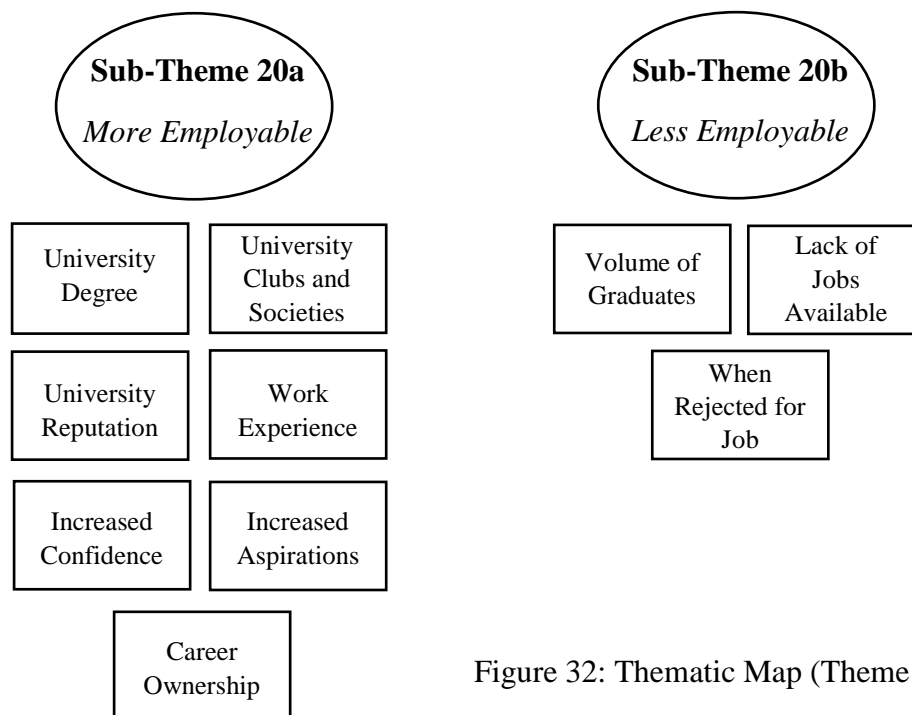
Figure 32: Thematic Map (Theme Twenty)

5.3.11 Factor (k): University Debt

Sub-Theme 21a

Will Not Repay

Debt will be Wiped First	Interest Payments Too High
Will Not Earn Enough	Limits Careers Ambitions

Barrier to HE Participation

Sub-Theme 21b

Will Repay

Bursary (Less Debt)	Welsh Student (Lower Fees)

Higher Salary Expectations

Sub-Theme 21c

Unknown Factors

Salary (Lifetime Earnings)	Unforeseen Circumstances (e.g. Health)
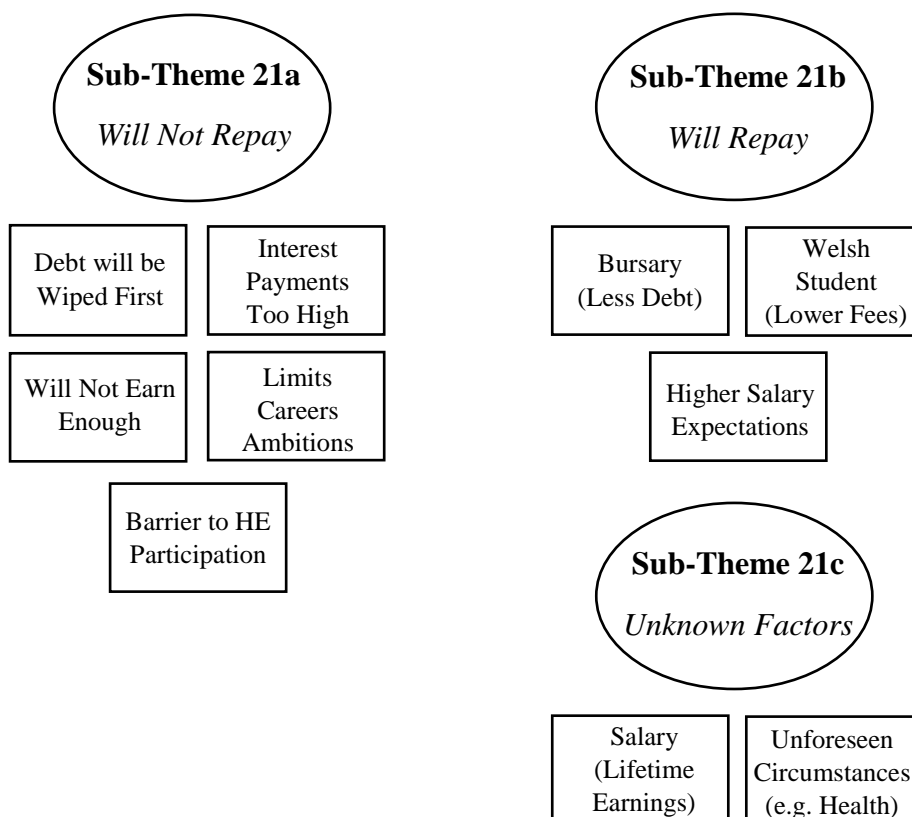
Figure 33: Thematic Map (Theme Twenty-One)

5.13.3 Factor (l): Costs and Benefits of Higher Education

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      ╭─────────────╮              ╭─────────────╮
      │  Theme 22   │              │  Theme 23   │
      │    Costs    │              │  Benefits   │
      ╰─────────────╯              ╰─────────────╯
```

Need Clear Reason for HE	Tuition Fee Increases
Debt Puts People Off HE	Increased Participation in HE

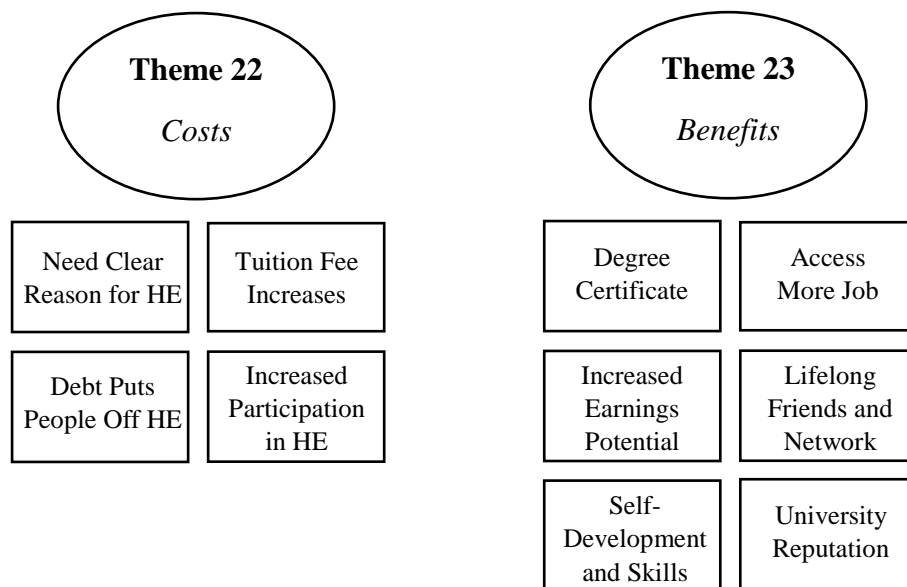| Degree Certificate	Access More Job
Increased Earnings Potential	Lifelong Friends and Network
Self-Development and Skills	University Reputation

Figure 34: Thematic Map (Themes Twenty-One and Twenty-Two)

5.4 Chapter Summary

This chapter has presented the treatment of qualitative data as part of the sequential explanatory mixed methods design (Section 3.2), to test the validity of the findings and to help clarify understanding by addressing twelve factors from the literature review (Chapter 2) and quantitative results (Chapter 4). The treatment of qualitative data through six phases of thematic analysis identified one hundred and seventy-seven codes, leading to twenty-three themes and seventeen sub-themes.

During the qualitative interviews, participants were asked to report the gender balance and career paths of alumni for their degree course. Table 36 provides a summary of these findings for each degree course. This chapter concludes with Table 37, providing a summary of the factors, themes, sub-themes, and codes from the treatment of qualitative data. Chapter 6 draws on the literature review (Chapter 2), the quantitative results (Chapter 4), and the treatment of qualitative data (Chapter 5) to present the findings, discussions and contributions of this research.

Table 36: Summary of Gender, Career Path, and Employability by Degree Subject

Priority	Degree Subject	Female	Male	Career Paths	Employability
P3	Engineering	5	95	Lloyd's Register, BAE Systems, BP Shipping Ltd., Global Maritime Consultancy, Army, Navy, Telecommunications	Degree-Job Alignment
P3	Modern Languages	90	10	Teaching, Translation, Interpretation, Journalism, International Business	High Demand for Graduates
P3	Mathematics	45	55	Finance, Accounting, Actuary, Risk Management, Audit	High Demand for Graduates
P3	Business	50	50	Accounting, Finance, Auditor, Consultancy	High Demand for Graduates
P3	Law	50	50	Solicitor, Barrister, Banking, Finance, Risk Management	Degree-Job Alignment
P2	Education	80	20	Teaching (Primary, Secondary), Academia, Business	Degree-Job Alignment
P2	Politics	50	50	Politics, International Relations, Business, Finance	Versatility (Skills)
P2	Geography, Civil & Environmental Sciences	50	50	Teaching, Environmental Agency, Civil Service, Ordnance Survey, Human Resources, Advertising	Versatility (Skills)
P2	History	60	40	Teaching, National Rail, Academia, Museums, Human Resources	Versatility (Skills)
P2	Chemistry	50	50	Postgraduate Education, Dentistry, Medicine, Pharmaceutical, Academia	Postgraduate Study
P2	Biological Sciences	65	35	Postgraduate Education, Medicine, Clinical Research, Medical Research, Ecological Research, Teaching, Accountancy	Postgraduate Study
P2	Psychology	90	10	Teaching, Forensic Health, Occupational Psychology, Human Resources, Advertising, Postgraduate Study	Versatility (Skills)
P2	English	80	20	Teaching, Human Resources, Postgraduate Study, Law, Journalism, Publishing, Creative Writing	Versatility (Skills)
P1	Philosophy	40	60	Law, Journalism, Media, Business, Academia	Versatility (Skills)
P1	Ocean & Earth Sciences	50	50	Postgraduate Education, Environmental Management, Water Management, Research	Postgraduate Study
P1	Music	50	50	British Gas, Teaching, Composition, Performing, Academia, Business, Finance	Portfolio Career
P1	Criminology & Social Sciences	50	50	Data Analyst, Police, Insurance, Teaching	Versatility (Skills)
P1	Archaeology	75	25	Museums, National Trust, English Heritage	Limited Job Opportunities
P1	Art	90	10	Event Management, Creative Teams, Sculpture, Painter	Limited Job Opportunities

Table 37: Factors, Themes, Sub-Themes, and Codes

Factor for Explanation	Themes and Sub-Themes	Code
a) Perceived Employability: Construct	1) Definition	(i) The ability to get a job, (ii) by standing out from the crowd, (iii) in a competitive labour market.
	2) Factors of Employability	(i) Undergraduate and Postgraduate Qualifications, (ii) Hard Skills, (iii) Transferable Skills, (iv) Work Experience, (v) Extracurricular Activities, (vi) Networking, (vii) Taking Ownership of Own Career, (viii) Confidence, (ix) Motivation, (x) Navigating the Application Process.
b) Challenges to Finding a Job After University	3) Personal Barriers	(i) Lack of Experience, (ii) Finding Jobs Advertised, (iii) Application Process, (iv) Financial Situation, (v) Transition from Higher Education to the Workplace, (vi) Age, (vii) Health.
	4) Market Barriers	(i) Competition for Jobs, (ii) Location of Jobs, (iii) Salary, (iv) Culture.
c) Perceived Employability: Degree Subject	5) Degree Type *a) Specialist Degree*	(i) Vocational or Technical Skills, (ii) Clear Job Role, (iii) Perceived as a Harder Degree.
	5) Degree Type *b) Generalist Degree*	(i) Transferable Skills, (ii), No Clear Job Role, (iii) Viewed as a Softer Degree.
d) Perceived Employability: Objective Data	6) UCAS Points	(i) No Impact on Employability, (ii) Facilitates Access to University, (iii) Degree More Important, (iv) Removed From Application by Some Employers, (v) Hygiene Factor / Barrier To Entry.
	7) Bursary Status	(i) No Impact on Employability, (ii) Facilitates Access to University, (iii) Increased Motivation Due to Bursary, (iv) Linked to Social Capital (Friends/Family).

Table 37: Factors, Themes, Sub-Themes, and Codes (Continued)

Factor for Explanation	Themes and Sub-Themes	Code
e) Perceived Employability: Social Networks	8) Family and Friends	(i) Setting Aspirations, (ii) Awareness of Job Opportunities, (iii) Passing on Networks, (iv) Sharing Industry and Life Experience.
	9) Society Membership	(i) Networking, (ii) Skill Development, (iii) Well-Rounded Individual.
	10) Barriers to Society Membership	(i) Lack of Time, (ii) Family Commitments, (iii) Living Away from University Campus, (iv) Personality (Shyness), (v) Motivation.
	11) Lecturers	(i) Knowledge of Industry, (ii) Awareness of Work Placement Opportunities, (iii) Awareness of Job Opportunities.
f) Perceived Employability: Meso Level Actors	12) Careers Service *a) Communication Methods*	(i) My Careers Portal, (ii) Email Updates, (iii) Posters, (iv) Social Media.
	12) Careers Service *b) Job Application Support*	(i) Cover Letter, (ii) Personal Statement, (iii) CV, (iv) Psychometric Test, (v) Assessment Centre, (vi) General Careers Guidance.
	12) Careers Service *c) Links with Employers*	(i) Careers Fairs, (ii) Work Placement Scheme, (iii) Networking Events (iv) Catalogue of Employers.
	12) Careers Service *d) Future Opportunities*	(i) Offer More Tailored Support by Degree Area, (ii) Help Students Narrow Down Options, (iii) Work in Partnership with Lecturers, (iv) Increase Awareness of Services Provided, (v) Compulsory Participation of Events, (vi) Engage Students More, (vii) In Person Events Beyond Just Main University Campus, (viii) Expand Coverage of Companies Being Promoted On Campus, (ix) Rejection Support for Job Applications.
	13) Graduate Recruiter *a) Current Contributions*	(i) Careers Fairs, (ii) Career Talks, (iii) Building Networks, (iv) Job Application Support.
	13) Graduate Recruiter *b) Future Opportunities*	(i) Awareness of Jobs Available, (ii) Further Job Application Support.

Table 37: Factors, Themes, Sub-Themes, and Codes (Continued)

Factor for Explanation	Themes and Sub-Themes	Code
g) Work Placement Barriers	14) Personal Barriers	(i) Difficulty Finding a Placement, (ii) Difficulty Securing a Placement, (iii) Lack of Existing Experience, (iv) Undecided on Career Path, (v) Travel and Living Costs, (vi) Transition from University to Work to University, (vii) Increased Length of Degree, (viii) Too Much Stress Alongside Degree, (ix) Timing of Placements, (x) Motivation.
	15) Organisational Barriers	(i) Length of Application Process, (ii) Availability of Placements (iii) Placement Needs to Add Value, (iv) Placements Sometimes Not Paid, (v) Location, (vi) VISA Restrictions.
h) Perceived Employability: Career Mobility	16) Mobility by Organisation *a) Single Organisation*	(i) Settle in One Location, (ii) Job Security, (iii) Financial Incentives, (iv) Career Progression, (v) If Happy Would Stay, (vi) If Good-Life Balance Would Stay, (vii) If Had Career Prospects Would Stay.
	16) Mobility by Organisation *b) Multiple Organisations*	(i) To Avoid Boredom, (ii) Changing Life Circumstances, (iii) Diversity of Experience, (iv) Career Progression, (v) Larger Network of Contacts, (vi) Money Driven, (vii) Status Driven, (viii) Portfolio Career.
	17) Mobility by Location *a) Local and National Mobility*	(i) Family and Children, (ii) Friends, (iii) Small Strong Network, (iv) Easier to Adjust, (v) Living With Parents (Finances), (vi) Location of Job Opportunities, (vii) Desire to Live in a City, (viii) Would Stay in Same Region (North/South), (ix) Avoid Language Barrier.
	17) Mobility by Location *b) International Mobility*	(i) Meet New People, (ii) Opportunity to Travel, (iii) Due to Location of Job Opportunities, (iv) Due to Competitive Labour Market, (v) Depends on Culture/Security/Climate of Country, (vi) Develop New Skills, (vii) For a Short Time or Part of Rotational Scheme/Same Company, (viii)While Still Young, (ix) If Dream Job, (x) Higher Salary, (xi) Brexit.

Table 37: Factors, Themes, Sub-Themes, and Codes (Continued)

Factor for Explanation	Themes and Sub-Themes	Codes
i) Perceived Employability: Gender	18) Gender Pipeline Challenges	(i) Gender Balance Variance by Degree Subject, (ii) Encourage Primary and Secondary School Pupils to take Certain Subjects to Balance Gender, (iii) Self-Worth and Confidence in Females, (iv) Exposure to Role Models of the Same Gender, (v) Taking Time Out To Have Children.
	19) Employer Issues	(i) Address Gender Pay Gap, (ii) Gender Representation on Hiring Committees, (iii) Raise Awareness if Issues in Specific Employment Sector, (iv) Support Female Employees with Children, (v) Gender Targets v No Gender Targets, (vi) Variation by Country of Gender Discrimination.
j) Perceived Employability: Year of Study	20) Final Year Employability *a) More Employable*	(i) University Degree, (ii) University Clubs and Societies, (iii) University Reputation, (iv) Work Experience, (v) Increased Confidence, (vi) Increased Aspirations, (vii) Career Ownership.
	20) Final Year Employability *b) Less Employable*	(i) Volume of Graduates, (ii) Lack of Jobs Available, (iii) When Rejected For Job.
k) University Debt	21) Repayment Expectations *a) Will Not Repay*	(i) Debt Will Be Wiped First, (ii) Interest Payments Too High, (iii) Will Not Earn Enough, (iv) Limits Career Ambitions, (v) Barrier to Higher Education Participation.
	21) Repayment Expectations *b) Will Repay*	(i) Bursary (Less Debt), (ii) Welsh Student (Lower Fees), (iii) High Salary Expectations.
	21) Repayment Expectations *c) Unknown Factors*	(i) Salary / Lifetime Earnings, (ii) Unforeseen Circumstances e.g. Health
l) Costs and Benefits of Higher Education	22) Costs	(i) Need Clear Reason For Pursuing Higher Education, (ii) Tuition Fee Increases, (iii) Debt Puts People Off Higher Education, (iv) Increased Participation in Higher Education.
	23) Benefits	(i) Degree Certificate, (ii) Access More Jobs, (iii) Increased Earnings Potential, (iv) Lifelong Friends and Network, (v) Self-Development and Skills, (vi) University Reputation.

Chapter 6: Findings and Analysis

6.1 Introduction and Student Definitions of Employability

This chapter draws on the literature review (Chapter 2), the quantitative results (Chapter 4), and the outcomes of the treatment of qualitative data (Chapter 5) to offer findings and analyses for Research Questions II and III.

Students defined employability as *the ability to get a job by standing out from the crowd in a competitive labour market*. Students focused heavily on aspect (i) the ability to get a job, reflecting alignment with the definition of employability by Rothwell and Arnold (2007, p.25) and of perceived employability by Vanhercke et al. (2014, p.594). However, students also focused on the challenging aspect of (ii) standing out from the crowd.

Participant 3: *It's making yourself (hesitates) stand out from the ever-increasing crowd in the pool of potential employees to employers. So that's the kind of level that you're (hesitates) trying to compete I suppose, that kind of sphere. So it's making your employability stand out from the rest. It's kind of how I'm picturing it.*

Participant 7: *Standing out to somebody who would employ you.*

Participant 13: *I think, setting myself out from the crowd is probably the biggest challenge that I'll face.*

A further challenge, which emerged as part of the student definition of employability was (iii) a competitive labour market, highlighting a perceived mismatch between the supply of graduates, and the demand for graduates in terms of job opportunities from employers.

Participant 10: *The ultimate problem is too many people, too few jobs.*

Participant 23: *I think one of the factors is the market is very intense with graduates.*

Participant 25: *I think there's a lot of competition. Like there are a lot of universities in the UK. Obviously the Russell Group, we all do the same, or pretty much the same courses of 100 people or more on each course. There's a lot of us but not many jobs, in my opinion.*

The findings suggest that students have an awareness of dominant themes in career theory literature including increased participation in HE, competition for jobs, and the need to stand out from other applicants (McCowan, 2015; Philips & Young, 2015; Tomlinson 2014).

The quantitative phase drew on a 3-item measure of employability adapted from Rothwell and Arnold (2007). Students agreed with statements *(i) I could easily switch from one*

job to another, and *(ii) I am optimistic that I would find a job if I looked for one*. However, students disagreed with the statement *(iii) If I had to find a job it would be easy*. Employability achieved a Cronbach's Alpha measure of reliability of 0.66 and 0.71 for waves one and two of the thirty-two item model, and 0.71 for the sixty-one item model. Whilst a score of 0.7 or above is preferred, the researcher decided to include the score of 0.66, partly because it rounds to 0.7, and partly because in wave two the same employability items exceeded 0.7. The qualitative interviews identified essential perceived factors of employability by students to include academic qualification, hard skills, transferable skills, work experience, extracurricular activities, networking, taking ownership of own career, confidence, motivation, and navigating the application process. Section 6.2 further evidences these factors and others by addressing *Research Question II.*

6.2 Research Question II

The literature review (Chapter 2) previously addressed *Research Question I: What are the factors of graduate employability?* This resulted in a conceptual model (Chapter 2.7) which offered the underpinning for *Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market.* Section 6.2 evidences the quantitative and qualitative findings and analysis for hypotheses *H1-H5* and *Moderators I-III.*

6.2.1 Social Capital

Social capital addressed whom you know (Kaur & Sandhu, 2016; Luthans et al., 2004). The quantitative findings indicated that students perceived social capital as having a neutral mean score. In response to the statement *I expect to secure graduate employment based upon my network of contacts*, 41.18% of participants agreed, 25.16% were neutral, and 33.21% disagreed. Students felt that their parents, family, school friends and university friends were unlikely to help them to get a job. The quantitative findings did support *H1a. Social capital is a factor of human capital*, although to a lesser extent than the findings of Sibunruang et al. (2016) in employers, or Esson and Ertle (2016) when looking at the views of prospective university students. Social capital had a Cronbach's Alpha measure of reliability of 0.83 and a second order factor analysis of human capital of 0.55.

The interview findings helped to clarify the student position by suggesting that family and friends do contribute significantly to perceived employability in some instances, either through their networks or by passing on valuable guidance and setting aspiration for students.

Participant 29: *Thinking of friends and family, they can massively help, especially when you are starting out, someone might have a job somewhere, or an internship somewhere, or might know someone who can help you get your foot in the door somewhere after. I do think they make a massive difference.*

Participant 15: *I think family has a massive role in employability in teaching children what their aspirations should be. I come from a family, my mum and dad are both Engineers, so with them both being Engineers, going into an Engineering job I know that it's achievable. I know it's within my capabilities, and I know that it can be worthwhile, well paid. Someone from a family that wasn't in engineering, it might not be as attractive to them in terms of how they decide their A levels, how they apply themselves at GCSEs.*

Students with stronger networks placed greater emphasis on social capital compared to those with weaker networks. Significantly, the findings suggest that the impact of social capital on employability builds over time, which may suggest why quantitative studies looking at graduates in the labour market, or looking at MBA or specialist Management MSc students offer stronger mean scores and support for social capital (Baruch et al., 2005; Sibunruang et al., 2016).

Participant 28: *I think networking is huge. I don't necessarily think that it matters straight away, it's something that builds as you go along. I think straight away after, you know looking for graduate roles and that kind of thing, it's all very much based on degree and then, following that, the social media side of it, the networking side of it comes into it a lot more as you get friends within the industry. I think there is an element of 'it's not what you know it's who you know' but initially you have to be able to prove yourself as well in terms of what... I think it builds as you go along.*

Furthermore, students acknowledged the role of university society membership in providing networking, skills development, and helping to evidence a well-rounded individual. This supports and builds on recent findings by Esson and Ertle (2016) of views by prospective university students. Additionally, students highlighted a number of barriers to society membership not previously discussed, including lack of time, family commitments, living away from the university campus, personality including shyness, and motivation.

Participant 6: *I do so much outside of university already, like actual work, so I find myself not having time to do any.*

Participant 12: *I'm so committed to my studies I find it difficult to find time to get involved in societies.*

Participant 5: *I've got my hands full with my own children and husband and everything.*

Participant 22: *I'd have to travel to Southampton – people who live in the city can probably do it a bit easier.*

Participant 21: *I was very shy and didn't know anyone and even though they* (the society members) *were lovely I just didn't feel comfortable so I just didn't join.*

Additionally, students cited the importance of lecturers as a further dimension of social capital, in particular, for their careers advice, their knowledge of the industry, and for the provision of work placement opportunities and job opportunities. This was particularly significant for students studying P1 and P2 generalist degree subjects, with a less defined career path than students studying P3 specialist degree subjects.

Participant 2: *I'd want workshops with existing Arts professionals, which could be tutors if they are practising Artists. Otherwise, it's the random person who wants to help but doesn't know anything about the field. They might talk about careers in the wider sense but I doubt very much if they could help us with the Arts – it's a very difficult career to go into.*

Participant 3: *I think that for Ocean & Earth Sciences in particular maybe speaking to some of the lecturers. Cos I think a lot of students look to their lecturers more than they look to the careers service.*

Participant 18: *I took an internship through the university but that went directly through one of our professors.*

Participant 30: *If I was to talk about career prospects, I'd probably talk to my tutor first... I think you'd get more information from your tutor or someone within your department.*

The link between lecturers and social capital is less prevalent in the literature than in these findings. This might be because existing studies tend to focus on graduates already in the labour market, rather than students about to transition from HE into the labour market. Alternatively, it may be because the focus on students from P3 specialist degree subjects in the literature fails to represent the wider views of students of other degree subjects as represented here. For example, specialist degree subjects have more defined career paths and so, perhaps, students

can benefit from more generic careers advice. For P1 and P2 students, this generic advice is often not sufficient and therefore lecturers can provide more tailored guidance. Section 6.2.10 further develops the role of lecturers in providing careers advice.

6.2.2 Cultural Capital

Cultural capital addressed who you are (Kaur & Sandhu, 2016; Luthans et al., 2004). The quantitative findings indicated that students perceived cultural capital as having an overall positive mean score. In response to the statement, *the reputation of this university will help me in securing graduate employment*, 76.31% of participants agreed, 16.31% were neutral, and 7.38% disagreed. This supported findings from prospective university students by Esson et al. (2013) and Esson and Ertle (2016). Furthermore, students agreed with Jaeger (2010) that extracurricular activities, reading, dressing smartly, travelling, speaking an additional language, networking, and volunteering had a positive impact on employability. Conversely, going to the gym, the use of social media, and visiting cultural exhibits had a neutral impact. The quantitative findings support *H1b. Cultural capital is a factor of human capital*. Cultural capital had a Cronbach's Alpha measure of reliability of 0.73 and a second order factor analysis of human capital of 0.67.

The interviews provided additional support, in particular with regard to the influence of the reputation of the university, participating in extracurricular activities, travelling, speaking an additional language, networking, and volunteering.

Participant 18: *I think in the end it's all about the university, it's all about that. The university has the name, obviously, when you come out of university you don't have yourself a name, you don't have much work history to present, so it's the university.*

Participant 13: *In terms of societies, I think, again, societies give you experience and the transferable skills that you might not necessarily get from just following your degree. So I think they enhance your employability as well.*

Participant 28: *I think people like, especially in their first summer of university, people like to travel.*

Participant 24: *Personally, I'm looking for employment abroad because I do languages.*

Participant 7: *I feel it's better to do a lot of networking and sacrifice your degree a little bit.*

Participant 11: *I did my volunteering in a school in my first year of study... you definitely develop skills over the years.*

A final element that spans social and cultural capital is university bursary status. Students perceive bursary status as a crucial factor to pursuing HE, supporting career theory literature which suggested that bursaries facilitate social movement and access to HE (Esson et al., 2013). However, bursaries are not disclosed on job application forms and therefore students did not perceive them to have a direct impact on employability. The case for a direct link between bursary status and graduate employability does not appear to be supported.

Participant 9: *I think at the end of the day, like, if you graduate with a degree you graduate with the same degree, it doesn't really matter, like, whether you have a bursary or not.*

Participant 15: *As far as I'm aware there is no way for an employer to know whether a student had a bursary or not, so I can't see how that would have an effect.*

Students did, however, perceive that the removal of bursaries would put off students from more disadvantaged backgrounds from pursuing HE, adding a further dimension to the quantitative findings of no direct association between bursary status and perceived employability.

Participant 16: *The only difference I would think was, if I had a bursary, I would be more inclined to go to university and so develop the skills in whatever discipline I chose.*

Participant 18: *I mean it can (assist someone) to actually come and take a course, but I don't see past that how much it can influence.*

Participant 33: *Apart from I guess, if you have a higher bursary then you're from a lower socio-economic background, but then if you are at university anyway, it's a level playing field when you get there, so no it shouldn't, no.*

6.2.3 Psychological Capital

Psychological capital addressed who you are (Kaur & Sandhu, 2016; Luthans et al., 2004). The quantitative findings indicated that students perceived psychological capital as having an overall positive mean score. In response to the statement, *university has increased my self-esteem and self-confidence*, 74.02% of participants agreed, 13.80% were neutral, and 12.18% disagreed. This supported findings from Baruch et al. (2005) that looked at the views of students studying an MBA or specialist Management MSc qualifications. Furthermore, students agreed with the 5-items of psychological capital offered by Cook et al. (1981). The

quantitative findings support *H1c. Psychological capital is a factor of human capital* when applied to undergraduates. Psychological capital had a Cronbach's Alpha measure of reliability of 0.72 and a second order factor analysis of human capital of 0.52.

The interviews indicated that whilst psychological capital is highly important for employability, students still face challenges in developing psychological capital. This is particularly true for females overcoming issues concerning self-esteem and confidence.

Participant 2: *There's a fundamental issue – that's self-worth.*

Participant 29: *I feel like it would affect employability or perceived employability that girls would feel a bit less confident about the skills they do have. I remember for myself, I'm not a very confident person, so I found the process of applying to uni very difficult cos you have to sell yourself and I'm like, well, I don't really know what I have to offer. So I think that would be important.*

Participant 22: *I think confidence, that's the thing – with creative people, it's confidence and experience.*

However, students were clear that university had helped them to develop their psychological capital, especially in terms of confidence.

Participant 26: *I've gained a lot more technical and transferable skills, that's made me feel a lot more confident.*

Participant 27: *I can see an increase in confidence from my first year to this year and just general increase in everything.*

Participant 33: *I mean obviously you are more employable as you go along because you're more qualified, you've grown in confidence, you have experience, you've become more comfortable with yourself, so you're a more attractive person to work with generally.*

6.2.4 Scholastic Capital

Scholastic capital addressed what you know (Kaur & Sandhu, 2016; Luthans et al., 2004). The quantitative findings indicated that students perceived scholastic capital as having an overall positive mean score. In response to the statement, *knowledge from my degree course will help in securing graduate employment*, 83.99% of participants agreed, 8.93% were neutral, and 7.08% disagreed. This supported findings from studies of MBA or specialist Management MSc students by Baruch (2009) and Baruch et al. (2005). Furthermore, students felt that their

degree course had improved their IT, literacy, numeracy, oral communication, problem solving, teamwork, and time management skills. These findings support and advance findings by Jackson and Chapman (2012), based on Business undergraduates in Australia. The quantitative findings support *H1d. Scholastic capital is a factor of human capital*. Scholastic capital had a Cronbach's Alpha measure of reliability of 0.73 and a second order factor analysis of human capital of 0.67.

Interestingly, no correlation existed between UCAS points and perceived employability, despite 89.96% of participants having 300+ UCAS points or equivalent. This was in contrast to a study of pre-university students in the UK by Esson et al. (2013), and a study of university students by Teichler (2009), which reported UCAS points to evidence increased employability through identifying the quality of the student. The interviews enabled further explanation regarding the perceived relationship between UCAS points and employability. Students felt that UCAS points determined access to HE institutions and degree courses that, in turn, positively influenced employability. Yet, students perceived their degree qualification to hold significantly more importance than their UCAS points, as the most recent evidence of their academic achievement and ability.

Participant 4: *I'd like to think by the time you're into university, it's more about what you do at university there.*

Participant 12: *I would not think employers would look too much at UCAS points having done an undergraduate degree.*

Participant 15: *None what so ever. I would be very surprised if they paid any attention to that on my CV. I've already demonstrated that my education before university was up to a high standard by getting into university. I don't expect them to pay much attention to it.*

Participant 22: *I don't think they have much, they enable you to enter a certain type of course, but I think, once you're on that course… My UCAS, I got straight A*s in my course, in terms of influence, not at all for UCAS.*

These findings position UCAS points as an enabler to HE, rather than directly influencing perceived employability. This indicates a shift in perception between students studying A Levels, who perceive UCAS points to be highly valuable for employability, and students already with UCAS points, studying at university.

Furthermore, several students positioned UCAS points as a hygiene factor, acknowledging that some employers use UCAS points as a barrier to entry for jobs. For

example, students reported that certain employers state a minimum threshold of UCAS points for graduate jobs, or require GCSEs in Mathematics, English, and Science. Once passed this threshold, no further perceived impact on employability exists.

Participant 4: *I guess there'll be certain things, so you know, a typical B in Maths GCSE and things like that.*

Participant 5: *I mean, I know that, like for teaching you have to have GCSE English, Maths and Science, so that's something, for example, I would not be able to go into because I don't have GCSE Science.*

Participant 11: *Some jobs, they say you need so many UCAS points, or like a GCSE in English or Maths as well as a 2.1 degree. They are like the basic requirements almost.*

The literature review identified PwC and Ernst & Young as the only AGR listed graduate employers to have publically removed UCAS point targets from their graduate applications, whilst the Civil Service and Grant Thornton take a flexible approach. This move by PwC and Ernst & Young appears to mirror students' perceptions in terms of UCAS points and their reduced relevance to graduate employability, in contrast to their degree classification.

6.2.5 Market-Value Capital

Market-value capital addressed what you have (Kaur & Sandhu, 2016; Luthans et al., 2004). The quantitative findings indicated that students perceived market-value capital as having an overall positive mean score. Students felt that undertaking a degree work placement had improved their IT, literacy, numeracy, oral communication, problem solving, teamwork, and time management skills. These findings support and advance findings by Jackson (2015) from Business undergraduates in Australia, who positioned classroom learning as the scaffolding and WIL as the development and refinement of skills. Tomlinson (2012) called for more studies of WIL in the UK, and Edwards (2014) and Wilton (2014) stated that the benefits of market-value capital are still widely unknown. The quantitative findings support *H1e. Market-value capital is a factor of human capital.* Market-value capital had a Cronbach's Alpha measure of reliability of 0.86 and a second order factor analysis of human capital of 0.62. Qualitative interviews helped to explain a paradox: Passmore (2014) found that 92% of students stated the importance of having placement, work experience, or internship opportunities, but only 27% of the students undertook them. Students in this study cited personal barriers and organisational barriers to developing market-value capital.

Students identified ten personal barriers:

(i) Difficulty finding a placement

Participant 16: *Like how accessible they are – so, knowing about work placements and opportunities... sometimes they aren't that well advertised.*

(ii) Difficulty securing a placement

Participant 31: *I think it is always the initial state that most students don't even think about applying, because they do not expect to get anywhere with it. And usually the applications are very, very lengthy, and when they don't expect to get anything from it, or they are very competitive, they don't expect to get anything from it in the first place.*

(iii) Lack of existing experience

Participant 4: *I think it's really difficult because I've found, in order to get into places, you need experience, but it's hard to get the experience because of those reasons.*

(iv) Undecided on career path

Participant 23: *I think it's again the students who are maybe unsure what they want to do after graduation, so they don't make an effort towards doing an internship.*

Participant 32: *I guess to some extent Philosophy students or Humanities students might feel like they don't sort of have a clear idea of the sort of job that would really benefit them that much in a year.*

(v) Travel and living costs

Participant 15: *I can see cost being an issue for some. The one I got in Salisbury, I'm on a year contract for the house in Southampton, which meant I was having to pay for it anyway. So I was commuting up to Salisbury every day which in the cost of diesel probably worked out cost neutral for the amount I was getting paid for the placement.*

Participant 26: *The main barrier, I think, is that a lot of them are unpaid, so students will have to fund their accommodation and transport themselves.*

(vi) Transition from university to the workplace and back to university

Participant 20: *My old housemate, he's done one this year and he, he's gone into work and he loved it straight away and he doesn't want to come back to university. I think that's the worry people have, as soon as they get into work, they got into the work environment and it's very, very different from studying yourself. So actually having to get back into studying is what puts people off.*

(vii) Increased length of the degree

Participant 30: *Me personally, the reason I didn't do it was because it was an extra year. I know a few people who've taken them, but for me, I wanted to get my degree done, get my classes done and then just crack on as quickly as possible.*

(viii) Too much stress alongside the degree

Participant 17: *I think it can be perhaps quite stressful doing one. Because, in Chemistry, you have a 9-5 job with a company who want you to work towards the company targets but, at the same time, you've got to write a dissertation for university and also do modules on top of that in your own time, so it is a lot of work and I think that can be quite off-putting.*

(ix) Timing of placements

Participant 9: *Because it's the holiday! (laughs). I like to travel during the holidays and just take some time off from school and, like, you're always dealing with, like, school and reading and work and you're just, like, you need some time off as well.*

Participant 32: *I do some sort of part-time work during summer, but I wouldn't want to work all the way through summer and then come back in. I like to have some time off so I would, I wouldn't like the idea of summer placements for that reason.*

(x) Motivation.

Participant 10: *Lethargy, lethargy, lethargy – that's an awful answer but it's the truth, I just don't think people are bothered.*

Participant 17: *I think laziness is a factor, some students are too lazy to go and do it.*

Students identified six organisational barriers:

(i) Length of application process

Participant 30: *It's quite a long application process, and there's quite a lot to it, to get these placements. You still have to go through the application process and potentially have interviews to get places.*

(ii) Availability of placements

Participant 10: *I don't think there are enough opportunities.*

(iii) Placements need to add value

Participant 18: *One of our professors was telling us a few years ago for Ship Scientists, and what happened you send three people and those three people just make coffees. Stuff like that.*

(iv) Placements sometimes not paid

Participant 1: *Sometimes they aren't paid so you don't earn money and you're not doing your degree.*

Participant 22: *I know some people who've gone for them, but they don't get paid, they're there for like two months, they've spent a lot on travel, like going up to London.*

Participant 33: *If they are unpaid that's a real barrier, unpaid internships, a lot of students need to work in the summer so they can save up for uni, so that's not helpful.*

(v) Location of opportunities

Participant 1: *If you have to travel up to London, that's a lot of expense and you have to have time in your schedule.*

Participant 33: *I think logistically they can be really difficult because a lot of them are based in London, so if you don't live in London how are you going to support yourself?*

(vi) VISA restrictions

Participant 13: *Also it's your ability as well to work in the UK, particularly as an international student. I know, as a couple of my friends are international and they have trouble when trying to find work placements with certain organisations who require a certain type of visa.*

One final finding from the interviews, relating to market-value capital, showed that, for a small number of degree subjects, students did not perceive work placements as useful, due to the diversity of career options (e.g. Art and Music). These students felt that gaining market-value capital was important, but that alternative approaches fitted better with their degree and career aspirations as part of building a freelance portfolio career.

Participant 2: *I think it would just be incredibly limited in what I could do. And that's not the fault of any of the work placements, that's just how it works. No professional orchestra would touch me with a bargepole at the moment (laughs), which is perfectly fine. That's accepted. Most people make their money through a portfolio career.*

Participant 10: *There are hardly any for artists and certainly hardly any interesting ones.*

Participant 22: *I don't actually know anyone who is doing a work placement.*

Participant 35: *The university, if they could help provide those years in industry, they would need to offer such a wide spectrum of options for students if they wanted to be at all relevant to what they wanted to go into. So for instance, if they offered years in industry working for the Arts Council, for instance, it wouldn't be useful for me, if I wanted to be a singer. So there are obvious barriers to it. However, as a freelancer, you could sing in a variety of things throughout the year, so I would rather do that.*

6.2.6 Skills

The quantitative findings indicated that students perceived skills as having an overall positive mean score. The quantitative findings support *H1f. Skills are a factor of human capital*. Skills had a Cronbach's Alpha measure of reliability of 0.86 and a second order factor analysis of human capital of 0.57. Students felt that skills were important and that a combination of scholastic capital and market-value capital helped in the development of these skills, supporting the views of Jackson (2015) from Business undergraduates in Australia, and expanding coverage of students to within the UK, and across degree subjects.

Students showed support in the questionnaires for IT, literacy, numeracy, oral communication, problem solving, teamwork, and time management as key employability skills, as represented in the literature (Jackson & Chapman, 2012; Van der Heijde & Van der Heijden, 2006; Wilton 2014; Yorke & Knight, 2007). However, in the interviews, students also perceived leadership to be an important skill for graduate employability. Students perceived this skill as predominantly developed through extracurricular activities and involvement in societies, rather than through their degree studies.

Participant 1: *Obviously, organisation and leadership are really important.*

Participant 9: *They place a lot of emphasis on, like, leadership skills and your advocacy skills and if you are involved with societies, it really helps with that.*

Participant 10: *Being able to lead is really important.*

Participant 33: *Having a leadership role in these societies is good because it proves that people trust me to be in charge of them.*

Career theory literature offered leadership as the next skill in the ranking, missing the cut-off of the top seven skills as justified in Chapter 2.3.8. The literature positions leadership as a skill, which is less relevant to graduates immediately upon entering the labour market, but of greater relevance as the individual progresses through their career. For example, studies of MBA students, who have considerably more work experience than graduates, tend to focus heavily on the importance of leadership (Baruch & Leeming, 2001). Whether this perception of leadership offered by students will change upon entry into the labour market lies outside the scope of this research. Branine and Avramenko (2015), in a quantitative study of undergraduates and employees across France, Spain, Germany, and the UK, identified leadership as an important skill. The findings of this study indicate further support for such a

position and highlight involvement in extracurricular activities and societies as valuable mechanisms for leadership development.

Tables 38 and 39 evidence proof of alignment between the literature and the interviews. For each skill, the rank and number of citations in career theory literature and in the interview transcripts are represented. Where rankings are equal, this is denoted by an '=' sign. The eight top-ranked skills repeat across both groups, with the top four in mirror order of citations.

Table 38: Skills (Rank)

Skill	Literature	Interviews
Communication	1	1
Teamwork	2	2
Time Management	3	3
Problem Solving	4=	4
Literacy	4=	6=
Numeracy	4=	6=
IT	7	8
Leadership	8	5

Table 39: Skills (Numbers)

Skill	Literature	Interviews
Communication	19	26
Teamwork	16	24
Time Management	9	18
Problem Solving	8	13
Literacy	8	7
Numeracy	8	7
IT	7	6
Leadership	5	10

6.2.7 Human capital

Students perceived social capital (*H1a*), cultural capital (*H1b*), psychological capital (*H1c*), scholastic capital (*H1d*), market-value capital (*H1e*), and skills (*H1f*) as factors of human capital, as identified in Sections 6.2.1 to 6.2.6. The quantitative findings indicated that students perceived human capital as having an overall positive mean score. The findings support *H2. Developing human capital is positively associated with graduate employability.* Human capital had a Cronbach's Alpha measure of reliability of 0.85, and a correlation of 0.29 with employability. Human capital accounted for a regression variance of 15.1% on

employability. Furthermore, human capital had a correlation of 0.34 with careers advice, and 0.31 with protean career orientation, evidencing the significant importance of human capital to perceived graduate employability.

The undergraduate perception of the graduate labour market addresses the construction and movement of human capital from universities into the graduate labour market, as part of a lifelong learning process, replacing a 'job-for-life' as a mechanism for career sustainability. The association between human capital and taking ownership of your career through a protean career orientation, highlights that students are aware of the dynamic structure of a career ecosystem (Baruch, 2013), and of the new work arrangements which continue to manifest in response to an evolving career ecosystem (Baruch et al., 2016). Students in this study appear to acknowledge the movement away from old psychological contracts (Kotter, 1973; Rousseau, 1995; Schein, 1980), with stability, loyalty, and mutual commitment replaced with dynamism, breach of old contract, and competence based relationships (Baruch, 2015). Furthermore, the perceptions of students reflect the rise of contemporary career focused studies in career theory publications, as identified through biometric mapping by Lee et al. (2014), and further developed in terms of contemporary career theory terminology by Baruch et al. (2015). Finally, planned action theory (Fishbein & Ajzen, 1975) manifests through social capital in terms of attitude, subjective norm, and motivations. In the context of HE, the importance of fostering positive attitudes, providing students with subjective norms through family, friends, and academics, and seeking to enhance motivation in the student to develop human capital is of significant importance, as well as informing a sense of emergent identity and employability. The role of career ownership through a protean career orientation (Section 6.2.9), and careers advice (Section 6.2.10) further informs this position.

6.2.8 Boundaryless Career Orientation (Career Mobility)

The quantitative stage asked students to respond to two statements of boundaryless mobility (Briscoe & Hall, 2006). In response to the statement, *In my ideal career, I would only work for one organisation*, 31.00% agreed, 32.10% were neutral, and 36.90% disagreed. In response to the statement, *I like the predictability that comes with working continually for the same organisation*, 45.68% agreed, 25.69% were neutral, and 28.63% disagreed. The mean scores indicate that students had a near equal split between a traditional bounded career orientation, a boundaryless career orientation, or somewhere in-between for career mobility.

This supports the claims by Baruch (2014; 2006), Dries and Verbruggen (2012) and Murphy, Lambrechts and Huybrechts (2016) that the traditional career is not dead. The quantitative stage also asked students to respond to two statements of boundaryless mindset (Briscoe & Hall, 2006). In response to the statement, *I am energised in new experience and situations,* 86.27% of participants agreed, 8.93% were neutral, and 4.80% disagreed. In response to the statement, *I would enjoy working on projects with people from across many organisations*, 81.70% of participants agreed, 11.59% were neutral, and 6.71% disagreed. The mean scores indicate strong support for a boundaryless career orientation in terms of mindset. Boundaryless career orientation had a Cronbach's Alpha measure of reliability of 0.70. Yet, correlation analysis showed no statistically significant link with employability. The quantitative findings did not support *H3. Holding a boundaryless career orientation is positively associated with graduate employability.*

Previously, boundaryless career measures of mobility and mindset have explored views of MBA or specialist Management MSc students (Baruch, 2014; Briscoe & Hall, 2006; Herrmann et al., 2015). These students already have experience in the labour market, which may have influenced and developed their orientation. Undergraduates with considerably less labour market experience, and in some cases no labour market experience, may perhaps not yet be sure of their position on a bounded or boundaryless career orientation. The quantitative findings indicate boundaryless orientation to be a separate dimension, which does not directly correlate to perceived employability. However, there is support in the mean scores from the undergraduate population in this study of a movement away from a traditional career, towards a boundaryless career orientation for mindset. This is not however the case for career mobility, which reflects near equal coverage of bounded career orientation, boundaryless career orientation, and the middle ground between these two dichotomies, extending similar findings by Baruch (2006; 2014), and Baruch and Reis (2016) from MBA or specialist Management MSc students. The findings provide support for a kaleidoscope career and shifting nature of careers in terms of an emergent identity that develops over time, based on life experiences. Furthermore, the research framework (Chapter 2.2) of viewing careers and labour markets as ecosystems (Baruch, 2015) provided an overarching theoretical lens to reconcile the apparent disconnect between the co-existence of traditional and boundaryless careers. The qualitative stage looked to explain the push and pull factors of working for a single or for multiple organisations, and for local, national, and international mobility, addressing career mobility and geographical dimensions of a boundaryless career (Baruch & Reis, 2016).

Students cited eight pull factors towards working for multiple organisations, (i) to avoid boredom, (ii) changing life circumstances, (iii) diversity and experience, (iv) career progression, (v) larger network of contacts, (vi) financial incentives, (vii) status driven, and (viii) as part of a portfolio career. In contrast, students cited seven pull factors towards working for a single organisation, (i) settle in one location, (ii) job security, (iii) financial incentives, (iv) career progression, (v) if happy would stay, (vi) if good life-balance would stay, and (vii) if had career prospects. Students did not have a fixed position regarding working for a single organisation or for multiple organisations. This indicates the influence that experience within the labour market has on an individual's emergent identity and the evolution of bounded versus boundaryless career orientation over time.

Students identified eleven dimensions influencing international mobility, (i) to meet new people, (ii) opportunity to travel, (iii) due to location of job opportunities, (iv) due to competitive labour market, (v) depends on culture/security/climate of the country, (vi) to develop new skills, (vii) for a short period of time as part of a rotational scheme/with same company, (viii) while still young, (ix) if dream job, (x) higher salary, and (xi) Brexit. These findings extend the seven dimensions previously offered by Baruch et al. (2013, p.2369) of *(i) time of exposure; (ii) intensity of international contact through work; (iii) breadth of interaction; (iv) legal context; (v) international work instigator; (vi) extent of cultural gap between an individual's country-of-origin and the context in which the international work takes place; and (vii) key cultural-related requirements of one's job/role.* The extension of these factors since 2013 is indicative of the evolving nature of careers and career theory, as well as the subtle differences in perceived employability of undergraduates in comparison to graduates already in the labour market.

Students identified five dimensions of local mobility, (i) family and children, (ii) friends, (iii) a small but strong network, (iv), easier to adjust, and (v) living with parents for financial reasons. Additionally, four dimensions of national mobility built on the five dimensions of local mobility, including, (vi) location of job opportunities, (vii) desire to live in a city, (viii) would stay in the same region, and (ix) to avoid a language barrier. Baruch and Reis (2016), and Cotton and Shen (2013) suggest that the reasons for national mobility are less clear than for international mobility. Baruch and Reis offer personal development, work-life balance, and higher remuneration as possible reasons for national movement. This study extends the dimensions of local and national mobility in the context of undergraduates prior to entry into the labour market. The findings show the complexity of geographical dimensions and the diversity of factors that influence bounded or boundaryless career orientation.

Furthermore, different factors have less or greater weighting over time, again reflecting the emergent identity aspect within a dynamic career ecosystem environment.

6.2.9 Protean Career Orientation (Career Ownership)

The quantitative findings indicated that students perceived protean career orientation as having an overall positive mean score. Students agreed with three of the items measuring a protean career (i) *I take responsibility for my own development*, (ii) *I am responsible for the success or failure in my career*, and (iii) *For me, career success is how I am doing against my goals and values*. Students agreed slightly with four further items measuring a protean career orientation (iv) *I will navigate my own career, mostly according to my plans*, (v) *Freedom and autonomy are driving forces in my career*, (vi) *I can easily find a job after university*, and (vii) *For me, career success means having flexibility in my job*. The findings support *H4. Holding a protean career orientation is positively associated with graduate employability.* Protean career orientation had a Cronbach's Alpha measure of reliability of 0.68, and a correlation of 0.61 with employability. As previously stated, the correlation between human capital and protean career orientation was 0.31. The correlation between protean career orientation and careers advice was 0.20. Protean career orientation accounted for a regression variance of 22.3% on employability. The regression model of human capital (15.1%), and protean career orientation (22.3%) accounted for a variance of 37.4% on employability.

The qualitative findings provided additional support for a protean career orientation amongst students:

Participant 1: *Obviously being encouraged to do them (WIL), but no-one can make you do them, so that's on you.*

Participant 6: *There's only so much someone can do for someone before they have to do it themselves. For me, I guess it's just inner motivation.*

Participant 9: *I think apart from that it's, like, you have to take the initiative to go and find the people to help you with it.*

Participant 13: *To have drive and ambition for what you want to go into.*

Participant 25: *Being proactive, so not just doing the work you get given at uni, but also other stuff on the side.*

Participant 38: *Driving yourself individually.*

To date, protean career measures have been developed and validated based on MBA or specialist Management MSc students (Baruch, 2014; Briscoe et al., 2006). This study responds to calls from Baruch et al. (2015), Gubler et al. (2014), and Lee et al. (2014) for scholars to address the lack of existing quantitative analysis of protean career orientation. Furthermore, this study advances the application of protean career measures, indicating career ownership as a prominent factor of employability across all fields of undergraduate study. This supports and develops similar findings from participants confined to postgraduate management qualifications with greater labour market experience. Additionally, the findings indicate that protean career orientation appears to develop prior to entry into the graduate labour market, or with minimal labour market exposure.

6.2.10 Careers Advice

The quantitative findings support *H5. Receiving careers advice is positively associated with graduate employability.* Careers advice had a Cronbach's Alpha measure of reliability of 0.84, and a correlation of 0.17 with employability. Careers advice accounted for a regression variance of 0.05% on employability. Furthermore, careers advice had a correlation of 0.20 with protean career orientation. The overall regression model of human capital (15.1%), careers advice (0.05%) and protean career orientation (22.3%) accounted for an overall variance of 37.9% on employability. The low regression variance for careers advice, combined with neutral impact for careers advisors and graduate recruiters offers some concern. This is magnified by the association between careers advice and protean career orientation, with protean career orientation accounting for the largest variance on perceived employability. The qualitative findings helped to explain the students' perceptions of careers advice.

Students highlighted the positive aspects of the careers service across three groupings. Communication methods included My Careers Portal, email, posters, and social media. Furthermore, job application support encompassed cover letter, personal statement, CV, psychometric tests, assessment centres, and wider careers guidance. Finally, employer links addressed careers fair, EXCEL work placement scheme, networking events, and a catalogue of employers. However, only half of the participants interviewed had made use of the careers service during their university studies. Those who had used the careers service had split views; some found it useful, while others found the advice too generic. Nine opportunities emerged

for the careers service to enhance the provisions on offer and engage a greater number of students.

(i) Tailored support

Participant 19: *I just think that if there was more of a specific Humanities sort of day like they have for the Science and like Business fairs and stuff, that that would really benefit us.*

Participant 33: *I'm so unaware of what the options are in terms of jobs, I don't know how they would, but if they could show you all the different options that maybe you haven't thought of before, that would be really helpful.*

(ii) Help to narrow down options

Participant 7: *I reckon, maybe something that could maybe help people refine their, like, getting away from casting your net, something that helps you narrow down that search.*

(iii) Partnership with lecturers

Participant 10: *I doubt very much if they could help us with the Arts – it's a very different career path to go into. So yeah, I'd want workshops with existing Arts professionals, which could be tutors if they are practising Artists.*

Participant 3: *I think for Ocean & Earth Sciences in particular, maybe speaking to some of the lecturers. Cos I think a lot of students there look to their lecturers more than they look to the careers service for advice. They don't really have the expertise that some of the lecturers do, with contacts and stuff like that.*

Participant 30: *If I was to talk about my career prospects, I'd probably go to my tutor first.*

Participant 35: *I feel like with my situation being Music, I would be better off talking to academics within my faculty about that.*

(iv) Increase awareness of services offered

Participant 21: *Maybe make themselves a little more aware to others, I didn't really know that... I'd heard there is a careers service, but I didn't really know what they do or where they are, so maybe making themselves more, in our face.*

Participant 31: *I must say, for me, I don't think I've really been exposed too much of that (careers service or faculty careers advisors).*

(v) Enforce compulsory participation

Participant 2: *They called it compulsory and it was in no way made compulsory, which lots of people aren't a fan of.*

(vi) Engage students more

Participant 26: *Personally, I'd like them to be a bit more proactive, come to us, but that's me talking as a typical lazy student.*

Participant 28: *The difficult thing for the careers department is finding the time where they can timetable lectures, their own lectures, and where people are going to show up to them.*

(vii) Provide support beyond the main university campus

Participant 3: *I tried to get my CV seen. I think I got it seen when they did a drop-in session at the NOC (National Oceanography Centre). That was a couple of years ago and I've been to some of the events they've held at the NOC. That's been more convenient to me being based down there.*

Participant 14: *There could be better links, even though WSA (Winchester School of Art) is part of Southampton, they're still very separate I think. Providing services at WSA would be useful.*

Participant 32: *I guess from a Humanities perspective, I've definitely never seen them on Avenue Campus, so I guess it might be worth them going down there if they're trying to engage with Humanities students because we're not always at Highfield, and if their only sort of physical output is on there, we're less likely to see them.*

(viii) Expand coverage of companies being promoted

Participant 34: *All the careers employability is about Bankers, Accountants, and Auditors, and yeah I just don't need that.*

Participant 37: *I do think a little more emphasis could be placed on the variety of things you could go into, fields you could go into, for example, you know it's almost exclusively, at the employability fairs, it's almost exclusively multinational companies that are offering positions. I'd be quite interested to know if there are any start-ups, or smaller businesses, or even local businesses that you know, that students might be interested in getting involved with.*

(ix) Provide support for students when rejected from job applications

Participant 3: *I've had a few rejections for summer applications which has kind of... so maybe having some support there. I know they do a lot with checking CVs and that sort of thing, but having that support for when things don't go well.*

Students acknowledge the role of graduate recruiters through careers fairs, careers talks, building networks, and job application support. Students called for alumni to come and talk about their careers and share their experience.

Participant 24: *Maybe keeping in touch more with past students and what they're getting up to and ask would they be willing to, you know, share where they are now and how they got there. Maybe like a search engine where you could be, like, oh I'm interested in jobs in I don't know, Journalism, and you could come up with alumni that were interested in Journalism and a little thing on what path they were on and how they got there.*

There was a call for graduate recruiters to help in raising awareness of jobs available, and to offer further job application support and encouragement for building work experience.

Participant 32: *I think, well again this is from a Humanities perspective, some don't always make it obvious that you can always apply. So if you're like going to get a Banking internship, it's perfectly ok for a Humanities student to apply. Sometimes you can feel like you are not the right person even if you might be, if you get what I mean. To sort of show that actually you don't have to be a Maths student to go into Banking.*

Participant 1: *They could give you tips on how to get an internship and work experience because they're primarily in the business of getting you to get a job and internships are a step towards a job.*

Students identified lecturers as key players in the provision of careers advice, particularly in aligning course pedagogy and employability incongruence (Ashleigh et al., 2012; Bastalich et al., 2014; Ojiako et al., 2014; Rufai et al., 2015; Sin & Amaral, 2017). Students felt the current provision of careers advice risked being too generic and too focused on engineering and finance related career opportunities. Furthermore, students highlighted the need for greater collaboration between universities and employers, supporting calls in career theory literature (Tams & Arthur, 2011). Additionally, students acknowledged the potential for careers advice to modify attitudes, subjective norms, and motivations, highlighting the importance of planned action theory (Fishbein & Ajzen, 1975). Students perceived careers advice to inform emergent identity and prepare them for deployment in career ecosystems

(Baruch 2015; 2013; Baruch et al., 2016). Figure 35 offers a careers advice model based on students' perceptions of possible collaboration opportunities between employers and universities. The figure highlights the complexity and interlinked dependencies across a variety of stakeholders in providing careers advice to students.
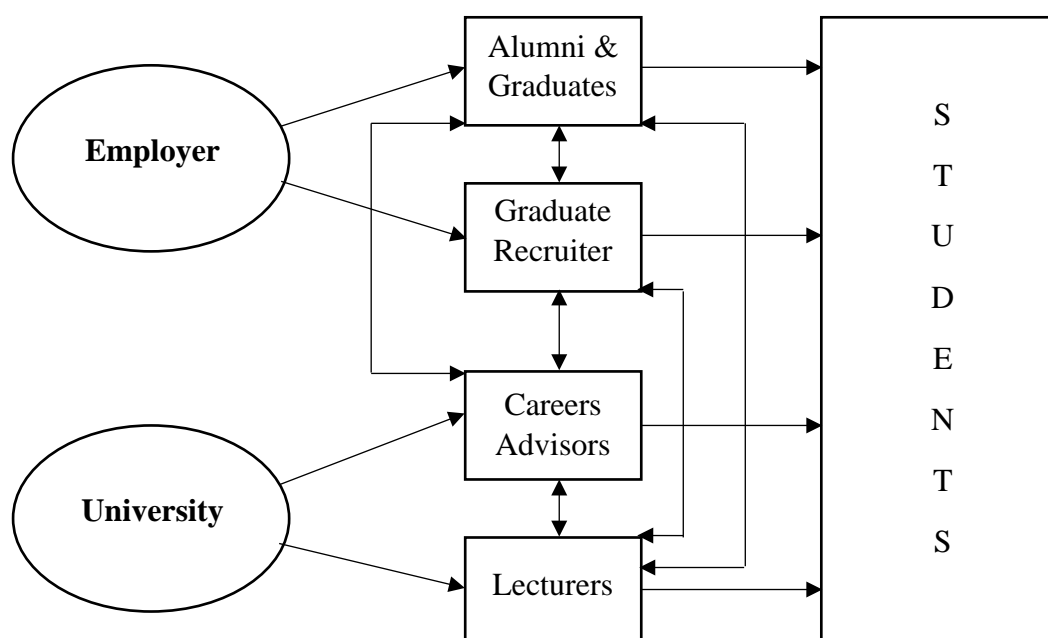

Figure 35: Employer and University Careers Advice Model for Undergraduates

6.2.11 Gender

The hierarchical regression model of human capital, careers advice, and career ownership through a protean career orientation was run based only on male participants, and then only on female participants for the sixty-one item model. Males perceive human capital as having a greater influence of employability than females (20.5% v 15.4%). For careers advice there was no moderation impact of gender. Males perceive career ownership as having a greater influence of employability than females (28.9% v 18.7%). The cumulative influence of human capital, careers advice, and career ownership through a protean career orientation was 49.3% for males, compared to 34.1% for females. From this perspective, male participants do perceive themselves as more employable than their female counterparts, in keeping with gender moderation outcomes from Rivera (2011), Tomlinson (2012), and Tholen (2014). The findings highlight the complexity of gender as a moderator on components of self-perceived employability. For example, careers advice reflected the views of Sok et al. (2013), Morrison (2014), and Jackson and Wilton (2017), who evidenced gender to have no moderation effect

on employability. Boundaryless career orientation was not significantly correlated to self-perceived employability and thus moderator impacts of gender could not be explored for *H3*. The findings supported *Moderator I. Gender is a moderator for H1, H2, and H4, such that the relationships are stronger for males than for females.* Conversely, the findings rejected *Moderator I. Gender is a moderator for H5, such that the relationships are stronger for males than for females.* The qualitative stage provided support for the quantitative findings and helped to explain further the perceived role of gender on employability through two central themes, gender pipeline challenges, and employer issues.

Students identified gender pipeline challenges as a central theme, composed of

(i) Gender balance variation

Participant 12: *I would argue Science, particularly Chemistry and Physics, there is quite a shortage of female Physicists and Chemists specifically. I know at undergraduate level in Biology it's pretty evenly split between males and females, but the postgraduate students doing PhDs, the males outnumber the females. I would say that is again a social pressure, an inbuilt difference in career paths.*

(ii) Targeting primary and secondary school pupils

Participant 26: *Definitely in terms of the STEM (Science, Technology, Engineering, and Mathematics) subjects, promoting female involvement, it's just about eradicating any assumptions or misconceptions about the career market, because, obviously it's getting better, but I think it needs to be installed at such an early age, as early as possible, that there is no normal, you can go into any career you wish to, and there should be no barriers to you getting that career. I think that's key. It's a case of having people that are in those situations, for example, a female Engineer coming into schools and saying 'look, I've done it, there's no reason why you can't', that gives students that role model to look up to, that example of aspire to, and, if those examples aren't available, it's about teachers doing that, for sixth form colleges and university outreach teams to promote that and say 'you can do whatever you want, ignore any misconceptions' as early as possible.*

(iii) Self-worth and confidence in females

Participant 29: *I feel like it would affect employability or perceived employability that girls would feel a bit less confident about the skills they do have. I think before university making people aware of the skills they have, I guess also that can be combined with when people are writing their personal statements, because I remember for myself, I'm not a very confident*

person, so I found that process of applying to uni very difficult cos you have to sell yourself and I'm like well I don't really know what I have to offer. So I think that's important.

(iv) Exposure to role models of the same gender

Participant 10: *There's a fundamental issue – that's self-worth – and I don't know how the university could deal with it, other than to give us more women to teach us and support us – not in the background, in the front ground. You can't really say have self-esteem classes, but in a way, that's what we need. Give us more powerful women – we've got two, they're great, two women tutors that are really great, but only two. I wish I had an answer because it's really important – it starts at home, carried on in school, and by the time they get to university it's ingrained that they are second best really – finding a way to change that, I wish I could.*

(v) Taking time out to have children

Participant 20: *I think for women you are really disadvantaged because obviously, you're the only gender who can have children and most employers, I heard also that employers don't like hiring women who are in the sort of twenties, where you, you have children and they don't want to hire you if you're only going to be part-time or take maternity leave and stuff like that, so I think there's a big barrier there in terms of your gender.*

Students further identified employer issues as a central theme, composed of

(i) Gender pay gap

Participant 26: *Obviously with the glass ceiling, the gender pay gap, so experiences for women are likely to perhaps be less satisfying, just because I could do the same work as a girl in my cohort now, but she could be paid less.*

(ii) Gender representation when hiring

Participant 19: *I think it would be best if say on interview boards for jobs, that you have an even amount of gender, just some gender equality on interview boards so there is no way of being discriminative because the interview board fully represents the people that are coming in, so then a decision can be made and that would be the right decision.*

(iii) Awareness of issues specific to the sector

Participant 1: *I think if there was a distinct problem in the industry then we should be told as a female you're this likely to get a job, but as a male you're this likely to get the same job, so if there was a big difference I would expect them to tell us and help us avoid that problem.*

(iv) Support for female employees with children

Participant 25: *The company I will be looking at from September onwards, they've got some great social and corporate responsibility aspects and one of them I think is something ridiculous like if you've recently given birth and you have to travel, if you're back at work and you have to travel for work, then they do a shipment of your breast milk back to your child (laughs). I think when I first read it, I thought was ridiculous, but actually, I thought that's encouraging isn't it and that's them doing something about it.*

(v) Gender targets or no gender targets

Participant 4: *I think employers are, they're either willingly doing it or they're forced to take on more women now, so I think that's definitely a good thing and it's definitely narrowed the gap.*

Participant 33: *And I do think like reverse discrimination, we need more boys to be English teachers, he's not quite as good as she is but I need to represent, so I'm going to hire him. So I do think it does, yeah.*

Participant 19: *But if there's a quota in place and they've got too many male workers already then they would have to hire me and I think that's quite unfair. So I'm not really sure if sort of the quotas are exactly the right, the right solution for this problem, because obviously people can get hired for jobs that they're not exactly the best candidate for but simply based on their gender which again is kind of the same thing as not hiring someone because they're a woman, it's still discrimination.*

(vi) Variation of discrimination by country

Participant 24: *Then if you're speaking country wise, countries such as Latin American countries where it's very much seen as women are definitely the weaker sex, it's definitely hard to climb in your career there because women there are typically viewed only as secretaries.*

6.2.12 Degree Subject

The hierarchical regression model of human capital, careers advice, and career ownership through a protean career orientation was run based only on P3 degree participants and then only on P1 and P2 degree participants for the sixty-one item model. P3 students perceive human capital as having a greater influence of employability than P1 and P2 students (16.5% v 14.5%). For careers advice, P3 students perceived a greater influence on employability than P1 and P2 students (4.7% v -0.3%). Career ownership for P3 students is

higher than for P1 and P2 students (24.7% v 19.3%). The cumulative influence of human capital, careers advice, and career ownership through a protean career orientation was 45.9% for P3 students, compared to 33.5% for P1 and P2 students. The findings indicate that P3 students (Business, Engineering, Law, Mathematics, and Modern Languages) perceive themselves as more employable than students studying P1 and P2 degree subjects (Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences). The findings appear to be reflective of league tables of employment outcomes, which evidence P3 students as having greater employment prospects than P1 and P2 students. Boundaryless career orientation was not significantly correlated to self-perceived employability and thus moderator impacts of degree subject could not be explored for *H3*. The findings supported *Moderator II. Degree subject is a moderator for H1, H2, H4, and H5, such that the relationships are stronger for P3 subjects than for P1 and P2 subjects. The* findings are significant as research to date has focused on students from P3 degree subjects, in part due to the more natural progression of these degree courses to specific job outcomes, and in part due to ease of access (Gupta et al., 2014; Hseih & Hsu, 2013; Jackson & Chapman 2012; Jackson & Wilton, 2017; Sheepway et al., 2014).

The qualitative stage enabled students to explain their perceptions of difference between degree subjects. Students studying specialist degree subjects (P3) were perceived by all students in this study as more employable than students studying more generalist degree subjects (P1 & P2). Students felt specialist degree subjects focused more on vocational and technical skills, which lead to a clear job role, and were perceived as a harder degree when compared to more generalist degree subjects.

Participant 15: *With Engineering, it's got a very defined path into industry and it's very obvious the kind of things that you can be useful doing. It's a very employable subject, which is why I chose it.*

Participant 21: *I think if you study a very specific degree subject I think you can probably, you're most likely to go into a certain job. So if you study Medicine you are probably going to become a Doctor, or Law you're going to become a Lawyer or Solicitor of some sort.*

Participant 29: *I know from speaking to other Modern Languages students that they feel a bit more employable because on top of other things they do have language skills.*

Participant 38: *For example, if you go into Actuarial Science then you need to have a bit of knowledge of that area. You can't be a Geography graduate and come do an Actuarial Science job, it's a bit difficult.*

In contrast, students felt that more generalist degree subjects focused on transferable skills, had no clear job role, and were viewed as a softer degree when compared to specialist degree subjects.

Participant 2: *So I think the perception of – the Music students' gone out to do something whereas the Engineer is sitting at their desk doing lots of hard work; they are two completely different skills. Obviously, they are very related to their job markets that they are looking into with their degrees.*

Participant 26: *I think for degrees like mine, they are more transferable, I think that's the big difference, so naturally we doubt our own routes because there's quite a broad spectrum of careers we choose and that naturally means we are perhaps more pessimistic.*

Participant 33: *Jobs like English and History, a lot of Humanities jobs, don't feed directly into anything, so they're not vocational, they're not technical. They make you feel 'well-rounded people', but it's not obvious what you want to do.*

Participant 37: *If you think of Maths graduates and, as I said Engineers, quite a lot of the more well-paid positions would be looking for graduates in those particular courses rather than History. I think it's kind of to be expected because you could argue those degrees are harder, but it certainly makes my life harder in terms of finding a job next year.*

Students perceived that science graduates were more employable than graduates with a BA, but also required additional education before entering the labour market.

Participant 30: *Humanities are looking for jobs now, whereas – this may be a massive generalisation but seems to be the trend – people studying the Sciences are looking to do further education.*

Participant 35: *For instance, my housemate who is studying Biology, I'm sure he would see himself as more employable. Simply because he will have a BSc, rather than myself and my friends who have BAs. Now I know this should not be the case, but it is.*

6.2.13 Year of Study

The quantitative results showed the year of study to have no significant impact on either mean score or second order factor analysis of human capital for social capital, cultural capital, psychological capital, or market-value capital. Yet, students perceived skills to be of greater importance in their final year of study, compared to their penultimate year of study, both in terms of mean score and second order factor analysis. Additionally, scholastic capital saw a slight increase in mean score from penultimate to the final year of study, but no significant impact on second order factor analysis of human capital. The year of study had no significant impact on either human capital or employability, although slight rises occurred in the means and correlations between the penultimate and final year of study. The findings rejected *Moderator III. Year of study is a moderator for H1-H2, such that the relationships are stronger for penultimate year undergraduates than for final year undergraduates.* The qualitative phase enabled explanation of the students' perceptions of the year of study, particularly useful given Qenani et al. (2014), and Jackson and Wilton (2017) evidenced a drop in perceived employability during the final year of study, attributed to greater awareness of the challenges posed by the labour market. The quantitative results did not support this position, and in the case of skills, and to a lesser extent scholastic capital, students perceived a very slight rise from the penultimate to the final year of study.

The qualitative results proved to be particularly valuable, by highlighting the complexity of year of study as a moderator. Students described the year of study as either having a positive impact, a negative impact, or both on their perceived employability. Students highlighted their university degree, the university reputation, clubs and societies, and work experience as factors for feeling more employable in their final year of study.

Participant 30: *Obviously, being three years at university, your knowledge will increase, but I think the employability comes more in the skills you learn and that you are taught during your degree.*

Participant 6: *I think it comes from what uni you go to as well. The fact I've attended the university, I think employers look at that and think, well you know, he must be doing alright you know. Whereas other universities, I think they might not necessarily rate as highly.*

Participant 29: *Also because as you go along uni, I don't know, if you join societies or you join sports or the things you end up doing, I think that makes you more employable.*

Participant 38: *I think if you have done an internship in your penultimate year then, naturally, you feel like you have a bit of an advantage.*

Furthermore, students cited increased confidence, increased aspirations, and career ownership as additional factors for feeling more employable.

Participant 33: *I mean obviously you are more employable as you go along because you're more qualified, you've grown in confidence, you have experience, you've become more comfortable with yourself, so you're a more attractive person to work with generally.*

Participant 21: *I was sort of alright with the idea I would go to uni, I'd get my degree, and it was very possible I would have to go back home to a small flat, with my family in south-east London, council estate kind of area (laughs). And probably first start in a low-income job, something normal, working in a supermarket or something like that, until I could hopefully get a job in something I want to do, which I have not decided yet. But yeah, I think there are more opportunities than I thought there were now.*

Participant 36: *Certainly more employable as the years have gone on. For example, last semester I did an exchange and I think that shows great skill and passion for your subject and the ability to seek out opportunities, and I couldn't have done that in my first or second year. So obviously, as the years go on, you get more opportunities and more chances to show you're willing to seek out these opportunities and actually take part in them.*

In contrast, students stated the volume of graduates, the lack of jobs available, and being rejected for a job as factors for perceiving themselves to be less employable.

Participant 7: *And having applied for jobs, realising you don't get a job straight away and there are like, hundreds, thousands of people competing for places and you're not as employable as you are led to believe initially.*

Participant 31: *In the last decade it feels like there are less jobs out there, especially for our age group and for graduates. And consequently, this makes new graduates feel as if they are less employable because there are less, it seems like there are less jobs out there. Especially graduate jobs, yeah, it seems like this labour market seems to have diminished for graduates and consequently, we do have, it feels like we have lower employability.*

Participant 23: *What affects my employability is when I apply for a certain company, I get rejected, for example, that sort of changes my view about maybe I'm not particularly good enough compared to others. While it may just be purely a case of whether they have fulfilled their requirements or are just looking for what else they can possibly recruit.*

Whilst a small number of students categorically perceived themselves to be either more or less employable in their final year of study compared to their penultimate year of study, the majority of students cited both more employable and less employable factors. The findings offer a two-dimensional model of market factors and personal factors, whereby market factors play a role in students' perceiving themselves to be less employable. This supports the findings of Qenani et al. (2014), and Jackson and Wilton (2017) with the final year of study attributed to providing a greater awareness of the challenges posed by the labour market. Furthermore, the findings support the claim by Clarke (2008) that the availability of jobs in the labour market determines employment opportunities. In contrast to their findings, the second dimension of personal factors sees students acknowledge their personal development over their years of university study. This seems the more intuitive outcome given the perceived role of human capital on graduate employability and is supported by Remedios (2012), and Van der Heijde and Van der Heijden (2006). Therefore from a personal perspective, students' perceive themselves to be more employable but, from a market perspective, less employable. These findings provide a mechanism for supporting the claim by Jackson (2014) and Holmes (2013) that a graduate can be employable without necessarily being employed. The two-dimensional model and mixed methods approach capture this complexity, perhaps accounting for conflicting findings to date by quantitative studies in career theory literature.

6.3 Research Question III

Section 6.3 evidences the quantitative and qualitative findings and analysis for *Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions.*

6.3.1 University Debt

Students in their penultimate year of study predicted it would take 16-25 years to repay their student debt. However, as these students moved into their final year of study, the median increased to 25-30 years. Furthermore, in their penultimate year of study, 20.90% of students with a student loan did not expect to repay their debt in full. This figure rose to 36.43% of students when asked again in their final year of undergraduate study. Only 8.53% of students expected to have no student debt. The qualitative stage further explained the students' perceptions of repaying their debt, along with related costs of pursuing HE.

The interviews indicated that the majority of students did not expect to repay their student loan. They cited that their debt would likely be written-off first and that the interest payments were too high. The Student Loans Company (2017) states the interest rates for 2012/13 (6.6%), 2013/14 (6.3%), 2014/2015 (5.5%), 2015/16 (3.9%), and 2016/17 (4.6%); calculated yearly as the Retail Price Index (RPI), plus 3% for students studying until the April after leaving their course. Interest rates then become dependent upon income, from RPI for earnings of £21,000 or less, rising to RPI plus 3% for income of £41,000 or more.

Participant 10: *I think, by the way, it's horrendous about the fees and being charged interest. I didn't sign up for the interest and I find that it's a horrendous amount of money I'm now going to owe.*

Participant 11: *I don't think I'll ever repay it because it gets written off after a certain amount of time.*

Participant 20: *It gets interest on it doesn't it, so I think that would be the reason that you don't pay it off in full because you're, the debts only this much but you still have to pay extra.*

Furthermore, students felt they would not earn enough, that their career ambitions would be limited because of the debt, and that the debt levels act as a barrier to participation in HE particularly for people from disadvantaged backgrounds.

Participant 15: *I expect I'll end up keeping on top of the interest kind of thing but not repaying it all back by the end of the 30 year period. Basically, it's too much money. I don't expect I'll be earning enough to be able to make a dent in the sum of debt.*

Participant 10: *It makes me want to not be able to pay it back, in which case I wouldn't be pushing ahead in a career just on that basis. And I think a lot of Artists feel the same and that's a shame, that's basically going to curb a lot of peoples' ambitions.*

Participant 3: *I think that's something that is really putting people off going into university itself at this moment and with the current uncertainty of it going up again, that can really impact on people. And especially with the people I was saying earlier maybe don't have that opportunity or are not very well off, coming from disadvantaged backgrounds, who might really need those bursaries in order to take education... That can really bias the split of people that are going into university.*

Students who felt they would repay their student loan tended to have lower levels of debt than students who felt they would not repay, for example those receiving a bursary or being a Welsh student.

Participant 29: *I have been fortunate to get the maintenance grant and to get bursaries and financial support from the Government, which has helped me to keep my costs down massively. But a lot of my friends don't have that opportunity. So for me yes, for most people I know, no.*

Participant 13: *Yes, I think so. But that's because I'm a Welsh student. So I pay significantly less than my English counterparts.*

Nevertheless, students with high salary expectations were confident of repaying their loan.

Participant 8: *I would expect that I would make enough money that it would pay off in a reasonably fast amount of time – I don't know, maybe six or seven years.*

Some students cited unforeseen circumstances as the reason for not knowing if they would repay their loan or not.

Participant 26: *Unforeseen circumstances may mean that I drop out, or that I go to another country, something like that. Whether I pay the full amount, I'm not sure, it depends on circumstances that are too far in advance.*

Participant 37: *It entirely depends on what job I'm able to secure.*

Students also acknowledged the tuition fee increases and increased participation in HE, stating the need for students to have a clear reason for pursuing HE.

Participant 22: *When you look at the timelines, the amount it's gone up is pretty criminal. I had to really think about 'do I actually want this degree?'*

Participant 12: *Its value is being diminished over time simply by the number of people that are attending higher education.*

Participant 19: *Not for everyone. I think that there's quite a large culture surrounding higher education at the moment where people are pushed in, pushed towards going to university because they don't know what else to do… For the costs for some people, it's just not worth it when you can go straight into industry and starting working straight away from scratch and build your way up.*

One might expect that increasing student fees and subsequent student debt may dissuade prospective students from pursuing HE. Fleming (2017) adopts this view by arguing

that university debt is the dark side of human capital, stating that in 2014 total student debt in the US was $1.2 trillion and in the UK £2bn, with both figures steadily growing. However, a study of pre-university sixth form students by Esson and Ertle (2016), found prospective students to be more concerned with their expected return on investment in HE. In addition, The Institute for Fiscal Studies (2016) found that the volume of graduates had not yet eroded the earnings premium of a degree, although it could in the future. Expected earnings (Section 6.3.2) and benefits of HE (Section 6.3.3) helped to explain the students' perceptions of costs versus benefits. This is of particular interest given that a survey of over two thousand students by Future Finance (2016) reported that less than half of students were confident that their university degree would pay for itself.

6.3.2 Expected Earnings

The quantitative results indicated that students expected to earn a median salary of £20,000 to £24,000 six months after graduation. This figure remained constant for both penultimate and final year students. High Fliers (2017), focusing on the top 100 graduate employers who often pay more than smaller graduate employers, found median earnings of £30,000. This figure is therefore likely to over-estimate actual median salaries of graduates. Glassdoor (2017), based on three thousand and thirty-six salaries submitted anonymously by graduates found median earnings of £28,000, compared to the UK national average salary of £27,600. However, the primary focus on larger graduate employers also skews these findings. Graduate Jobs (2017), reflective of all graduate roles, not just the top one hundred employers, offers an estimated median of £19,000 to £22,000. This appears to align with student expectations of £20,000 to £24,000 allowing for wage inflation year on year. The Complete University Guide (2018) also aligns with students' perceptions of earnings for students at University A, as evidenced in Chapter 2.8.4. Of some concern are findings by the Longitudinal Education Outcomes (2016) dataset, which found one in four graduates of the class of 2004 were earning only £20,000 a year ten years after leaving university. If this trend continues for graduates of the class of 2017 then it is likely to affect the ability of students to repay their university debt, especially as students cited increased earnings potential as a benefit of HE. These variances in salary further highlight the contribution of this study of looking at students from P1 and P2 degree subjects, rather than solely focusing on students from P3 degree subjects, given the higher earnings expectations for P3 students compared to P1 and P2 students.

6.3.3 Benefits of Higher Education

In response to the statement, *I feel the benefits of higher education outweigh the associated costs,* 75.72% of participants agreed, 12.14% were neutral, and 12.14% disagreed. In addition to increased earnings potential, students offered five further benefits of HE.

(i) Degree certificate

Participant 24: *I think on paper these days the stigma of higher education definitely helps you get a job. I wouldn't be one hundred percent sure that in reality what we learn at university is actually hugely beneficial, but I think definitely that bit of paper gets you a foot in many doors.*

(ii) Access to more jobs

Participant 12: *I would say higher education is worth the costs, it is worth the costs associated with it. Cos holding a degree gives you access to a much wider range of specialist careers as well. Careers that are more likely to remain relevant as kind of the labour market changes in the future.*

(iii) Lifelong friends and networks

Participant 13: *Being in uni gives you the opportunity to network with people who you would not have otherwise met. To talk with people who are like-minded and like the same things as you, but also to talk with people you have never met before and try out things that you would never have done and explore what you want much more, to develop lifelong friendships.*

(iv) Self-development and skills

Participant 26: *My personal experience is definitely because I've developed so much, I've seen a progression. I think it's a case of my skillset, my confidence, and being able to apply everything I've learned in my career.*

(v) University reputation

Participant 18: *I am very happy with employability that the university is providing me cos I think in the end it's the university, it's all about the university. The university has the name, obviously, when you come out of university you don't have yourself a name, you don't have much work history to present, so it's the university.*

Overall, the majority of students felt that the benefits of HE outweighed the associated costs. Yet, students often stated this position with a caveat, saying that, if they had to pay for tuition and living costs out of their own money, rather than as a government loan, this may no

longer be the case. The fact that debt is written-off after thirty years was also a factor, with some students viewing their debt as a graduate tax with no intention or expectation of repaying the full sum plus interest. Whilst the benefits at present outweigh the costs, the gap is closing and it is not certain this will remain the case in future years, especially if tuition fees continue to rise and wage inflation stagnates.

6.4 Chapter Summary

Chapter 6 has offered findings and analysis for Research Questions II and III, drawing on quantitative results (Chapter 4), the treatment of qualitative data (Chapter 5) and linked to the literature review (Chapter 2). Focus now moves to discussion and contribution of the findings and analysis.

Chapter 7: Discussion and Contribution

7.1 Introduction

This chapter provides a discussion of *Research Questions I and II* (Section 7.2), and *Research Question III* (Section 7.3). The theoretical contribution (Section 7.4), and practical contribution (Section 7.5) follow, with the chapter summary (Section 7.6) completing the penultimate chapter.

7.2 Research Questions I and II Discussion

Section 7.2 offers a discussion of the findings for *Research Question I: What are the factors of graduate employability?* and *Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?* The literature review (Chapter 2) indicated that human capital, careers advice, career ownership through a protean career orientation, and career mobility through a boundaryless career orientation are factors of graduate employability, with gender, degree subject, and year of study as moderators. This offered a conceptual model of graduate employability underpinned by human capital theory and contemporary career theory (Section 2.7). Each of these factors is discussed, drawing on the findings and analysis (Chapter 6).

7.2.1 Human Capital

The findings evidence that students perceive social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills as factors of human capital. Students perceived UCAS points to have no direct impact on employability, suggesting that employers should follow the lead of PwC and Ernst & Young by removing UCAS point requirements from application screening. Whilst students perceived bursary status to have no impact on employability, it was perceived as a significant factor in determining access to university, particularly for students from low-income families or disadvantaged backgrounds with an aversion to debt. Thus removal of student bursaries by the UK Government may indirectly be preventing less affluent prospective students from going to university, and

subsequently affecting their employment outcomes and the wealth of diversity they could offer to employers.

Social capital findings support a proposition offered by Jackson and Wilton (2017) that the payback of social capital is stronger later in the careers of graduates, rather than at the point of initial transition from HE to the labour market. Additionally, students identified lecturers as an important aspect of social capital during the qualitative interviews. Students perceived cultural capital and psychological capital as important factors of employability, supporting findings by Fuller et al. (2011), Tholen (2014), and Luthans et al. (2015). Scholastic capital, market-value capital, and skills were the strongest factors of human capital. The UK sample aligned with an Australian sample of Business undergraduates, which found classroom learning to be the scaffolding whilst WIL helps in development and refinement of skills (Jackson, 2015), evidencing active learning theory (Bonwell & Eisson, 1991) and experiential learning theory (Kolb, 2014; 1984). However, for Art and Music students, a portfolio career alongside degree studies was favoured over WIL. This suggests that a 'one-size-fits-all' approach, such as recommended by the Wilson Review (2012), may need refinement on a subject-by-subject basis, particularly in the Arts and Humanities. The overall premise of the Wilson Review does appear justified as the process helps to inform the student of the reality of the workplace, subsequently enabling the student to understand better their career ambitions (Zegwaard & McCurdy, 2014). Furthermore, the low uptake of WIL opportunities, coupled with the barriers to WIL stated in the interviews, highlights the need for universities and employers to offer greater support mechanisms to students. Universities could offer guaranteed work placements to students, such as the EXCEL placement scheme introduced at University A in September 2016. Employers could offer paid opportunities that enable all students, regardless of their financial situation, to access valuable work experience. From a classroom-based perspective, students wanted scholastic capital to include greater links to employability outcomes, either through embedding employability in the curriculum or by offering employability sessions alongside module content. Students thus support calls in the literature for a greater alignment of employability and pedagogy incongruence (Ashleigh et al., 2012; Bastalich et al., 2014; Bennet et al., 2015; Ojiako et al., 2014; Sin & Amaral, 2017).

Hierarchical regression analysis showed that undergraduates perceive human capital as positively related to employability, accounting for a 15.1% influence. This is a significant finding for the UK Government and employers as demonstrated by alignment between policy, perception, and outcome expectations. The UK Government has positioned employability

outcomes of graduates as the cornerstone of HE reform, evidenced by the Dearing Report (1997) and the Wilson Review (2012). For employers, human capital gives graduates the potential to enhance organisational capital, increase competitiveness, and increase profits; all crucial for organisational survival in a competitive and globalised labour market (Campbell et al., 2012). The fuller coverage of human capital factors, the mixed methods approach, and the wider reach of participants from different undergraduate degrees offers a significant and original theoretical and practical contribution to career theory (Sections 7.4 and 7.5).

7.2.2 Careers Advice

The quantitative findings indicate that students perceive careers advice as positively associated with graduate employability, although only having a neutral or minimal impact as evidenced by regression variance of 0.05%. The finding of a neutral impact is unexpected given the purpose of meso level actors is to enhance employability (Holmes, 2013). Perhaps students are not aware of the exact contributions of these meso level actors to their own employability. It is possible their views will change upon entry into the labour market, or retrospectively, having secured employment. Alternatively, as suggested by Crawford and Wang (2016), participants in this study may have less exposure to these actors, suggesting a divide between proactive and non-proactive students. Wilton (2014) offered a similar suggestion based on WIL and employability, by highlighting that, where participation is optional, more engaged students enhance their employability, whilst less engaged students might not. This appeared to be the case from the interviews, which indicated that students who used the careers service tended to be happy with the employability advice provided. However, only half of the random interview sample of final year undergraduates had used the careers service during their studies. Of particular concern is the trend whereby students studying P1 and P2 degree subjects (Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences) appeared less likely to have used the careers service. The findings indicate that students must actively seek out careers advice to benefit from the support on offer. The promising sign is that University A has identified accurately the students most in need of support via the CFPER (Chapter 2.6.2). The challenge now comes in accessing and engaging these students. Existing communication links do not seem to be working and attendance at non-compulsory events is often lacking. Furthermore, students not based at the main university campus reported less contact with the careers service.

In addition, employers invited to campus for careers fairs often reflected the more employable P3 degree subjects (Business, Engineering, Law, Mathematics, and Modern Languages). Providing a greater coverage of employment areas and opportunities may help to engage more students.

Further collaboration between the university careers service, graduate recruiters, and lecturers was highlighted as an important area for further progression (Tams & Arthur, 2011). This evidences the importance of career ecosystem theory, which highlights the dependency of loosely coupled actors on each other (Baruch, 2015; 2013; Baruch et al., 2016). Ultimately, students must take a greater responsibility for seeking out careers advice and careers advisors must increase awareness of the services offered and ensure that, where feasible, the advice is tailored to the circumstances of the individual student. The meso level actors must strive to offer tailored advice, rather than a generic approach, to ensure contact with students throughout their studies, to give maximum time for the student to take action to enhance their employability. This highlights the importance of planned action theory for careers advice to modify attitudes, subjective norms, and motivations of students to enhance employability (Fishbein & Ajzen, 1975). Lecturers also have a key role to play through careers guidance and embedding employability in the course modules (Sin & Amaral, 2017). Compulsory sessions as part of the undergraduate degree may offer success if, as suggested, students' motivation for learning is predominantly driven by goals, standards, and the assessment learning outcomes (Fry, Ketteridge & Marshall, 2015). Inviting alumni to present on campus and encouraging students to think about their employability early in their degree offer further fruitful approaches. The findings contribute to career theory by highlighting significant differences in the perceived employability across different subject areas (Section 7.2.5). Existing research confined to Business, Engineering, and Healthcare graduates is therefore not reflective of all graduates and risks presenting a stronger perception of employability than is actually the case.

7.2.3 Protean Career Orientation (Career Ownership)

Students agreed that taking ownership of their career increased their self-perceived employability. Hierarchical regression analysis strengthened this claim, evidencing career ownership through a protean career orientation as having a 22.3% variance on perceived employability, the highest of any component in this study. These findings advance career theory literature through the application of protean measures beyond the usual scope of MBA

or specialist Management MSc students (Baruch & Leeming, 2001; Cocchiara et al., 2010; Santos et al., 2017). Furthermore, reliability analysis evidenced support for the use of Baruch's (2014) protean career measure in undergraduate populations. This is encouraging as, although MBA or specialist Management MSc populations are likely to have considerably more labour market exposure, undergraduates show significant alignment through undergraduate education and the need for developing their employability to facilitate employment outcomes. Furthermore, undergraduate perceptions appear to reflect the view of other actors and the career theory position that taking ownership of one's career is an essential component of employability (McKeown, 2014; Rodrigues et al., 2016). The reported awareness of career ownership appears to evidence engagement from the student population in taking responsibility for developing their own employability. The correlation between career ownership through a protean career orientation and careers advice indicates that students need to be made aware of the importance of career ownership as early as possible and provided with suitable support mechanisms for personal development.

7.2.4 Boundaryless Career Orientation (Career Mobility)

The quantitative findings supported the claims of Briscoe and Hall (2006) that mindset and mobility are two distinct measures of a boundaryless career. There is support in the mean scores from the undergraduate population in this study of a movement away from a traditional career, towards a boundaryless career orientation for mindset. This is not however the case for career mobility, which reflects near equal coverage of bounded career orientation, boundaryless career orientation, and the middle ground between these two dichotomies, extending similar findings derived from MBA or specialist Management MSc students (Baruch, 2014; Baruch & Reis, 2016; Briscoe & Hall, 2006; Herrmann et al., 2015). The findings also support the claims by Baruch (2014; 2006), Dries and Verbruggen (2012) and Murphy, Lambrechts and Huybrechts (2016) that the traditional career is not dead.

The qualitative findings indicated that there are many boundaries, some are more easy to cross (e.g. local mobility between two organisations), and some are more rigid (e.g. changing sector whereby an English graduate working as a copywriter wishes to become an accountant). Despite not being statistically associated with employability, the findings offer validation of boundaryless career measures on an undergraduate population, and across a multitude of fields of undergraduate study.

The qualitative findings examined career and geographical mobility (Baruch & Reis, 2016). Students reported labour market experience as the key determinant of mobility between organisations, in particular, career advancement and salary. This indicates the significant influence that employers and labour market experience have on an individual's emergent identity, the shifting position of a kaleidoscope career, and the evolution of bounded versus boundaryless career orientation over time. The findings support the research framework (Chapter 2.2) of viewing careers and labour markets as ecosystems (Baruch, 2015), providing an overarching theoretical lens to reconcile the apparent disconnect between the co-existence of traditional and boundaryless careers.

The majority of students were open to moving internationally for a job offer, particularly in the early stages of their career, if they did not have dependents (e.g. family, partner, or children). This advances career theory literature by highlighting that different factors have less or greater weighting over time, reflecting the emergent identity aspect within a dynamic career ecosystem environment. The findings offered eleven dimensions of international mobility, extending the seven previously identified by Baruch et al. (2013). The extension of these factors since 2013 is indicative of the evolving nature of careers and career theory, as well as the subtle differences in perceived employability of undergraduates in comparison to MBA or specialist Management MSc students already in the labour market. For example, undergraduate students viewed language barriers as a key concern, alongside career progression and salary advancement, which both featured prominently in MBA or specialist Management MSc studies (Baruch & Forstenlecher, 2017; Scurry et al., 2013). Other universities may perhaps benefit from a scheme currently run by University A that is providing free language courses to all students during their studies, especially if this can help to expand employability and employment opportunities. Furthermore, Cotton and Shen (2013) suggest that reasons for local or national mobility are less clear than for international mobility. The findings offered five dimensions of local mobility, coupled with four further dimensions of national mobility, which extend the three dimensions offered by Baruch and Reis (2016). This highlights the complexity of geographical dimensions and the diversity of factors that influence bounded or boundaryless career orientation, offering directions for future research (Chapter 8.3).

7.2.5 Moderation: Gender, Degree Subject, and Year of Study

The quantitative findings showed gender to moderate human capital and career ownership through a protean career orientation in favour of males, but with no moderation for careers advice. The findings respond to calls in a white paper from the UK Government in The Higher Education and Research Bill (2016) for research into gender to inform HE policy decisions. Degree subject moderated human capital, careers advice, and career ownership through a protean career orientation in favour of P3 subject students (Business, Engineering, Law, Mathematics, and Modern Languages). The findings for career ownership offer a significant contribution to career theory literature, with the protean career construct not previously applied to UK undergraduates or across different degree subjects.

From one perspective, female representation in HE has improved significantly, accounting for 53% of students (Higher Education Funding Council, 2014). However, this masks the fact that, at University A, 95% of engineering students are male and 90% of Art students are female. The Complete University Guide (2018) showed engineering graduates to be earning £26,522 compared to Art students earning £15,811. Students perceived Engineering to be the most employable subject in the study, and Art the least employable. This highlights gender pipeline challenges for specific sectors, although other degree subjects tended to have a better gender balance. The findings indicate that employers and universities need to target primary and secondary school students to encourage females to study engineering and males to study Art related subjects at GCSE, A Level, and Degree Level. Employers will then have a more diverse pipeline of applicants to hire from, removing the need for gender targets, which proved controversial in this study from both male and female perspectives. Students felt that employers should ensure their hiring committees have strong gender representation, both to evidence to prospective candidates the commitment to gender diversity, and to ensure that both genders have equal representation when it comes to hiring decisions. Employers need to play an active role in retaining and promoting graduates to provide role models to future generations. This includes removing the gender pay gap, actively addressing discrimination across all countries of operation, and supporting females in taking time out to have children without negative impacts to their future career potential. Through primary, secondary, and tertiary education, and into the labour market, all stakeholders of graduate employability need to help females in developing self-worth and confidence, and in being able to convey this during the job application process. Both females and all students from P1 and P2 degrees need support in this area, with female P1 and P2 degree students needing the greatest support. Students,

regardless of their own degree, perceived P3 degree subjects as harder, linking more directly to a specific job, and focusing more on vocational and technical skills than P1 and P2 degree subjects. On a positive note, this indicates that students have a strong awareness of the employability potential of their own and other degree subjects, given their perceptions reflected the employability rankings of degree subjects found by University A (Gowar, 2015).

In terms of year of study, the quantitative findings showed no moderation impact. However, the qualitative findings evidenced a two-dimensional model of market factors and personal factors, indicating support for claims by Jackson (2014) and Holmes (2013) of a graduate being employable but without employment. From a market factor perspective, students perceived themselves to be less employable in their final year of study, supporting the findings from Jackson and Wilton (2017), Qenani et al. (2014), and Clarke (2008). This included the volume of graduates, the lack of jobs available, and receiving rejections for job applications. In contrast, from a personal factor perspective, students perceived themselves to be more employable in their final year of study, supporting findings by Remedios (2012), and Van der Heijde and Van der Heijden (2006). This included university degree, the university reputation, clubs and societies, work experience, increased confidence, increased aspirations, and career ownership. The findings highlight the importance of the mixed methods approach to this research, as the quantitative findings failed to capture this complexity, which might explain the conflicting findings to date from quantitative studies in career theory literature.

7.2.6 Employability and Emergent Identity

The findings indicated that students agreed with the definition of employability by Rothwell and Arnold (2007, p.25), and of perceived employability by Vanhercke et al. (2014, p.594). This is encouraging as it evidences alignment in terms of understanding employability as a construct across different actors of graduate employability. Students felt that standing out from the crowd was particularly difficult due to the competitive nature of the graduate labour market. Again, this indicates a good awareness of dominant themes in career theory literature including increased participation in HE, competition for jobs, and the need to stand out from other applicants (McCowan, 2015; Philips & Young, 2015; Tomlinson, 2014). Overall, students perceived themselves to be employable but felt it would not be easy to find a job. Governments and employers must, therefore, work together to ensure that the policy of increased participation in HE is sustainable, by ensuring sufficient labour market demand for

graduates. This approach can maximise national competitiveness and enhance the career prospects of future graduates. In response to *Research Question III*, Chapter 7.3 highlights the importance of offering a return on investment to graduates in the context of increased tuition fees, offering the basis for future research in Chapter 8.3.

The findings validated a conceptual model of graduate employability underpinned by human capital and contemporary career theory. The model incorporated human capital, careers advice, and career ownership through a protean career orientation, with moderators of gender, degree subject, and year of study. Furthermore, the decision between a bounded or a boundaryless career orientation appeared to develop over time, influenced by labour market experience (e.g. salary and career advancement) and external life circumstances (e.g. partner or children). The findings indicate support for a kaleidoscope career, whereby the views of students shift over time based on their life experiences, and as they gain additional exposure to the labour market to help make informed decisions about their future career path (Mainiero & Sullivan, 2006; 2005; Sullivan, 1999). Coupled with an ability for lifelong learning, this provides the mechanism for a sustainable career (Van der Heijden & De Vos, 2015). Furthermore, students require additional support to develop their attitudes, subjective norms, and motivations as part of planned action theory (Fishbein & Ajzen, 1975). This support, alongside wider careers advice, requires a collaborative approach between employers, universities, and students, highlighting the role of career ecosystems whereby actors depend on each other for the overall effectiveness of the system (Baruch, 2015; 2013; Baruch et al., 2016; Inansiti & Levien, 2004). The exposure to HE and the transition from HE into the labour market offers an emergent identity through the shifting and evolving nature of identity construction (Brown, 2015; Holmes, 2015; 2013; Jackson, 2015; Oliveira et al., 2016), underpinned by social identity theory (Ashforth & Mael, 1989) and working identity theory (Ibarra, 2003). Although this research looks at students in their penultimate and final year of undergraduate study, their identity has already begun to be constructed and to emerge before entry into HE and will continue to do so beyond their graduation from HE. Future research must examine how employers can access future talent earlier in the education cycle. This is particularly important for sectors where demand for graduates outstrips supply, or where gender and wider diversity issues currently prevail.

7.3 Research Question III Discussion

Section 7.3 offers a discussion of *Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions.*

7.3.1 Costs of Higher Education

Participants in this study represent the first cohort of students to face tuition fees of £9,000 per annum. The majority of students did not expect to repay their student loans in full within a thirty-year period, at which point any outstanding debt it wiped. Students cited the volume of the debt, the interest payments, and their salary expectations as underlying factors. This is worrying given The Treasury needs graduates to repay their student debt to ensure the sustainability of the current funding model. At present, it appears The Treasury will face a shortfall in repayments by graduates, with Garner (2014) estimating that 73% of students would not repay their loan in full. It is feasible that, in reality, more graduates may repay their debt in full, but the perception of students prior to entry into the labour market is not encouraging. A further concern is that a small number of students claimed the level of debt and the repayments linked to earnings would actually make them less ambitious in terms of their career. If this is the case, then current policy could be accountable for negatively affecting the life aspirations of graduates and, by association, national competitiveness. Students were also worried about the impact of their debt over the thirty-year lifespan, supporting findings by Amigo Loans (2016) that young people with a Degree, Master's or PhD are 10% more likely to be rejected for a mortgage due to a poor credit score compared to applicants with A Levels as their highest qualification.

The findings indicated that students who felt they could repay their loan had either a lower level of debt or higher salary expectations. For example, Welsh students pay £3,000 per annum less than domestic students, resulting in either £9,000 or £12,000 less of overall debt over a three or four-year undergraduate course. Additionally, students with a government bursary towards their tuition fees had overall debts of up to £27,000 less for a three-year course and £36,000 less for a four-year course, compared to students without government bursaries. However, from the academic year 2016/2017, the UK Government removed the provision of student bursaries. The findings indicate that in future more students will have more debt, resulting in fewer students repaying their debt in full. Students identified a further problem

with the removal of bursaries, claiming that students from disadvantaged backgrounds were being put off pursuing HE due to the levels of debt they would incur. This backs up findings by the CIPD (2016), The Sutton Trust (2015), and Tholen (2014) that found people from disadvantaged backgrounds felt held back because they cannot afford to invest in lifelong learning opportunities. The findings suggest that the decision to stop government bursaries needs to be reconsidered based on the actual impacts as perceived by students and prospective students. Furthermore, students' expectations of earnings six months after graduation closely aligned with figures published by The Complete University Guide (2018), Graduate Jobs (2017), and Longitudinal Educational Outcomes (2016). Graduates are less likely to repay their loans in full, due to the volume of debt and interest in comparison to salary expectations and current wage stagnation. The exception comes in students from degree subjects with the highest earnings potential (e.g. Engineering, Mathematics, and Business) who expect to repay their debt in full. This aligned with salary projections from High Fliers (2017) reflecting the top one hundred graduate employers and incorporating the more highly paid graduate jobs.

Focus now moves to the benefits of HE (Section 7.2.2) and, subsequently, to a discussion of the current position of costs versus benefits of HE, as perceived by the students.

7.3.2 Benefits of Higher Education

The findings indicate that students perceive the degree certificate as the most recent evidence of academic ability and achievement. However, in support of findings by Morrison (2014) from undergraduates in Wales, students no longer see the degree itself as sufficient. The findings are encouraging and indicate that students have a strong awareness of the competitive nature of the graduate labour market. The quantitative and qualitative phases of the mixed methods study showed that students perceived the reputation of the university as an important benefit of HE. This advances career theory, providing wider support for previous studies exploring the role of university reputation, limited to Business undergraduates (Rothwell et al., 2008), and prospective university students (Esson & Ertle, 2016). In fact, as evidenced in *Research Question II*, all students reported HE to increase their human capital and help construction of an emergent identity. The findings develop existing work exploring human capital, predominantly limited to MBA or specialist Management MSc students (Baruch et al., 2005), or specialist Management BSc students (Kalfa & Taska, 2015).

Students perceived HE to improve their employability and life aspirations. This included WIL opportunities during HE and future career prospects following graduation. The students' perceptions appear to align with findings of increased earnings for graduates compared to non-graduates (Graduate Jobs, 2017; High Fliers, 2017; The Complete University Guide, 2018). Students identified careers advice as a further important factor for employability and career prospects. Students who made use of the careers service found the careers advice to be highly beneficial to their employability. However, only half of the interview participants had used the careers service, and the quantitative results found existing careers advice to have 0.05% perceived influence on employability. This is in contrast to University A winning local, national, and international awards for their careers service provision over the last five years. As discussed in Section 7.2.2, engaging more students is likely to improve employability outcomes. Careers advice needs to be tailored where possible, provide as much coverage as feasible of employment opportunities, and draw on collaborative partnerships with graduate recruiters, university alumni, and lecturers.

Having discussed the perceived costs of HE (Section 7.3.1), and the perceived benefits of HE (Section 7.3.2), focus now moves to weighing up the costs and the benefits of HE as perceived by students.

7.3.3 Current Position: Costs v Benefits

Overall, the quantitative and the qualitative findings indicated that the majority of students perceive the benefits of HE to outweigh the associated costs. However, the perceived gap between the benefits and costs of HE appears to be narrowing, with increasing tuition fees beginning to dissuade prospective students from pursuing HE. This develops the proposition by Fleming (2017) that university debt is the dark side of human capital, stating that, in 2014, total student debt in the US was $1.2 trillion and in the UK £2 billion, with both figures steadily growing. In fact, students stated that if they had to pay for tuition and living costs from their own money, rather than as a government loan, they would not have undertaken HE. The thirty-year term on the loan was an important factor, with the majority of students not expecting to repay their student debt in full. Of greater concern was the perception that students from disadvantaged backgrounds are being put off HE due to their aversion to debt, developing previous findings by the Sutton Trust (2015) and Tholen (2014). This is a particular worry for social mobility, particularly the resulting reduction in the diversity of graduates entering the

labour market. Given the new system of £9,000 per annum tuition fees was presented to the general public as being fairer, the UK Government may wish to revisit its position. The current claim seems at best naïve or optimistic, and at worst misleading and significantly damaging to national competitiveness.

The findings indicate that, if tuition fees continue to rise, the number of students pursuing HE will fall, given the benefits remain constant. This is in direct contrast to the UK Government's current agenda of increasing participation in HE. The Robbins Report (1963) stated that HE should be freely available to anyone with the ability to pursue it (Chapter 1.3). The findings suggest that this principle needs to be upheld to enable the greatest diversity and representation of students in HE. Young people, in particular, agree with this position, as evidenced in the 2017 UK General Election, where record numbers of 18-25-year-olds voted for a policy to remove student fees for all students, returning funding responsibility to The Treasury. In fact, given employers and the national economy gain from the output of HE, perhaps a model that removes debt from the student is appropriate? Critics argue that the necessary funds are not available to achieve the objective, however desirable it may appear to be. This research seeks to offer pragmatic and realistic recommendations. The removal of student tuition fees appears the most desirable outcome. If this is not feasible, then student bursaries need be reinstated to support students from poorer backgrounds in their career and life aspirations, directly benefiting national competitiveness. Targeted bursaries are required where the supply of graduates is failing to meet demand.

The findings indicated that the extent to which the benefits outweigh the associated costs varies by degree subject, particularly by the employability and earnings potential of previous graduates. For example, the current salaries of graduates from P1 and P2 degree subjects mean that graduates from these subjects are unlikely to be able to repay their debt in full (Graduate Jobs, 2017; Longitudinal Educational Outcomes, 2016; The Complete University Guide, 2018). If fees continue to increase, students from outside P3 subject areas will become even less likely to repay their debt in full. The findings supported this position with Art and Music students feeling least likely to repay their student loan, which aligns with the lower earnings potential of their degree subjects. This is significant, given career theory research to date has focused on undergraduates and graduates from P3 subjects. Given an estimated 73% of students will not repay their debt in full at existing fee levels, this is highly problematic to The Treasury, which will be left with an even greater shortfall than initially predicted (Garner, 2014). Future research needs to see if student expectations translate into

reality (Chapter 8.3). If so, this appears to evidence a two-tier system of degree subjects, whereby if a student wishes to maximise their chances of paying back their student debt, they need to study P3 degree subjects with direct employment outcomes and high earnings potentials. This is a worry for P1 and P2 degree subjects, but also a wider worry for society if prospective HE students start to focus on salary over career satisfaction or contribution to society. This process may already be starting to occur, given a study by Esson and Ertle (2016) of pre-university sixth form students found prospective students to be most focused on their expected return on investment from HE.

Students highlighted an array of benefits from HE, recognising the value of HE to their development, future career, and life aspirations. This research indicates the gap between benefits and costs has narrowed significantly since the introduction of £9,000 per annum tuition fees. Policy makers need to closely monitor the views of current and prospective students and account for these when setting future agendas. Students felt that an individual needed a clear reason for pursuing HE and that perhaps, university was not suitable for everyone. This links to the conservation of resources theory whereby people wish to increase their resources whilst simultaneously protecting against loss of existing resources (Höbfoll, 2001; 1989). The volume of graduates has not yet eroded the earnings premium of a degree, but could in the future if the costs of HE continue to rise (Institute for Fiscal Studies, 2016). Already, less than half of students are confident that a university degree will pay for itself (Future Finance, 2016). This research suggests that governments must decide if an agenda to pursue increasing participation in HE is still the correct direction of travel and, if so, what is the appropriate funding model.

7.4 Theoretical Contribution

This research offers three original contributions to career theory related to understanding the students' perceptions of graduate employability. These include conceptualisation and validation of a new model of graduate employability (Section 7.4.1), validation of protean and boundaryless career scales in undergraduate students (Section 7.4.2), and the return on investment of pursuing higher education (Section 7.4.3).

7.4.1 Conceptualisation and Validation of a New Model of Graduate Employability

This research offers conceptualisation and validation of a new model of graduate employability factors as perceived by students. The literature review (Chapter 2) deduced a conceptual model (Chapter 2.7), subsequently validated via a two-wave quantitative study. Factors of human capital included social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills. Perceived employability factors included human capital, careers advice, and career ownership through a protean career orientation. The model advances career theory by improving the understanding of students' perceptions of employability, based on findings from a UK setting, applicable across the OECD. The quantitative and qualitative phases of the mixed methods study showed that students perceived the reputation of the university as an important benefit of HE. This advances career theory, providing wider support for previous studies exploring the role of university reputation, limited to Business undergraduates (Rothwell et al., 2008), and prospective university students (Esson & Ertle, 2016). The findings develop existing work exploring human capital, predominantly limited to MBA or specialist Management MSc students (Baruch et al., 2005), or Business undergraduates (Kalfa & Taska, 2015). Five additional sub-areas of the model add weight to this first original contribution: (a) coverage of degree subjects, (b) year of study, (c) gender, (d) the need for collaboration, and (e) identity construction. These are now addressed in turn.

(a) Participants in this study came from P1, P2, and P3 degree subject areas. To date, career theory research has predominantly focused on undergraduate students from P3 degree subjects of Business, Engineering, Law, Mathematics, and Modern Languages (Gupta et al., 2014; Hseih & Hsu, 2013; Jackson & Chapman, 2012; Sheepway et al., 2014; Wilton, 2012; 2008). Research of postgraduate students has focused extensively on MBA or specialist Management MSc students (Baruch & Forstenlecher, 2017; Baruch & Reis, 2016; Scurry et al., 2013). This research extends coverage of undergraduate participants to include P1 and P2 degree subjects (Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences). Students from P3 degree subjects perceived themselves as more employable and to have greater earnings potential than students from P1 and P2 degree subjects. Furthermore, for subjects including Music and Art, students preferred to build up a portfolio career of experience, rather than undertaking WIL as part of their degree studies. The diversity of views contributes to career theory by highlighting significant differences in the perceived employability across different degree subject areas.

Existing research confined to P3 degree subject participants is therefore not reflective of all graduates and risks presenting a stronger perception of employability among students than is actually the case. Section 7.5 provides practical contributions relating to supporting P1 and P2 students.

(b) Year of study offered a two-dimensional model of personal factors and market factors. Students felt more employable due to personal factors (e.g. university degree, clubs and societies, university reputation, work experience, increased confidence, increased aspirations, and career ownership), but less employable due to market factors (e.g. volume of graduates, lack of jobs available, when rejected for a job). The mixed methods approach was essential to explain the complexity, as the quantitative findings showed no impact for the year of study as a moderator. This helps to explain the counterintuitive quantitative findings of Qenani et al. (2014) in the USA, and Jackson and Wilton (2017) in the UK, of students feeling less employable in their final year of study. Consequently, the findings develop claims by Jackson (2014) and Holmes (2013) that a graduate can be employable without being employed.

(c) The gender findings from this research respond to calls in a white paper from the UK Government in The Higher Education and Research Bill (2016) for researchers to look at gender to help inform HE policy decisions. Chapter 7.5 details the practical contributions. Gender moderated human capital and career ownership through a protean career orientation in favour of males. The findings offer a significant contribution to career theory literature, with the protean career construct not previously applied to UK undergraduates, and career ownership accounting for the highest variance on employability in the validated model of self-perceived employability. However, gender had no moderation role on careers advice, although careers advice had the lowest variance on employability in the model. The findings suggest a reason for the mismatch in career theory literature across student focused studies, with Rivera (2011), Tomlinson (2012), and Tholen (2014) reporting males to have greater self-perceived employability than females, whereas Sok et al. (2013), Morrison (2014), and Jackson and Wilton (2017) reported gender to have no impact. The qualitative findings identified gender pipeline challenges and employer issues as central themes, offering an explanation for why non-student focused studies strongly support the notion that males perform more strongly in the labour market than their female counterparts (Kirton, 2009; Pas et al., 2011; Rodrigues et al., 2016). Chapter 8.3 draws on these findings to highlight the complexity of career theory, evidencing a need for cross-disciplinary research into employability across the lifespan of the individual.

(d) This research contributed to career theory by supporting calls by Tams and Arthur (2011) for greater collaboration, particularly between the meso level actors of the university careers service, graduate recruiters, and lecturers. This evidences the importance of career ecosystem theory, which highlights the dependency of loosely coupled actors on each other (Baruch, 2015; 2013; Baruch et al., 2016). Students who made use of the careers service were generally happy with the support provided. However, only half of the qualitative participants in the study had used the careers service during their HE studies, although no data currently exists from University A to validate engagement levels across the wider student population. The quantitative findings of perceived neutral impact and 0.05% variance of careers advice on employability were unexpected, particularly as the purpose of meso level actors is to enhance employability (Holmes, 2013). The meso level actors need to promote themselves to students throughout their university degree and offer tailored advice where feasible. This highlights the importance of planned action theory for careers advice to modify attitudes, subjective norms, and motivations of students to enhance employability (Fishbein & Ajzen, 1975). Equally, students need to take accountability and actively engage with meso level actors to benefit from the guidance available. Of particular concern is the trend whereby students studying P1 and P2 degree subjects appeared less likely to have used the careers service. This advances propositions by Crawford and Wang (2016) and Wilton (2014) of a divide between proactive and non-proactive students. Lecturers also have a key role to play through careers guidance and embedding employability in the course modules (Ashleigh et al., 2012; Ojiako et al., 2014; Sin & Amaral, 2017). Compulsory sessions as part of the undergraduate degree may offer success if, as suggested, students' motivation for learning is predominantly driven by goals, standards, and the assessment learning outcomes (Fry, Ketteridge & Marshall, 2015). Section 7.5 develops the practical contributions for careers advice.

(e) Identity construction forms a prominent theme in career theory literature (Brown, 2015; Holmes, 2015; 2013; Jackson, 2015; Oliveira et al., 2016), underpinned by social identity theory (Ashforth & Mael, 1989) and working identity theory (Ibarra, 2003). This research offers the term emergent identity to capture the shifting and evolving nature of identity construction as perceived by students. The quantitative findings captured emergent identity via the model of graduate employability underpinned by human capital and contemporary career theory. Students require additional support to develop their attitudes, subjective norms, and motivations as part of planned action theory (Fishbein & Ajzen, 1975). This support, alongside wider careers advice, requires a collaborative approach between employers, universities, and

students, highlighting the role of career ecosystems whereby actors depend on each other for the overall effectiveness of the system (Baruch, 2015; 2013; Baruch et al., 2016; Inansiti & Levien, 2004). The qualitative findings offer a further contribution relating to the retention of graduates, and the development of firm-specific capital and organisational capital (Campbell et al., 2012; Wright et al., 2014). Students would stay with an employer that provided salary increases, development opportunities, and a good work-life balance. The focus on development opportunities reflects the importance of lifelong learning as a mechanism for a sustainable career (Van der Heijden & De Vos, 2015). However, students would take ownership of their career and actively leave an employer that failed to provide these aspects. The findings indicate support for a kaleidoscope career (Mainiero & Sullivan, 2006; 2005; Sullivan, 1999), whereby the views of students shift over time based on their life experiences, and as they gain additional exposure to the labour market to help make informed decisions about their future career path. Students perceive identity construction as fluid and emerging.

7.4.2 Validation of Protean and Boundaryless Career Scales in Undergraduate Students

The second original contribution of this research is the validation of protean and boundaryless career scales in undergraduate students. The Cronbach's Alpha measure of reliability validated the use of Baruch's (2014) protean career orientation measure, and Briscoe and Hall's (2006) boundaryless career orientation measure across a multitude of fields of undergraduate study. To date, validation of these measures has focused on MBA or specialist Management MSc students (Baruch, 2014; Briscoe & Hall, 2006; Briscoe et al., 2006; Herrmann et al., 2015; Santos et al., 2017).

The quantitative findings supported the claims of Briscoe and Hall (2006) that mindset and mobility are two distinct measures of a boundaryless career. There is support in the mean scores from the undergraduate population in this study of a movement away from a traditional career, towards a boundaryless career orientation for mindset. This is not however the case for career mobility, which reflects near equal coverage of traditional-bounded career orientation, boundaryless career orientation, and the middle ground between these two dichotomies, extending similar findings derived from MBA or specialist Management MSc students (Baruch, 2014; Baruch & Reis, 2016; Briscoe & Hall, 2006; Herrmann et al., 2015). The findings also support the claims by Baruch (2014; 2006), Dries and Verbruggen (2012) and Murphy, Lambrechts and Huybrechts (2016) that the traditional career is not dead.

Additionally, the research framework (Chapter 2.2) of viewing careers and labour markets as ecosystems develops the notion of providing an overarching theoretical lens to reconcile the apparent disconnect between the co-existence of traditional and boundaryless careers (Baruch, 2015). The qualitative findings contribute to career theory by offering eleven dimensions of international mobility, extending the seven previously identified by Baruch et al. (2013). Furthermore, in response to calls by Cotton and Shen (2013), this research identified five dimensions of local mobility, coupled with four further dimensions of national mobility, extending the three dimensions offered by Baruch and Reis. The additional factors are indicative of the evolving nature of careers and career theory, as well as the subtle differences in perceived employability of undergraduates in comparison to MBA or specialist Management MSc students already in the labour market. The majority of students were open to moving internationally for a job offer, particularly in the early stages of their career, if they did not have dependents (e.g. family, partner, or children). The fact that different factors have less or greater weighting over time reflects emergent identity within a dynamic career ecosystem environment. Therefore, this research advances boundaryless career theory by highlighting the influence that experience within the labour market or wider life experience has on an individual's emergent identity, the shifting position of a kaleidoscope career, and the evolution of traditional-bounded versus boundaryless career orientation over time.

7.4.3 The Return on Investment of Pursuing Higher Education

The third original contribution of this research addresses the return on investment of pursuing HE. Participants in this research represented the first cohort of students to pay £9,000 per annum tuition fees. Students continued to perceive the benefits of HE to outweigh the associated costs, highlighting the array of benefits from HE to their development, future career, and life aspirations. However, the perceived gap between benefits and costs has narrowed significantly since the tuition fee increase. The majority of students did not expect to repay their university debt in full, reflecting findings by Future Finance (2016) that less than half of students are confident that a university degree will pay for itself. Students agreed with the Institute for Fiscal Studies (2016) that the volume of graduates has not yet eroded the earnings premium of a degree, but could in the future, if costs of HE continue to rise. In particular, students felt that an individual needed a clear reason for pursuing HE and that perhaps university was not suitable for everyone. This view captures the conservation of resources theory (Höbfoll, 2001; 1989) as students seek to acquire resources through the pursuit of HE,

but fear the loss of resources through the university fees. Students supported findings by the CIPD (2016), The Sutton Trust (2015), and Tholen (2014) that increased tuition fees put off students from disadvantaged backgrounds. Chapter 7.5 evidences the practical contribution through advice to policy makers.

7.5 Practical Contribution

This research offers practical contributions to OECD Governments and policy makers (Section 7.5.1), employers and graduate recruiters (Section 7.5.2), universities, careers services, and lecturers (Section 7.5.3), and students (Section 7.5.4).

7.5.1 OECD Governments and Policy Makers

The implications for OECD Governments and policy makers come through understanding the students' perceptions of employability and helping to enhance national competitiveness through making future graduates more employable. This research indicates that the removal of student bursaries is putting off students from disadvantaged backgrounds from pursuing HE due to an adversity to debt. This backs up findings by the CIPD (2016), The Sutton Trust (2015), and Tholen (2014) whereby people from disadvantaged backgrounds felt held back because they cannot afford to invest in lifelong learning opportunities. The UK Government and other Governments across the OECD need to promote social mobility to ensure diversity at university and diversity in the labour market. The re-introduction of bursaries for students from disadvantaged backgrounds appears essential, as the current system appears significantly damaging to national competitiveness.

The value and relevance of this research are highlighted by calls from the UK Government via The Higher Education and Research Bill (2016) to address the gender agenda within HE. Females were less likely to take ownership of their careers than males, which is significant given career ownership through a protean career orientation had the highest perceived variance on employability within the graduate employability model. This develops findings by the Association of Graduate Recruiters (2016) that females are not applying at the same rate as males for the top graduate jobs. Furthermore, both male and female students perceived females to face greater barriers in the labour market than males, in terms of earnings and taking time off to have children. This, in turn, limited the number of female role models in top positions in industry, limiting the aspirations of primary and secondary school pupils.

Governments must work collaboratively with industry to promote equality and to highlight gender diversity to children at the earliest opportunity, to help influence their emergent identity and their career aspirations. This will create a pipeline of students taking relevant subjects at GCSE, A Level, and Degree level, subsequently entering the graduate labour market. For example, in the academic year 2016/2017, females account for 90% of Art students, but only 5% of Engineering students at University A.

A further relevance of this research comes from addressing calls from the UK Government via The Higher Education and Research Bill (2016) to explore the impacts of the WIL agenda, proposed by Wilson (2012). Overall, students showed support for the proposal that all students should be given the opportunity to undertake WIL as part of their degree studies. The students in this study were the first cohort to be offered this opportunity through a placement scheme established by University A in 2016. Students reported that WIL helped them to improve their employability and secure graduate employment. This reflects findings by the Association of Graduate Recruiters (2017) that students without WIL are struggling to secure graduate employment. In contrast, students studying Art and Music felt that WIL was not a suitable avenue for them to pursue. Instead, they preferred a portfolio career whereby they gain experience alongside their degree from a variety of loosely coupled opportunities. Therefore, the UK Government and other OECD Governments must be careful about applying WIL to all degree subjects, although in the majority of cases this agenda appears credible. In all cases, the need for work experience to enhance employability holds true.

The students in this study represent the first cohort to pay £9,000 per annum of university fees, coupled with higher interest rates. According to Fleming (2017) total student debt in the US is $1.2 trillion and in the UK £2 billion, with both figures steadily rising. In addition, a study by Amigo Loans (2016) found that young people with a Degree, Master's or PhD are 10% more likely to be rejected for a mortgage due to a poor credit score compared to applicants with A Levels as their highest qualification. A concern for the UK Government is that the majority of students did not expect to repay their student loan due to the accumulation of increased university fees, increased interest rates, and modest salary expectations. A number of students felt the repayment conditions would limit their career ambitions. Given an estimated 73% of students will not repay their debt in full at existing fee levels, this is highly problematic to The Treasury, which will be left with an even greater shortfall once the outstanding debt is wiped after thirty years (Garner, 2014). Furthermore, students felt that, while the benefits of university still outweigh the costs, the gap is narrowing as tuition fees continue to rise. The

volume of graduates has not yet eroded the earnings premium of a degree, but could in the future if the costs of HE continue to rise (Institute for Fiscal Studies, 2016). Students felt that tuition fees should be abolished, which appeared to represent the wider view of 18-25 year olds given the appetite for such a policy in the June 2017 UK General Election. In an ideal world, the underlying premise for the Robbins Principle would be upheld: provide a university place to anyone with the ability and attainment to participate in UK HE (Robbins Report, 1963). However, the UK Government agenda for mass participation in HE, coupled with continued fallout from the 2007-2008 global financial crisis, limits the viability of this policy. Therefore, the findings from this research recommend that focus should be placed on reinstating student bursaries for disadvantaged students and for students taking degrees where labour market demand greatly outstrips the supply of graduates. These findings have implications for governments across the OECD looking at the success or failure of new ideas, as the policy makers battle with the ongoing challenges of university funding.

7.5.2 Employers and Graduate Recruiters

Students perceived UCAS points to have no direct impact on employability, suggesting that employers should follow the lead of PwC and Ernst & Young by removing UCAS point requirements from application screening. Students felt that UCAS points helped them to gain access to university, but were then no longer a relevant measure of employability. Instead, students emphasised the importance of their degree as the most recent evidence of their academic ability when applying for graduate jobs. The removal of UCAS points offers a larger and more diverse pool of applicants, which could improve organisational performance and national competitiveness (Wright et al., 2014).

Employers need to maximise their provision of WIL opportunities, in response to the Wilson Review (2012) which called for all students to be given the opportunity to participate in WIL. Students reported WIL to increase their perceived employability and lead to graduate employment opportunities, reflecting industry findings by the Association of Graduate Recruiters (2017). This means that employers must strive for maximum diversity of applicants to WIL opportunities, given WIL appears to be the official pipeline for graduate recruitment. WIL offers employers a mechanism for securing talent for their graduate programmes ahead of competitors, subsequently enhancing organisational capital and gaining a competitive

advantage (Campbell et al., 2012). WIL may improve retention rates as employers get an extended interview period and students get to see if the organisation is the correct cultural fit.

Additionally, students had mixed feelings regarding gender targets, with the majority of students feeling that the best applicant should get the job regardless of their gender. Instead, students recommended that employers target primary and secondary school pupils to encourage females to study related subjects at GCSE, A Level and at Degree level through exposure to female role models. This offers employers a more diverse pipeline and a further mechanism for accessing top talent ahead of competitors. Employers need to play an active role in retaining and promoting graduates to provide role models to future generations. Students suggested removing the gender pay gap, actively addressing discrimination across all countries of operation, and supporting females in taking time out to have children without negative impacts to their future career potential or earnings. Through primary, secondary, and tertiary education, and into the labour market, all stakeholders of graduate employability need to help females in developing self-worth and confidence, and in being able to convey this during the job application process. Students also identified limited circumstances where male representation needs to be addressed (e.g. Human Resources). Students also called for gender representation on hiring panels, both as an attraction mechanism to evidence diversity, and to reduce unconscious bias during the hiring process.

Students felt that graduate recruiters enhanced their employability through careers fairs, careers talks, building networks, and job application support. However, graduate recruiters need to raise awareness of the jobs available to graduates, particularly where applicants from a wide variety of degree subjects are desirable. Students felt that bringing alumni to universities to share their experiences of the company helped with career decision making and building professional networks. Careers advice needs to be tailored where possible, provide as much coverage as feasible of employment opportunities, and draw on collaborative partnerships with universities, careers services, and lecturers.

7.5.3 Universities, Careers Services, and Lecturers

In June 2017, University A began to implement the advice from this research to improve graduate employability. This is a significant contribution as rates of employment are a key measure in the Teaching Excellence Framework (TEF), published for the first time on 22nd June 2017, with University A receiving a bronze medal. Prospective students will use the TEF

as part of their decision-making process when choosing a university, and the TEF results determine the fees that universities can charge. Chapter 8.3 discusses directions for future research, discussing the TEF further. The outcomes of these implications for enhancing student employability will be of interest to other universities within the Russell Group and across the OECD.

Females and students from P1 and P2 degree subjects need to be made aware of the importance of taking ownership of their careers as early as possible, and provided with suitable support mechanisms for personal development - in particular, for developing self-worth and confidence, and being able to convey this during the job application process. The encouraging sign is that University A has identified accurately the students most in need of support via the CFPER (Gowar, 2015), and students' perceptions align with these findings, indicating that students have a strong awareness of employability. The challenge now comes in accessing and engaging these students. Existing communication links do not seem to be working and attendance at non-compulsory events is often lacking. Furthermore, students not based at the main university campus reported less contact with the careers service. In addition, employers invited to campus for careers fairs often reflected the more employable P3 degree subjects, for example, employers looking for Engineering, Mathematics, Technology, and Science graduates. Providing a greater coverage of employment areas and opportunities may help to engage more students. Ultimately, students must take a greater responsibility for seeking out careers advice and careers advisors must increase awareness of the services offered, ensuring that, where feasible, the advice is tailored to the circumstances of the individual student (Verbruggen et al., 2017). The meso level actors must strive to offer tailored advice, rather than a generic approach, to ensure contact with students throughout their studies, to provide maximum time for the student to take action to enhance their employability and develop their emergent identity.

Students highlighted the importance of lecturers in helping to provide tailored careers advice. They also suggested that compulsory sessions as part of the undergraduate degree may offer success. Fry et al. (2015) support this view, suggesting that students' motivation to learning is predominantly driven by goals, standards, and the assessment learning outcomes. Students viewed language barriers as a key concern alongside career progression and salary advancement, which both featured prominently in MBA or specialist Management MSc focused studies (Baruch & Forstenlecher, 2017; Scurry et al., 2013). Other universities may perhaps benefit from a scheme currently run by University A, providing free language courses

to all students during their studies, especially if this can help to expand employability and employment opportunities.

7.5.4 Students

Students need to have a clear reason for pursuing HE and ensure they have explored the various pathways open to them. Students need to become more proactive, particularly in terms of undertaking WIL or other work experience opportunities, and in seeking out careers advice (Crawford & Wang, 2016; Wilton, 2014). This is particularly true for students of P1 and P2 degree subjects, and for females. Students also need to take ownership of their employability and develop their employability as part of their emergent identity. This needs to begin at school and continue throughout university and into the labour market, as part of an emergent identity, alongside lifelong learning as part of a sustainable career (Van der Heijden & De Vos, 2015). Finally, students must ensure that their voice is heard and theirs views represented in the graduate employability agenda. For example, participating in research focusing on graduate employability, completing feedback requests from the university, or voicing suggestions for potential improvement to the process. After leaving university, graduates need to provide valuable feedback through the National Student Survey (NSS) and return to the university as alumni to share their experience and contacts with future students.

7.6 Chapter Summary

This chapter has provided a discussion of *Research Questions I and II* (Section 7.2), and *Research Question III* (Section 7.3). The theoretical contribution (Section 7.4), and practical contribution (Section 7.5) followed, with the chapter summary (Section 7.6) completing the penultimate chapter. The final chapter of this thesis provides conclusions, limitations, and directions for future research.

Chapter 8: Conclusions, Limitations and Directions for Future Research

8.1 Conclusions

The aim of this research was to explain the students' perceptions of graduate employability via a pragmatic, sequential explanatory approach. Pragmatism offers feasible practical contributions, which are closely coupled to robust theoretical underpinning. Understanding and exploring the student perspective of graduate employability factors is crucial, as their views are not well known (Jackson, 2015; Rospigliosi et al., 2014; Tymon, 2013) and outcomes of understanding the student view strategically influence organisational performance theory (Wright et al., 2014). Each stakeholder has a piece of the puzzle; if we can put the pieces together, we can build a more complete and richer picture of graduate employability to facilitate theoretical and practical advancement.

The thesis is composed of eight chapters. The opening chapter introduced the study, covering background, research purpose, contribution, motivation, and scope. Chapter 2 reviewed and evaluated literature addressing existing conceptual models of graduate employability, research framework, human capital, career orientation, careers advice, and moderators. The literature review followed a systematic approach to constructing a conceptual model of graduate employability and hypotheses for testing and validation of the model. The chapter concluded by addressing graduate debt and earnings. Chapter 3 detailed pragmatism as the philosophical position and the sequential explanatory mixed methods approach used to test and validate the proposed conceptual model. This included an quantitative two-wave stage informed by self-reporting questionnaires, followed by a qualitative stage using interviews to explain the findings of the quantitative stage. The chapter also evidenced the research design, research sample, ethical considerations, and strategies for preparing the data for analysis. Chapter 4 provided the quantitative results and Chapter 5 the treatment of qualitative data from applying the mixed methods approach. Chapter 6 discussed findings and analysis of the quantitative and qualitative findings, and Chapter 7 provided discussion by research question and theoretical and practical contributions of the research.

Section 8.1.1 now provides a short summary of the findings for the Research Questions and Hypotheses. Section 8.1.2 details the implications of the research offering a summary of the original contributions, their meaning in the wider context of career theory, and a

justification for the importance of this research. Following on from the conclusions, Section 8.2 addresses the limitations of the research, and Section 8.3 offers a discussion of possible directions for future research.

8.1.1 Research Questions and Hypotheses

Research Question I: What are the factors of graduate employability?

The literature review (Chapter 2) followed a systematic approach to constructing a new conceptual model of graduate employability and emergent identity, underpinned by a human capital and contemporary career theory framework. The model addressed six factors of human capital, career mobility through a boundaryless career orientation, career ownership through a protean career orientation, and careers advice. Moderators included gender, degree subject, and year of study. The following hypotheses facilitated validation of the conceptual model, in preparation for *Research Question II.*

H1a. Social capital is a factor of human capital.

H1b. Cultural capital is a factor of human capital.

H1c. Psychological capital is a factor of human capital.

H1d. Scholastic capital is a factor of human capital.

H1e. Market-value capital is a factor of human capital.

H1f. Skills are a factor of human capital.

H2. Developing human capital is positively associated with graduate employability.

H3. Holding a boundaryless career orientation is positively associated with graduate employability.

H4. Holding a protean career orientation is positively associated with graduate employability.

H5. Receiving careers advice is positively associated with graduate employability.

Moderator I. Gender is a moderator for H1-H5, such that the relationships are stronger for males than for females.

Moderator II. Degree subject is a moderator for H1-H5, such that the relationships are stronger for P3 subjects (Business, Engineering, Law, Mathematics, and Modern Languages)

than for P1 and P2 subjects (Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences)

Moderator III. Year of study is a moderator for H1-H2, such that the relationships are stronger for penultimate year undergraduates than for final year undergraduates.

Research Question II: How do undergraduate students view the identified graduate employability factors in relation to influencing their future employability in the graduate labour market?

A pragmatic, sequential explanatory mixed methods approach (Chapter 3) addressed the findings of *Research Question I* (Chapter 2). A two-wave quantitative study enabled initial testing of the hypotheses, followed by a qualitative stage using interviews to explain the quantitative findings. The quantitative findings supported *H1a-f* (social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills) as factors of human capital, and *H2* (human capital), *H4* (career ownership through a protean career orientation), and *H5* (careers advice) as positively associated with employability. Students reported objective data of UCAS points and student bursary status as not directly related to employability, but important for accessing HE.

The quantitative findings rejected *H3* (career mobility through a boundaryless career orientation), but Cronbach's Alpha measure of reliability validated boundaryless career as a stand-alone measure, despite not being statistically associated with employability. The quantitative findings indicated a shift towards a boundaryless career orientation for mobility. However, for mindset, near-equal representation was found of a traditional-bounded career orientation, a boundaryless career orientation, or somewhere between the two dichotomies. This supports the literature findings derived from MBA or specialist Management MSc students (Baruch, 2014; Baruch & Reis, 2016; Briscoe & Hall, 2006; Herrmann et al., 2015). The interviews indicated that the desire for a bounded or boundaryless career develops over time as part of an emergent identity, influenced by a two-dimensional model of market factors and personal factors.

Regression modelling showed that human capital (15.1%), careers advice (0.5%) and career ownership through a protean career orientation (22.3%) accounted for an overall perceived variance of 37.9% of employability. The interview findings from thirty-eight participants helped to explain the low variance of careers advice. The majority of students who

made use of the careers service found the advice to be very useful. However, only half of the interview sample (seventeen participants) had made use of the careers service, highlighting an engagement issue from both careers service providers and students. Furthermore, students called for greater collaboration across careers service providers, lecturers, and graduate recruiters. Students perceived that lecturers could offer more tailored careers advice and embed employability into the curriculum, whilst graduate recruiters need to increase awareness of the job opportunities available, particularly to students studying degree subjects with less clear career pathways (Verbruggen et al., 2017). Gender did not moderate careers advice, but did moderate human capital and career ownership through a protean career orientation, whereby a stronger influence occurred for males. Degree subject was a moderator for human capital, careers advice, and career ownership through a protean career orientation, whereby a stronger influence occurred for P3 degree subject students (Business, Engineering, Law, Mathematics, and Modern Languages). This indicates that females, and P1 and P2 degree subject students (Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences) need additional support in developing human capital and taking ownership of their careers. In terms of year of study, the quantitative findings showed no moderation impact. However, the qualitative findings evidenced a two-dimensional model of market factors and personal factors, indicating support for claims by Jackson (2014) and Holmes (2013) of a graduate being employable but without employment. From a market factor perspective, students perceived themselves to be less employable in their final year of study, supporting the findings from Jackson and Wilton (2017), Qenani et al. (2014), and Clarke (2008). This included the volume of graduates, the lack of jobs available, and receiving rejections for job applications. In contrast, from a personal factor perspective, students perceived themselves to be more employable in their final year of study, supporting findings by Remedios (2012), and Van der Heijde and Van der Heijden (2006). This included university degree, the university reputation, clubs and societies, work experience, increased confidence, increased aspirations, and career ownership. The findings highlight the importance of the mixed methods approach to this research, as the quantitative findings failed to capture this complexity, which might explain the conflicting findings to date from quantitative studies in career theory literature.

Overall, the findings indicated that students agreed with the definition of employability by Rothwell and Arnold (2007, p.25), and of perceived employability by Vanhercke et al.

(2014, p.594). This is encouraging as it evidences alignment in terms of understanding employability as a construct across different actors of graduate employability. Students felt that standing out from the crowd was particularly difficult due to the competitive nature of the graduate labour market. Again, this indicates a good awareness of dominant themes in career theory literature including increased participation in HE, competition for jobs, and the need to stand out from other applicants (McCowan, 2015; Philips & Young, 2015; Tomlinson, 2014).

Research Question III: The trade-off between the benefits of university participation and the cost of debt accumulated during higher education studies: Students' perceptions.

The literature review (Chapter 2.8) evidenced the costs and benefits of higher education from a variety of stakeholder positions. The quantitative and qualitative findings of this research helped to understand the students' perceptions.

Participants in this research represented the first cohort of students to pay £9,000 per annum tuition fees. Students continued to perceive the benefits of HE to outweigh the associated costs, highlighting the array of benefits from HE to their development, future career, and life aspirations. However, the perceived gap between benefits and costs has narrowed significantly since the tuition fee increase. The majority of students did not expect to repay their university debt in full, reflecting findings by Future Finance (2016) that less than half of students are confident that a university degree will pay for itself. The exception comes from students studying degree subjects with the highest earnings potential (e.g. Engineering, Mathematics, and Business) who expect to repay their debt in full. Students' expectations of earnings six months after graduation closely aligned with figures published by The Complete University Guide (2018), Graduate Jobs (2017), and Longitudinal Educational Outcomes (2016). Students agreed with the Institute for Fiscal Studies (2016) that the volume of graduates has not yet eroded the earnings premium of a degree, but could in the future, if costs of HE continue to rise. In particular, students felt that an individual needed a clear reason for pursuing HE and that perhaps university was not suitable for everyone. This view captures the conservation of resources theory (Höbfoll, 2001; 1989) as students seek to acquire resources through the pursuit of HE, but fear the loss of resources through the university fees. Students supported findings by CIPD (2016), The Sutton Trust (2015), and Tholen (2014) that increased tuition fees put off students from disadvantaged backgrounds.

8.1.2 Research Implications

This research offers three original contributions to career theory related to understanding the students' perceptions of graduate employability. These are detailed in Chapter 7.4 and briefly summarised here:

(i) The conceptualisation and validation of a new model of graduate employability underpinned by human capital and contemporary career theory. Five additional sub-areas of the model add weight to this first original contribution: (a) coverage of degree subjects, (b) year of study, (c) gender, (d) the need for collaboration, and (e) identity construction.

(ii) Validation of Baruch's (2014) protean career orientation measure, and Briscoe and Hall's (2006) boundaryless career orientation measure across a multitude of fields of undergraduate study. This contribution included identification of eleven dimensions of international mobility, extending the seven previously identified by Baruch et al. (2013), and nine dimensions of local or national mobility, extending the three dimensions offered by Baruch and Reis (2016).

(iii) The return on investment of pursuing HE. Participants in this research represented the first cohort of students to pay £9,000 per annum tuition fees. Students continued to perceive the benefits of HE to outweigh the associated costs, highlighting the array of benefits from HE to their development, future career, and life aspirations. However, the perceived gap between benefits and costs has narrowed and students felt that an individual needed a clear reason for pursuing HE and that perhaps university was not suitable for everyone. Students supported findings by CIPD (2016), The Sutton Trust (2015), and Tholen (2014) that increased tuition fees put off students from disadvantaged backgrounds.

Practical contributions offered advice to OECD Governments and policy makers, employers, graduate recruiters, universities, careers services, lecturers, and students (Chapter 7.5). These contributions are significant in addressing the challenges of neoliberalism as successive OECD governments have presided over an ideological focus on HE by replacing social models with market-led approaches (Palfreyman & Tapper, 2016). They drew on themes of reduced state funding of HE, economic returns, diversification, increased participation, internationalisation, league tables, employability, students-as-consumers, and accumulation of intellectual capital for deployment in a knowledge-based economy (Phipps & Young, 2015). The contributions also respond to calls by the Higher Education and Research Bill (2016) for research to offer strategies to address gender inequality from HE into the labour market.

Students suggested the development of a pipeline of talent from primary school to secondary school, to university, and into the labour market. Furthermore, students call on employers to address gender discrimination in the labour market and provide greater support for females taking time out from the workplace to have children, helping to ensure retention, career progression, and greater representation at the top levels of management.

Professor Peter McKiernan (2016), President of The British Academy of Management and The European Academy of Management, called for management scholars to carry out fundamental research in an applied setting to achieve meaningful and rigorous contributions. In the wider context, this mixed methods research addressed such calls by combining rigorous research with theoretical and practical relevance. This research helps to explain the students' perceptions of graduate employability, as their views are not well known (Jackson, 2015; Rospigliosi et al., 2014; Tymon, 2013). Through the construction of an emergent identity, the outcomes address the motivation for this research of seeking to make undergraduates more employable, subsequently fit for deployment in an increasingly globalised, knowledge-based economy (Crossman & Clarke, 2010); simultaneously offering implications for theory and practice to HE institutions, industry and national governments. Graduate employability is a considerably more complex area than is sometimes portrayed and collaboration is essential across all stakeholders. This research highlights the importance of and provides a mechanism for, giving a voice to a neglected actor in graduate employability, the micro level undergraduate student. The outcomes of this research offer directions for future research (Chapter 8.3), which follow a discussion of the limitations.

8.2 Limitations

An important aspect of rigorous academic research is to acknowledge limitations. For each limitation discussed, a reference is provided to a peer reviewed published journal paper highlighting the same limitation in their study.

(i) The structural factors of the labour market conditions and employability outcomes fall outside the scope of this research from an quantitative perspective (Vanhercke et al., 2014), although students did cover some of these aspects during the qualitative interviews. Developing this limitation, Chapter 1.6 acknowledged the role of the media but stated that exploring the array of media views is beyond the scope of this research.

(ii) Participants came from a single university (Direito et al., 2012). However, coverage of P1, P2, and P3 degree subjects from a typical OECD pre-1992 university helped to maximise the contribution of the research. Future research could replicate this research across other universities, countries, and continents (Section 8.3).

(iii) There is a risk when accessing students that the more engaged students self-select themselves to participate (Crawford & Wang, 2016). To address this the researcher sent an email to all qualifying students at University A and went to lectures in person, giving the same brief each time to limit bias. In the qualitative phase, half of the participants had made use of the careers service and half had not, which helped to give a more rounded reflection of the students' perceptions.

(iv) This research tested whether students had developed sufficient awareness to self-report accurately their views, given a lack of exposure to the graduate labour market (Benson et al., 2014). However, without an understanding of the student perspective, there is an attempt to form policy and strategy without engaging the very actors affected by such proposals, risking disconnect and a failure to explore all potentially available options. In fact, the qualitative interviews evidenced an alignment of students' perceptions with the perceptions of other actors of graduate employability, albeit framed from their own agenda and perspective.

(v) The use of a seven-point Likert scale instead of a five-point Likert scale reduces participant bias but is reliant on participants to self-report accurately to this level of detail (Baruch, 2014).

(vi) Wave one and wave two of the quantitative part of this study each represent a cross-sectional study. A two-wave research design cannot be presented as a longitudinal study (Ployhart & Vandenberg, 2010), as the timing of each snapshot is not guaranteed to be representative. For a study to be considered longitudinal, it must have a minimum of three waves, and each of these waves must make a prediction of the data for the subsequent wave in order to examine predictors of change over time (Ployhart & Vandenberg, 2010). Due to resource constraints of time and money, it was not feasible to carry out a longitudinal study for this specific research. The limitation of common method bias and false causality assumptions from a two-wave cross-sectional design was reduced through a qualitative stage of interviews to follow-up on unexpected findings from the quantitative stage (Benton & Craib, 2011; Lincoln & Guba, 1985). If time and resources permitted, the study would benefit from a third wave, exploring students' perceptions in their first year in the graduate labour market,

converting the two-wave study to a longitudinal study (Dries, 2013a, p.107; Edwards, 2014; Wilton, 2014). However, the wide coverage of participants and the pragmatic, sequential explanatory mixed methods approach maximised the contribution of this study given the constraints, especially because career theory articles tend to be cross-sectional, one-phase, quantitative or qualitative research designs. Future work could address this limitation, as discussed in Section 8.3.

In addition to the six limitations discussed, Appendix C evidences the researcher position. An example of the researcher developing during the PhD is evidenced by the 32-item model of wave one, enhanced to a 61-item model in wave two. Future research would apply the full 61-item model to all waves when replicating the study. Overall, the limitations of this study do not detract from the meaningful and rigorous original contributions.

8.3 Directions for Future Research

In response to calls by Creswell (2015), future work could replicate this research across other universities to compare students' perceptions within a single country or across different continents. This study could also be converted from a two-wave, cross-sectional study, to a three-wave, longitudinal study (Ployhart & Vandenberg, 2010). The third wave could follow students after graduation into the labour market to see how their emergent identity and views continue to evolve over time. This approach would offer a mechanism for comparing perceptions of employability pre and post-entry to the graduate labour market. Subsequent waves of data could also be collected over time as resources permitted. A challenge to this approach would be maintaining access to participants and the dropout rate of participants with each subsequent wave (Baruch & Holtom, 2008). The linking and prediction of data between waves could add further contribution to theory and practice (Dries, 2013a, p.107; Edwards, 2014; Wilton, 2014).

Additionally, future research could look at signalling theory (Spence, 1973a; 1973b) between applicants for graduate jobs and the hiring organisation. This could complement and advance the conservation of resources theory (Höbfoll, 2001; 1989) in terms of explaining the decision of students to invest time and money in HE.

An alternative avenue for longitudinal research is the EXCEL placement scheme introduced by University A in 2016. The positive or negative impacts of the scheme on

students' employability would help to inform government policy, in particular the recommendations of the Wilson Review (2012), as well as inform other universities of the merits or limitations of introducing similar schemes.

Career research needs to follow the lead of this research and focus on students from P1 and P2 degree subjects, rather than continue the narrow focus to-date on students from P3 degree subjects who have better employability outcomes and clearer defined career paths. Factors of age, disability, ethnicity, mode of study (e.g. part-time), or exploring the role of the media could offer an additional explanation of the students' perceptions of graduate employability.

The findings highlight the importance of the mixed methods approach to this research in capturing the complexity of graduate employability, perhaps explaining the conflicting findings to date from quantitative or qualitative studies in career theory literature. This complexity evidences a need for cross-disciplinary research into employability across the lifespan of the individual, particularly in terms of the construction of emergent identity.

On 23rd June 2016, the UK voted by a margin of 48.1% to 51.9% to leave the EU (Electoral Commission, 2016). As part of Questionnaire B, in response to the statement *I feel that securing graduate employment will be more difficult now the United Kingdom has voted to leave the European Union*, 59.95% of participants agreed, 23.51% were neutral, and 16.54% disagreed. In addition, the Teaching Excellence Framework (TEF), published for the first time on 22nd June 2017 awarded universities a gold, silver, or bronze medal based on a series of metrics. Universities received a gold medal for evidencing engagement with students, highlighting the importance of collaboration and of giving a voice to the student population. Rates of employment formed a key component of the TEF, underpinning the importance to universities in terms of setting tuition fees and attracting prospective students. Therefore, challenges to labour market certainty, and new metrics underpinned by a neoliberal agenda offer an alternative direction for future research.

To conclude, the key message from this research is the need for collaboration across all actors of graduate employability. The focus needs to start at primary and secondary school, and continue through university to create a pipeline of talent for employers. This is particularly crucial for sectors where demand for graduates outstrips supply, or where gender and diversity issues currently prevail. Individuals need to take ownership of their careers and focus on lifelong learning as part of a sustainable career (Van der Heijden & De Vos, 2015). The

researcher hopes the original contributions of this research to theory and practice will aid the advancement of graduate employability, through giving a voice to the students' perceptions of graduate employability, and stimulating future research agendas.

Appendix A: Executive Summaries of The Robbins Report (1963), The Dearing Report (1997), The Browne Review (2010) and The Wilson Review (2012)

The Robbins Report (1963) Executive Summary

1. Our terms of reference instructed us to review the present pattern of higher education and to make suggestions for improving it. Our first task, therefore, after some preliminary discussion of principles, was to make a thorough survey of the existing situation in higher education in Great Britain and the historical trends of which it is the outcome. The results of this survey are set out in broad outline in Chapter III and later chapters; details will be found in Appendices One, Two, Three and Four. Whatever may be the fate of our specific recommendations, we hope that the results of this survey, the product of the skill of our technical advisers, will place the study of higher education in this country upon a new footing.

INTERNATIONAL COMPARISONS

2. Comparisons with conditions abroad reveal a situation of some complexity. In the United States of America, the Soviet Union and certain Commonwealth countries the provision of higher education greatly exceeds our own, after allowing for differences in population. But elsewhere the comparison is more ambiguous. Judged on grounds of opportunity offered for entry, our system is well down the list of the systems with which we have compared it. Judged on grounds of output of qualified persons, the comparison is not unfavourable: the United States of America and the Soviet Union apart, we stand very high on the list. But when we compare published plans for future development many other countries are far ahead of us. If, as we believe, a highly educated population is essential to meet competitive pressures in the modern world, a much greater effort is necessary if we are to hold our own.

THE FUTURE REQUIREMENT FOR PLACES

3. Our calculation of the future requirement for places in this country is based on an estimate of the numbers of young people who, on the present basis of student grants, will both be able to satisfy suitable entrance requirements for higher education and will wish to be admitted. Our investigations have suggested the existence of large reservoirs of untapped ability in the population, especially among girls: they have also shown a most significant increase in the number of young people coming forward year by year from the schools. We

recognise that there can be no certainty bow strongly this trend will continue up to 1980. With that qualification, and on the assumptions set out in Chapter VI and Appendix One, which allow for no relaxation in the degree of competition for entry, we have arrived at a requirement of about 560,000 places for full-time students in all higher education in 1980/1, and of about 390,000 places in 1973/4, compared with 216,000 in 1962/3.

HIGHER EDUCATION AND THE SCHOOLS

4. We are clear that the main remedy for the serious strains that are placed on the schools must lie in a great expansion of places in higher education. But there are a number of ways in which the processes of selection for higher education might be improved; and the arrangements for co-ordination between institutions of higher education and the schools should be strengthened. The special problems due to competition for places in institutions of outstanding eminence can only be solved by the improvement of other institutions.

EXISTING INSTITUTIONS AND COURSES

5. In order to decide how best to reach the target of 560,000 places it is necessary first to examine the provision made and the potentialities of existing institutions - the universities, the Training Colleges and Colleges of Education, the various institutions specialising in technology and the system of further education in general.

UNIVERSITIES

6. There is much to praise in the universities' central tradition of teaching and research and their provision of honours courses for studies in depth. But there are also two weaknesses: the small proportion of students in the universities of England and Wales taking first degrees of a broader nature, and the inadequate provision for postgraduate study and research.

7. Broader courses for the first degree are already available to a larger extent than is often realised. But these courses should be taken by a much greater number of students than at present, both on educational grounds and in the interest of their future careers. We should not recommend so large an expansion of universities as we do unless we were confident that it would be accompanied by a big increase in the number of students taking broader first degree courses.

8. A general lengthening of undergraduate courses to four years is undesirable, but a substantially higher proportion of students than at present should proceed to postgraduate work, with appropriate grants. The quality of the best research in this country will bear

comparison with anything done elsewhere. But the growing complexity in the developing branches of knowledge in many cases requires a better foundation of fundamental studies than can be provided in the present first degree course; and it is in this respect that arrangements in some other countries are superior. We consequently recommend more provision both for research and, in particular, for advanced courses.

COLLEGES FOR THE EDUCATION AND TRAINING OF TEACHERS

9. In the rapidly changing colleges for the education and training of teachers there are very different problems. In England and Wales many of the colleges are very small. Some of the students have the capacity to do work of degree standard; and although the colleges will continue to concentrate in the main on courses of the present kind, it is unjust that there should be no facilities for obtaining a degree. But to confer degree-giving powers on all the existing colleges would be inappropriate because of the number involved, the variation in their sizes and the diversity of standards.

10. Differences of size are clearly capable of being remedied within various types of administrative structure; and plans already made for the future are designed to produce a big improvement. But under the present arrangements the problems of status and awards are more intractable. We recommend a radical change. The status of the colleges would best be assured and the problem of degrees satisfactorily solved by a closer association with the universities. Our recommendation is that, as a development from the Institutes of Education in which the colleges are at present associated with the universities, there should be set up University Schools of Education under whose auspices degrees would be available to suitable college students. The Schools of Education would receive finance through the grants committee system. Training Colleges, which should be renamed Colleges of Education, would be given independent governing bodies: they would become members of the Schools of Education and would receive finance from them.

11. We do not recommend a degree for students who complete the present course: to award both a professional qualification and a degree after three years would leave insufficient time for the depth of academic study that characterises a three-year degree course and would give the students concerned an unfair advantage over those university students who, after a three-year course for a degree, take another year's professional training before becoming teachers. We do, however, recommend that such students as - either on entry or after a preliminary period - are found to possess the capacity should be able, if they wish, to take a

course of study that, in addition to giving professional training, leads after four years to a degree. For a minority of students transfer to a university may be appropriate.

12. For the universities these proposals involve an additional administrative burden at a time when preoccupation with their own expansion will be very great. But we are convinced that immense benefit will flow from closer links with the universities and that our proposals offer the best hope of raising the status and standards of the colleges and securing their full integration into the system of higher education of the future. For the local authorities, who have done so much to promote the development of the colleges, and who are so closely involved in the supply of teachers, these proposals involve parting with institutions to which many of their members have devoted long and energetic service. It is essential that, in ways that we specify in some detail, the local authorities should be associated with the Colleges and the Schools of Education.

13. In Scotland, too, we propose that degrees should be awarded to appropriate students in Colleges of Education who successfully complete a four-year course. Our proposals for changes in the government of the colleges are somewhat different from those in England and Wales, but their cumulative tendency is in the same direction.

TECHNOLOGICAL AND FURTHER EDUCATION

14. There is an outstanding need to attract a higher proportion of first class talent into courses in technology and to provide for the more effective organisation of research and training at postgraduate level both inside and outside the universities.

15. We recommend the development of five Special Institutions for Scientific and Technological Education and Research, comparable in size and standing and in advanced research to the great technological institutions of the United States of America and the Continent. The bases for three such institutions already exist in the university sphere. We recommend that another, completely new, institution should be planned and that a fifth should be developed from one of the existing Colleges of Advanced Technology.

16. We recommend that in general the Colleges of Advanced Technology should be given charters as technological universities. They should be placed as soon as possible under the Grants Commission, which is one of our main recommendations for the future machinery of central government, and, as with the new universities, their progress towards complete autonomy should be supervised by academic advisory committees. Some of the Central Institutions in Scotland, if they do not forge links with universities, should move in the same direction.

17. We welcome the developments in management education taking place in various universities and colleges, but we recommend that there should be developed on a larger scale two postgraduate schools of management studies. In order to take advantage of the employment of part-time staff, both should be situated in large cities. In order to have immediately available the best specialists in the relevant technical disciplines, both should be associated with university institutions.

18. The Regional Colleges are to be regarded as at once providing the seedbed for some further growth of institutions to university status and as fostering, in addition to their characteristic work in science and technology, educational experiments in fields such as the teaching of modern languages and many aspects of business studies.

19. We hope that, for reasons of economy of staff and equipment, the work of university level will be concentrated as far as possible in selected centres. But we attach great value to the continued provision of facilities for work of university level over a wide area. The Area Colleges will develop in a variety of ways, and the opportunities open to students will be enhanced by our proposals that degrees should be available for appropriate courses.

20. Students taking advanced courses in the Regional and Area Colleges should have the same opportunity for degrees as those in university institutions. For this purpose, we recommend the creation of a Council for National Academic Awards to perform, for Britain as a whole and with more extended terms of reference, functions similar to those performed so well in England and Wales by the present National Council for Technological Awards. In particular, the new Council would award degrees.

THE FUTURE OF HIGHER EDUCATION

21. We have carefully considered whether any new categories of institution should be introduced. We conclude that in general this is not necessary: the present range of institutions, if imaginatively developed, affords the necessary scope for new experiments and opportunities.

22. In suggesting how the 560,000 students of 1980 should be distributed between different types of institutions, one of our main concerns has been to reduce the pressure on the schools caused by the shortage of places in the universities. Some of this pressure may well be reduced by the extension of facilities for obtaining degrees in other institutions. But we doubt whether it will be reduced sufficiently. We therefore recommend that the universities' share of entrants to higher education should be increased from 55 per cent in 1962 to 60 per cent in 1980.

23. If this is to happen, the necessary first steps must be taken immediately. Of the 350,000 university places needed by 1980, nearly 300,000 might in favourable conditions be provided by the development of existing institutions, which at present contain 130,000 students. In modern conditions it is desirable that universities should be large enough to have an adequate division of labour within departments and to make economical use of buildings and equipment.

24. It may be that most of the university places that are required in the next ten years can be provided by such developments. But if no further steps are taken, the situation will thereafter be irretrievable, for universities take long to establish. We therefore recommend the immediate foundation of six new universities, of which at least one should be in Scotland. Another would be the new Special Institution for Scientific and Technological Education and Research. Such new foundations might provide 30,000 places by 1980. The remaining places should be provided by the advancement to university status of some ten Regional Colleges and Colleges of Education. If the scale of these recommendations should seem over-ambitious, we would remind the sceptics that demographic projections beyond 1980 suggest no lessening of the rate at which the demand for places will grow.

25. Except for management studies and languages, we have not made recommendations about the content of courses in particular subjects, holding this to be a matter best worked out in detail within and among the various institutions concerned. But we consider that there is scope for an increase in the proportion of students in higher education engaged in studying science - this will be largely achieved by current plans of development - and that there is scope for considerable increase in the proportion and an improvement in the quality of those taking technological courses of various kinds.

26. As we have indicated, much of the expansion contemplated will take place by the growth of existing institutions. But, for the remainder that demands new foundations, having regard to the decisions of the last few years, we wish to emphasise the claims of the great centres of population, both because of the advantages that institutions can draw from such an environment and because of the advantages they can confer. As a result of a recent decision, which we endorsed, there will soon be two universities in Glasgow; and there is room for more than one in some other large cities.

27. We emphasise the importance of expanding facilities for the education of adults, such as refresher courses for graduates in industry and courses for married women wishing to start or resume their careers after bringing up a family, as well as more general courses for those wishing to enlarge their intellectual and aesthetic horizons. Not all of these activities will

be undertaken by full-time study. There will be a continuing role for the voluntary and statutory organisations interested in courses of part-time higher education. We hope that, as in the past, the universities will maintain an active interest in the provision of these courses and that the fruitful co-operation of the agencies in this field will continue.

STAFFING, TEACHERS AND STUDENTS

28. There is no reason to suppose that in the long term the expansion of higher education need be held up by lack of suitable teachers. But in the short term there will be difficulties; and in any event attention will have to be given to the economical use of manpower and the adoption of the most suitable methods of teaching. We repudiate any suggestion that the teaching problem should be solved at the expense of research, but we think that teaching time might well be used more effectively; and we urge that increased attention should be given to the problems of introducing young men and women from families with scanty educational background to the atmosphere of higher education. We also recommend the provision of more extensive residential facilities for students.

THE COST OF HIGHER EDUCATION AND ITS FINANCE

29. With an increase from 8 to 17 per cent in the proportion of the relevant age group for whom we recommend that full-time higher education should be provided, the cost of higher education will be substantially increased both absolutely and in relation to the gross national product. While we are unable to put a figure on the return on this outlay considered as an investment, we are clear that it will be remunerative, both in its absolute effects on the general productivity and adaptability of the internal working of the economy and in helping to maintain our competitive position in the world at large.

30. On the assumption of a constant value of money and an average increase in productivity of 3¼ per cent per annum, our proposals would lead to an increase in public expenditure on full-time higher education from £206 million in 1962/3 to £742 million in 1980/1; the proportion of gross national product devoted to this purpose would rise from 0.8 to 1.6 per cent. A substantial fraction of the rise in expenditure could be carried without increased relative burden by the increase in productivity we have assumed; and although there would remain a proportion not so carried, such expenditure would be well justified. On any broad appraisal of the return both in productivity and increased capacity for enjoyment, many items at present covered by public expenditure have less claim on our resources than this.

31. We have given considerable attention to the suggestion that part of the cost should be met by loans to students rather than outright grants covering maintenance and fees. We dismiss the belief that this would substantially alter the ultimate burden in terms of calls on real resources of manpower and equipment. But we recognise considerable force in arguments, based upon justice, for a partial charge for what otherwise might well be described as a subsidy from those sections of the community who do not get the returns which normally accompany superior educational qualifications. Nevertheless, the introduction of a system of loans at a time when substantial proportions of the population were only beginning to acquire the habit of higher education might deter parents, particularly those with daughters, from persuading, encouraging or allowing their children to proceed to higher education. Hence, although as time goes on more attention may well be paid to this method of finance, we do not recommend its adoption here and now.

32. We have also considered the contribution of fees to the income of institutions, which in recent years (mainly because of the decline in the value of money) has become a much smaller proportion of their total income. At present most fees are wholly or in part met from rates or taxes so that, apart from overseas students and the relatively few home students whose parents pay fees, the distribution between fee income and subsidy is a matter of secondary importance to public finance. But we have been impressed by the argument that there is a certain safeguard for institutions if all their income does not come immediately from one administrative source: and for this reason we recommend an increase in fees so that they will cover at least 20 per cent of the expenditure of institutions. An appropriate increase would be required in the general grant to local authorities.

THE INTERNAL GOVERNMENT OF INSTITUTIONS OF HIGHER EDUCATION

33. In discussing the government of individual autonomous institutions, we defend the principle of lay majorities on ultimate governing bodies but emphasise that there should be strong academic representation and that such bodies should not interfere with strictly academic business. We argue that there should be adequate representation of non-professorial members of the teaching body on all internal organs of government not concerned with matters of appointment and promotion. We outline a parallel code for other institutions. We draw attention to the importance of the position of vice-chancellors, especially in a period of expansion, and emphasise the need at once to relieve them of superfluous duties and to make adequate provision for appropriate methods of appointment. We discuss the problems of federalism among academic institutions, and recommend both the repeal of the Universities

(Scotland) Act, 1889, and independent enquiries into the respective problems of the Universities of Wales, London, Oxford and Cambridge as they affect the national interest, unless they solve these problems for themselves. We also propose a reconstruction of the present Committee of Vice-Chancellors and Principals, aimed at making it a body capable of representing an enlarged system of autonomous institutions in discussions with the Grants Commission, the schools and other interests.

ACADEMIC FREEDOM AND ITS SCOPE

34. The problems of reconciling in modern conditions the claims of autonomous institutions to academic freedom and the need for adequate co-ordination of a system substantially supported from public funds are the subject of a separate chapter. We set out, both in regard to individuals and institutions, the ingredients of academic freedom that, in our view, are essential to a healthy system of higher education. At the same time we indicate the spheres in which consideration of national needs and an economical use of public resources make it necessary to limit completely free action and to provide some machinery of co-ordination. Recognition of this need has made us all the more aware of its dangers. We therefore lay great emphasis on the principle of control through general block grants administered by an independent committee or commission appointed for its expert qualifications, not for its political affiliations. We regard this principle, exemplified in the present system by the University Grants Committee, as one of the significant administrative inventions of modern times: and we attach great importance to its retention and development in the machinery of government of the future.

THE FUNCTION OF THE GRANTS COMMISSION

35. We therefore recommend that oversight of the entire body of autonomous institutions, the universities and the Colleges of Advanced Technology, and with the universities the associated Schools of Education, together with the Scottish Colleges of Education, should be placed in the hands of a Grants Commission. This body, which would be the lineal successor of the University Grants Committee, would have the duty of advising the government on the magnitude of the grants to be made to this sector of higher education and of distributing grants and assessing the correct allocations to the different institutions concerned. The main body of the Commission would be constituted on the same principles as the University Grants Committee. with a suitably augmented staff. Much of its detailed work would, however, be conducted by a structure of committees, whose membership need not be

restricted to members of the main Commission. In this way we believe that the intimate contacts characteristic of the operations of the University Grants Committee will be retained, although the scope of the Commission will be considerably wider.

MINISTERIAL RESPONSIBILITY

36. The problem of ministerial responsibility for the Grants Commission presents many difficulties. It would be inappropriate for the Chancellor of the Exchequer to be responsible for the Grants Commission, whose scope will be much wider than that of the University Grants Committee. Nor would it be suitable for it to be the responsibility of a minister without portfolio. We have considered therefore with great care whether the whole education service should become the responsibility of a Secretary of State for Education, and we do not wish to minimise the strength of the case that can be made for this. But in the end we have come to the conclusion that for autonomous institutions, involved as they are not only in teaching but also in research and the advancement of knowledge, the more appropriate conjunction for the Grants Commission would be with the Research Councils, the Arts Council and other bodies that have the status of advisory and distributing intermediaries. We recommend therefore the creation of a new ministry with the responsibility for all such intermediaries, with the title of Ministry of Arts and Science. For Scottish institutions, we recommend a special relationship between the new minister and the Secretary of State for Scotland.

THE MACHINERY OF CO-ORDINATION

37. With such a structure of ministerial responsibility - the new minister responsible for the Grants Commission and the institutions dependent on it, and the Minister of Education and the Secretary of State for Scotland remaining responsible for the other institutions of higher education and the schools - there will be a need for co-ordination. The prime responsibility for this will rest with the ministers and their departments, advised on specific questions like the supply of teachers by national advisory bodies. But we also recommend the establishment of a small Consultative Council, composed of people representative of various educational and other interests, to which ministers can remit questions concerned with higher education as a whole, as well as its relations with the schools.

THE CRISIS IMMEDIATELY AHEAD

38. The Report concludes by drawing attention to an educational emergency now confronting higher education because of the arrival at the ages of seventeen and eighteen of

the very large numbers of children born immediately after the second world war. In our judgment, this is an emergency of the same importance as the emergency produced by demobilisation after the last war and demanding the same type of extraordinary measures to meet it. If the needs of this situation are not adequately met by immediate government action, many of our plans for long-term expansion will be seriously endangered.

The Dearing Report (1997) Executive Summary

*The Committee made 93 recommendations which can be found printed in **bold** type throughout the text. They are also collected together as Annex A to the report.*

Among the Committee's main recommendations were that:

- *the provision of higher education should be expanded to allow for widening participation, particularly among women, ethnic minorities, and students with disabilities;*

- *there should be a focus on students' learning skills;*

- *there should be development and increased use of Communications and Information Technology;*

- *there should be diversity of provision of higher education;*

- *public spending on higher education should increase with the growth in Gross Domestic Product;*

- *public funding of institutions should take more account of student choice;*

- *the government should review how students repay loans;*

- *further reviews of higher education should take place every ten years.*

Browne Review (2010) Executive Summary

England has an internationally respected system of higher education. There are now a record number of people enrolled, studying an increasingly varied range of subjects at a diverse set of higher education institutions ('HEIs'). Graduates go on to higher paid jobs and add to the nation's strength in the global knowledge based economy. For a nation of our scale,

we possess a disproportionate number of the best performing HEIs in the world, including three of the top ten.

However, our competitive edge is being challenged by advances made elsewhere. Other countries are increasing investment in their HEIs and educating more people to higher standards.

In November 2009, I was asked to lead an independent Panel to review the funding of higher education and make recommendations to ensure that teaching at our HEIs is sustainably financed, that the quality of that teaching is world class and that our HEIs remain accessible to anyone who has the talent to succeed. Over the last year, we have consulted widely and intensively. Our recommendations are based on written and oral evidence drawn from students, teachers, academics, employers and regulators. We have looked at a variety of different systems and at every aspect of implementing them – financial, practical and educational – to ensure that the recommendations we are making are realistic for the long term. I would like to thank all those who have contributed their knowledge, experience and time to this review. Our findings are contained in our full report and summarised here.

• Great advances have been made in making it possible for more people from all backgrounds to enter an HEI. Currently 45% of people between the ages of 18 and 30 enter an HEI, up from 39% a decade ago. Improvements have been made to ensure that students from disadvantaged schools or backgrounds are given a fair chance to study for a degree. Our recommendations build on this success. Support by way of cash for living ('maintenance') will be increased. Those studying for a degree part time will be given proportionate access to funding to those studying full time.

• The quality of teaching and of the awarded degrees is the foundation upon which the reputation and value of our higher education system rests. Our recommendations in this area are based on giving students the ability to make an informed choice of where and what to study. Competition generally raises quality. The interests of students will be protected by minimum levels of quality enforced through regulation.

• England's HEIs are very varied, in the type of student they attract, the standards of attainment they require for entry, the courses taught and so on. While most of higher education takes place in an HEI called a university this one word does not capture the reality of their diversity. Our recommendations reinforce this diversity. And since one size does not fit all, we would expect the result to be that HEIs will set varied charges for courses.

• A degree is of benefit both to the holder, through higher levels of social contribution and higher lifetime earnings, and to the nation, through higher economic growth rates and the improved health of society. Getting the balance of funding appropriate to reflect these benefits is essential if funding is to be sustainable. Our recommendations place more of the burden of funding on graduates, but they contribute only when they can afford to repay the costs financed. Students do not pay charges, only graduates do; and then only if they are successful. The system of payments is highly progressive. No one earning under £21,000 will pay anything. We estimate that only the top 40% of earners on average will pay back all the charges paid on their behalf by the Government upfront; and the 20% of lowest earners will pay less than today. For all students, studying for a degree will be a risk free activity. The return to graduates for studying will be on average around 400%.

In formulating our recommendations we had to balance the level of participation, the quality of teaching and the sustainability of funding; changing one component has an impact on the others. What we recommend is a radical departure from the existing way in which HEIs are financed. Rather than the Government providing a block grant for teaching to HEIs, their finance now follows the student who has chosen and been admitted to study. Choice is in the hands of the student. HEIs can charge different and higher fees provided that they can show improvements in the student experience and demonstrate progress in providing fair access and, of course, students are prepared to entertain such charges.

Our recommendations will lead to a significant change; we do not underestimate the work that will be required. Since this review was commissioned the pressure on public spending has increased significantly. This will add urgency to make funding sustainable. We hope that, as these recommendations are debated, no one loses sight of the powerful role that higher education will play in continuing to build the greatness of this nation.

Wilson Review (2012) Executive Summary

1. Since the Lambert Review (2003) there has been a huge change in both the quantum and the quality of business–university collaboration. This change has not only been stimulated by government funding initiatives but also by a growing realisation, within both business and universities, of the central role of universities in providing high-level skills, a world-class research base and a culture of inquiry and innovation. Universities are an integral part of the supply chain to business—a supply chain that has the capability to support business growth

and therefore economic prosperity. However, a sustainable supply chain is not a simple linear supplier–purchaser model; strength and resilience in such a supply chain is derived from close collaboration and an understanding of each party's priorities and capabilities. The objective is to attain world leadership in business–university collaboration; improvements need to be made in the supply chain to attain that status.

2. The landscape of business–university collaboration consists of a large number of highly diverse domains—for example, applied research in advanced technologies, in-company upskilling of employees, bespoke collaborative degree programmes, science park developments, enterprise education, entrepreneurial support for staff and students, higher-level apprenticeships, skills development of post doctoral staff. A second dimension of each domain is defined by industry sector—for example, the creative industries, agriculture, bio-pharma, engineering. Universities operate in specific domains, meeting the needs of a range of businesses; no one university can operate in all domains. Similarly the needs of business align with different domains and it is not unusual for a business to collaborate with several universities in meeting those needs. To achieve world leadership in business–university collaboration, all domains must attain excellence. It is necessary to understand the entire landscape of collaboration in order to ensure that policy intended to improve performance in one domain does not adversely affect performance in another. Knowledge of the effectiveness of the domains in this landscape is currently dispersed and in some domains is dominated by anecdote rather than evidence. A source of authoritative knowledge should be established, a source with a governance structure where business and university leaders sit as equals.

3. Like businesses, universities thrive on competition; competition has been a driver of performance and efficiency. However, in the field of business support the concepts of collaborative advantage also have merit and there are many examples of consortia of universities aggregating their capabilities to meet business needs. Nevertheless, in the context of the university sector as a whole, further clarity of the portfolio of each university's capability, allied with a referral system, will improve collaboration and, critically, the reputation of the university sector. To achieve optimal university performance in business support, universities should make explicit decisions about their domains of operation, ensure that their enquiry systems are effective and establish referral mechanisms to help businesses find the appropriate university support for their needs.

4. In order to enhance graduate skills levels and ensure a smooth and effective transition between university and business environments, there is a need to increase

opportunities for students to acquire relevant work experience during their studies. Sandwich degree programmes, internships and work‑based programmes all have roles to play in achieving this. Further, measures to promote progression into high‑level apprenticeships need to be introduced in 2 order to meet business needs. Government has a role to play in both these fields through funding support and regulatory changes.

5. There is existing and expanding good practice in business–university collaboration in degree programme design, delivery and sponsorship. This has clear advantages for the company, the student and the university. Where the business–university collaboration supports students who are not a burden on the public purse, government should ensure that the development of such programmes, and the consequential opportunities for students, are not inhibited by regulation.

6. Strategies to ensure the development and recording of students' employability, enterprise and entrepreneurial skills should be implemented by universities in the context of the university's mission and promoted through its public literature to inform student choice. It is for universities to determine the educational context within which those skills are developed and the emphasis that is placed upon the integration of skills development within the curriculum. Extracurricular opportunities for entrepreneurial activities should be facilitated by universities in collaboration with the National Association of College and University Entrepreneurs (NACUE) and other national organisations. The Higher Education Achievement Report (HEAR) is recommended for recording each student's development, activities and achievements for the purposes of self‑ awareness and future employment.

7. Networking between universities and the business community is a critical component of an efficient innovation ecosystem. There are several established networking tools at national and regional levels that create links between universities, business and research technology organisations. These mechanisms need to be constantly evaluated, reviewed and updated as media innovations change communications capability and expectation.

8. Given the international mobility of corporate investment in research, sustaining research collaboration through establishing strategic partnerships and long‑term investment is a measure of UK university research excellence, business commitment and government support. Within the small and medium‑sized enterprises (SME) sector, growth in innovation will benefit from further specific and targeted government intervention. The long‑established

successful Knowledge Transfer Programme merits further investment and the innovation voucher schemes piloted in the West Midlands should be extended to other parts of the country.

9. Despite significant investments and improvements in postgraduate research student skills development, there is need for further development in the context of enterprise skills and business experience. Postdoctoral staff would benefit from similar support. PhD students and postdoctoral research staff should have the opportunity to undertake internships to maintain contact with the application of research.

10. The present investment in Catapult centres is welcomed. The existing innovation and knowledge centres have the potential to provide a pipeline of future centres. It is important that these centres engage with business, universities and other research organisations, exchanging staff expertise in a structured and planned manner.

11. There is widespread concern that the government's policies on immigration will damage the UK's research base. Whether this damage would be caused through perception of regulation or through actual regulation is unclear. This issue needs to be resolved. The UK's research base is 3 at the heart of its innovative capability; we cannot afford to erode the intellectual capital of our universities through the unintended consequences of our immigration policy.

12. There is a significant misalignment between the aspirations of graduates to obtain employment in the corporate sector and the number of jobs that are available in that sector. Universities have an important role in helping students understand the opportunities that are available in the SME sector or in self-employment.

13. The recruitment processes used by the largest graduate recruiters are highly selective and rigorous but have the potential to deliver outcomes that may be inconsistent with company diversity policies. A review of the parameters used within the pre-interview filters, together with consideration of the use of HEAR in the selection process, should provide the recruiter with improved reliability and therefore a lower risk of inappropriate appointments. The graduate selection processes used by SMEs are variable, normally less formal than the methods used by the corporate sector, and are often tailored by university careers services to meet the needs of the company, placing additional pressures on this service. There is a growth in the use of work experience, either through placements or internships, as a positive factor in graduate recruitment. This emphasises the need to expand work experience opportunities among the student population.

14. Universities have a key role to play in local enterprise partnerships (LEPs) and can benefit from the business connectivity that such partnerships provide. As the LEPs mature in their structures and networks, there are opportunities for universities, individually and as consortia, to support their local economy through proactive engagement, both through increased collaboration with SMEs and through partnerships with major corporates.

15. Universities are international organisations, not only in recruiting students from all parts of the world, but also through international research partnerships and joint venture investments overseas, often with the private sector. They are an underutilised resource in terms of inward investment and job creation. UK universities attract significant research sponsorship from international companies and, whilst there are direct and positive benefits through intellectual property and job creation in universities, there is insufficient attention given to the opportunity for additional investments in the UK from these activities.

16. Enterprise zones provide locations where there are financial incentives for investment and job creation. Several are located close to universities and could benefit from the strength and reputation of those universities in promotion, and from their capacity for research, innovation and high-level skills provision, to attract business. Further, local authorities are acquiring the powers to create enterprise zone conditions within existing and prospective university science parks. This is an opportunity that has the potential to achieve significant economic growth—in some ways emulating the US business clusters that exist around their research-intensive universities, but exploiting the complementary nature of excellence within the UK university sector.

17. If the potential of UK business–university collaboration is fulfilled, the next Review will report that universities are firmly at the heart of our economy, collaborating with business and government in generating the wealth that is necessary for a healthy and prosperous society.

Appendix B: Research Paradigm

This appendix discusses three philosophical paradigms evidenced from the literature review studies, (i) positivism, (ii) phenomenology, and (iii) pragmatism, within the broader context of management, education, psychology, and sociology research. This study adopts pragmatism, informed by aspects of positivism and phenomenology, as applied to the research design in Section 3.2.

Comte (1798-1857) is often called the founding father of positivism, positioning the scientific stage as the successor to the theological and metaphysical stages (Andreski, 2014; 1974; Benton & Craib, 2011). The positivist approach, driven by perceived cultural authority of the natural sciences and associated recognition in securing research funding, has held considerable power and influence in government decisions on policy and public debate, using statistics to predict possible outcomes (Benton & Craib, 2011). Examples of papers in the literature review adopting positivism include Branine and Avramenko (2015), Jackson (2015) and, Benson et al. (2014). Within this research, the positivist approach offers a way of validating the conceptual model of graduate employability via statistical analysis. However, if this study was to adopt only a positivist approach, it would fail to fully answer the research questions of explaining the students' perceptions of graduate employability. This research, therefore, required a further stage to gain richer contextualisation of the results and a deeper understanding of the students' perceptions of graduate employability.

Kant (1953) challenged positivism as a paradigm, stating that research is *not just about observing but how we process what we observe* a position exemplified via the '*duck-rabbit drawing*' (Benton & Craib, 2011, p.33)*. The *duck-rabbit drawing* is a drawing either depicting a duck or depicting a rabbit, depending on the interpretation of the individual observing. The psychological theory of perception underpins this occurrence by addressing how we perceive through assimilation and accommodation of data and information. Weber (1947) however, was more concerned with the *states of mind of the actors* (Weber, 1947, p.87), which gave rise to phenomenology in the late 1960s. Where positivism follows realist ontology and a deductive or theory testing approach, phenomenology follows subjective ontology and an inductive or theory building approach (Benton & Craib, 2011). This is an important mechanism to give a voice to the students' perceptions of graduate employability.

Phenomenology was a product of neo-Kantian philosophy (see works by Kant, Weber, Dilthey & Rickert), seeking to distinguish between natural sciences and social sciences. One such distinction was the nature of language and use of language. Weber (1947) positions understanding as either observational or explanatory, whereby explanation provides understanding to the descriptive outcome of the observation. Thus, the study of humans via social science differs from natural science, as humans possess self-consciousness. This position was later captured by the sociologist Giddens (1984), who introduced the concept of reflexivity, positioning human life as *essentially a life of meaning, of language and reflective thought and communication* (Benton & Craib, 2011, p.76). Examples of papers in the literature review adopting phenomenology include Burke (2015), Morrison (2014), and Evans et al. (2014). Within this research, a phenomenological approach would provide a more in-depth understanding by explaining the students' perceptions of graduate employability. However, if this research only adopted a phenomenological approach, it would limit the scalability of the research findings and contributions. Furthermore, it would prevent the validation of a conceptual model of graduate employability via statistical methods. This research, therefore, required a paradigm that adopts elements of positivism and phenomenology to answer the research questions and address the hypotheses deduced from the literature review.

In the last twenty-five years, management, education, and psychology research have experienced a shift towards a mixed methods approach to embracing the offerings of positivist and phenomenological approaches (Creswell, 2015; 2003; Gorard, 2004; Johnson, Onwuegbuzie & Turner, 2007; Tashakkori & Teddlie, 2010). This study employs a mixed methods approach through adopting pragmatism as the research paradigm, drawing on the pluralism of ontology and epistemology. Charles Sanders Peirce founded pragmatism in the 1870s, publishing the 'Third Grade of Clearness of Apprehension', later termed 'The Pragmatic Maxim' (Peirce, 1878, p.293): *Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object.* William James and Charles Dewey expanded Peirce's work in the late 1800s, and Peirce subsequently sorts to clarify his position through coining of the term '*pragmaticism*', as the *evolution of theories or beliefs in terms of the success of their practical application* (Peirce, 1905, p.481). Practical contribution of this research is to make future graduates more employable and seek better alignment across macro, meso, and micro level stakeholders of graduate employability.

Gerald (2013) captures the suitability of the philosophical approach for this study, positioning pragmatism in educational research as focusing on a changing universe through *the practical application of ideas by acting on them to actually test them in human experience*. Examples of papers in the literature review adopting a mixed methods approach include Edwards (2014), Wilton (2014), Finch et al. (2013), and Stanley and Marsden (2012). This research thus adopts pragmatism as the philosophical position, to explain the students' perceptions of graduate employability, bridging management and educational research agendas within career theory. This is underpinned by the ability to statistically test a conceptual model of graduate employability and subsequently enable students to explain their views and to address unexpected or missing aspects of the validated model. The literature review and research questions underpin the choice of pragmatism as the research paradigm. Section 3.2 provides further justification for the choice of a mixed methods approach for this research.

Appendix C: The Researcher Position

Adoption of a robust mixed methods methodology placed significant importance on the position of the researcher. Specifically, their motivations and biases that might influence the collection or generation of results or interpretation of the findings (Benton & Craib, 2011).

The researcher completed a BSc in the School of Engineering and Computer Science in 2008, and a MSc in the School of Management in 2009 at University A. He also undertook a summer internship in technology at a global leading investment bank between his BSc and MSc courses. Upon completion of his MSc in September 2009, he returned to the investment bank at the height of the fallout from the 2007-2008 global financial crisis, to undertake a technology-focused rotational graduate scheme. In March 2011, the researcher transitioned from technology into human resources, as a graduate recruiter covering summer internship, yearlong internship, and graduate hire accountability for roles across Europe. He also attended the Association of Graduate Recruiters Conference in 2011.

Throughout this process, the researcher's career and life aspirations continued to evolve. He was well aware of the UK Government agenda to encourage participation in HE and the associated drive for students to develop human capital and employability. The researcher's personal experience of HE, a summer internship, a graduate scheme, and working as a graduate recruiter helped to develop a wider perspective of the graduate employability process. What struck him most was the macro level UK Government agenda for employability and the industry expectation of work-ready graduates, representing tomorrows' leaders. A key graduate employability stakeholder perspective was missing, possibly the most important stakeholder concerning the future of the UK and global economy; the viewpoint of the student. The researcher's motivation for this research was to understand the students' perceptions of graduate employability, to inform future graduate employability policy and strategy, and to improve the employability of future graduates.

The motivation of the research gives rise to some potential areas of bias. The researcher had considerable experience as evidenced, both at University A and in the graduate labour market, through a number of different actor perspectives. The researcher negated the risk of studying students who were friends or friends of family because he completed undergraduate studies in 2008, and left the University in 2009 on completion of his MSc, before returning to pursue a PhD in 2014. Given the undergraduate degree is predominantly a three-year course,

although some participants in this study enrolled on four-year courses, these students were not at university in any capacity during the researcher's previous HE enrolments. Of course, some students, mainly in healthcare, enrol on undergraduate courses with a five-year duration. However, this research did not address these courses due to saturation in the existing literature, the different nature of these courses, and their higher employability outcomes.

Undergraduate studies have evolved since 2005-2008 and the researcher had to show vigilance to ensure that any held presumptions of the undergraduate experience, or from being a graduate recruiter and meeting undergraduates did not compromise the data collection process or the findings. Specifically, the researcher had to acknowledge that background, heuristics, and bias had shaped his views to-date and may have a bearing on the study. For example, themes of interest including human capital, careers, identity, and gender demographics are dominant within this work. A mixed methods methodology is particularly useful here, as is the extensive literature review evidenced in chapter 2, in developing and both quantitatively and qualitatively validating a new conceptual model of graduate employability. The self-funding nature of this research removed a number of potential biases imposed by funding bodies or by particular macro, meso, or micro level actors of graduate employability. Ethical considerations of this research are evidenced in Chapter 3.3.3.

Appendix D: Pilot Study

A pilot study was conducted for Questionnaires A and B in May 2015. The purpose of the pilot study was to check that participants understood the questions through clarification of language and that completion of the questionnaire took place within the stated timeframe.

Participants for the pilot study came from a faculty at University, A which was not the focus of the main data collection; the Faculty of Physical Sciences and Engineering. This ensured completion of the pilot study by participants of a similar education level and life-stage, whilst avoiding the potential for bias of the main data collection process. Questionnaire A targeted penultimate year students and Questionnaire B final year students. Six hundred (n=600) students were emailed a link to the online survey, of which eighteen (n=18) participated, giving a somewhat poor online response rate of 3.00%. A further twenty-seven (n=27) students within the original six hundred students were invited to complete a paper-based version of Questionnaires A and B, of which twenty-two (n=22) participated, giving a paper-based response rate of 81.48%. Overall, the pilot study received forty (n=40) participants, a response rate of 6.67% (n=40/600). Given the target participation for wave one of the main study of one thousand three hundred and fifty-five (n=1,355) students, the pilot study represents a 2.95% coverage.

The main data collection process used both online and paper-based approaches, in-person via university lectures and via university careers advisors. The pilot study highlighted a high response rate for the paper-based approach, but a poor online response rate, in keeping with Section 3.3.1 expectations. However, as also evidenced in that chapter, a multitude of different approaches is important for maximising coverage of student. A further consideration was the timing of data collection. The pilot study took place in May 2015, at the end of the academic year during the University undergraduate examination period. The poor online response rate in part stemmed from students focusing on completing coursework or preparing for examinations rather than participating in questionnaires. The main research was thus scheduled to avoid such clashes, running from November 2015 to March 2016 (Wave One) and November 2016 to December 2016 (Wave Two).

The following changes were made to Questionnaire A based on the pilot study:

- "Prefer not to say" added to provide full coverage of options.
- "Please number the following skills (1-6) in order of importance to you in securing graduate employment. One is least important and six is most important" replaced with a 1-7 Likert-scale response of the importance of each individual skill for securing graduate employment. The change made because two participants in the pilot study ranked each skill instead of ordering them. In addition, the question took too long to answer and a 1-7 Likert-scale thought to provide a greater level of validation than a ranked 1-7 response.
- Due to some graduates targeting higher paid jobs, including investment banking, entrepreneurship and top consultancies, the upper boundary for earning expectation 6 months after graduation changed from £40,000 to £60,000.
- The questionnaire was re-formatted to be delivered in 5 pages (1-page consent form and 4-page questionnaire) rather than the previous 7 pages. This change hoped to encourage a greater number of participants, due to a shorter document; as well as saving on printing and paper costs.

The following changes were made to Questionnaire B based on the pilot study:

- "Please number the following skills (1-6) in order of importance to you in securing graduate employment. One is least important and six is most important" replaced with a 1-7 Likert-scale response of the importance of each individual skill for securing graduate employment. The change made because two participants in the pilot study ranked each skill instead of ordering them. In addition, the question took too long to answer and a 1-7 Likert-scale thought to provide a greater level of validation than a ranked 1-7 response.
- Due to some graduates targeting higher paid jobs, including investment banking, entrepreneurship and top consultancies, the upper boundary for earning expectation 6 months after graduation changed from £40,000 to £60,000.
- The questionnaire was re-formatted to be delivered in 6 pages (1-page consent form and 5-page questionnaire) rather than the previous 7 pages. This change hoped to encourage a greater number of participants, due to a shorter document; as well as saving on printing and paper costs.

Appendix E: Participant Information Sheet (Questionnaires)

PARTICIPANT INFORMATION SHEET: QUESTIONNAIRES A and B

Study Title: The impact of higher education on self-perceived employability: standing out from the crowd in a highly competitive, globalised, graduate labour market.

Researcher: Mr. William Donald   **Ethics number**: 14811

**Please read this information carefully before deciding to take part in this research.
If you are happy to participate you will be asked to sign a consent form.**

What is the research about?

My name is Mr. William Donald a PhD Researcher at the University of Southampton, UK. I am kindly requesting your participation in a study regarding the impact of higher education on your perception of future employability. If you consent to participate in the study, you will be asked to complete a short questionnaire which should not last more than 10 minutes. You will be invited to complete a follow-up questionnaire next academic year. Personal information will not be released or viewed by anyone other than researchers involved in this project. A debriefing statement will be given to you upon completion of the study. This study is self-funded by the Researcher.

Why have I been chosen?

You have been chosen to participate in this study because you are an undergraduate student at the University of Southampton, studying your degree within one of our target faculties.

What will happen to me if I take part?

You will complete two Questionnaires, Questionnaire A, in your penultimate year of Undergraduate Study and Questionnaire B, in your final year of Undergraduate Study. Each questionnaire will take approximately 10 minutes to complete and can be completed online or in paper form. Confidentiality of your data will be ensured at all times. Linked anonymity will be used, via Student University Email, to facilitate the two wave nature of this study.

Are there any benefits in my taking part?

This research seeks to enhance perceived employability of undergraduate students, such as yourself.

Are there any risks involved?

There are no risks involved in taking part in this study.

Will my participation be confidential?

All responses are treated as confidential, and in no case will responses from individual participants be identified. Rather, all data will be pooled and published in aggregate form only. Participants should be aware, however, that the experiment is not being run from a 'secure' https server of the kind typically used to handle credit card transactions, so there is a small possibility that responses could be viewed by unauthorised third parties (e.g., computer hackers). However, the data would appear only as a string of numbers, so your responses will remain totally anonymous. Linked anonymity will be used, via Student University Email, to facilitate the two wave nature of this study.

What happens if I change my mind?

Participation is voluntary, refusal to take part in the study involves no penalty or loss of benefits to which participants are otherwise entitled, and participants may withdraw from the study at any time without penalty or loss of benefits to which they are otherwise entitled.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you may wish to contact the research support officer, Ying Ying Cheung (risethic@soton.ac.uk) or Head of Research Governance (02380 595058, rgoinfo@soton.ac.uk)

Where can I get more information?

If participants have further questions about this study, they may contact the principal investigator, Mr. William Donald at w.e.donald@soton.ac.uk.

Appendix F: Consent Form (Questionnaires)

CONSENT FORM: QUESTIONNAIRES A and B

Study title: The impact of higher education on self-perceived employability: standing out from the crowd in a highly competitive, globalised, graduate labour market.

Researcher name: William Donald

Ethics reference: 14811

By filling in this questionnaire I give consent to the research team to use the data for academic research purposes only. My participation is voluntary.

Data Protection

I understand that information collected about me during my participation in this study will be stored on a password-protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Appendix G: Questionnaire A
Students' Perceptions of Graduate Employability (A)

Thank you for agreeing to participate in this study. Please answer as honestly as you can.

Do not spend too long on each statement as we are wanting to gain your first response.

Demographic Data

1. What is your Student University Email? _____

2. What is your Gender?

☐ Male   ☐ Female   ☐ Prefer not to Say

3. What is your Ethnic group?

☐ Asian/Asian British   ☐ Black/African/Caribbean/Black British   ☐ Mixed/Multiple

☐ White   ☐ Other _____   ☐ Prefer not to say

4. How many UCAS Tariff Points did you have when applying for university?

☐ Less than 240   ☐ 240 to 299   ☐ 300 to 359   ☐ 360 or more

If Unknown please state A Level Grades (e.g. AAB) or Other Qualification

☐ Unknown _____

5. Do you have a Government Bursary towards the cost of your Undergraduate Studies?

☐ No Bursary   ☐ Partial Bursary   ☐ Full Bursary

6. What is your Faculty of Undergraduate Study?

☐ Business, Law & Art   ☐ Engineering and the Environment   ☐ Humanities

☐ Natural and Environmental Sciences   ☐ Social, Human & Mathematical Sciences

7. What is your Year of Study?

☐ 2nd   ☐ 3rd

8. How long do you think it will take you to pay back the debt accumulated during your higher education studies?

☐ 1-5 years   ☐ 6-10 years   ☐ 11-15 years   ☐ 16-25 years

☐ 25-30 years   ☐ No Debt Expected   ☐ Will Not Pay Back All Debt

☐ Will Not Pay Back Any Part of the Debt

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

Attitudes to Work

9. I am energised in new experiences and situations   1 2 3 4 5 6 7

10. I would enjoy working on projects with people from across many organisations   1 2 3 4 5 6 7

11. In my ideal career, I would work for only one organisation   1 2 3 4 5 6 7

12. I like the predictability that comes with working continually for the same organisation   1 2 3 4 5 6 7

13. For me, career success is how I am doing against my goals and values   1 2 3 4 5 6 7

14. If I have to find a job, it would be easy   1 2 3 4 5 6 7

15. I take responsibility for my own development   1 2 3 4 5 6 7

16. I make my career choices based primarily upon financial considerations   1 2 3 4 5 6 7

17. I am responsible for the success or failures in my career   1 2 3 4 5 6 7

18. I am optimistic that I would find a job if I looked for one   1 2 3 4 5 6 7

19. I could easily switch from one job role to another   1 2 3 4 5 6 7

Employability Influences

20. Knowledge from my degree course will help me in securing graduate employment   1 2 3 4 5 6 7

21. University has increased my self-esteem and self-confidence   1 2 3 4 5 6 7

22. I expect to secure graduate employment based upon my network of contacts   1 2 3 4 5 6 7

23. The reputation of this university will help me in securing graduate employment   1 2 3 4 5 6 7

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

Employability Skills

The following skills are important to securing graduate employment:

24. IT Skills   1 2 3 4 5 6 7

25. Literacy Skills   1 2 3 4 5 6 7

26. Numeracy Skills   1 2 3 4 5 6 7

27. Oral Communication   1 2 3 4 5 6 7

28. Problem Solving   1 2 3 4 5 6 7

29. Teamwork   1 2 3 4 5 6 7

30. Time Management   1 2 3 4 5 6 7

My degree course has improved the following skills:

31. IT Skills   1 2 3 4 5 6 7

32. Literacy Skills   1 2 3 4 5 6 7

33. Numeracy Skills   1 2 3 4 5 6 7

34. Oral Communication   1 2 3 4 5 6 7

35. Problem Solving   1 2 3 4 5 6 7

36. Teamwork   1 2 3 4 5 6 7

37. Time Management   1 2 3 4 5 6 7

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

Work Placement

38. Undertaking a degree work placement will increase my chances of securing graduate employment   1 2 3 4 5 6 7

39. Undertaking a degree work placement will secure me a graduate job offer   1 2 3 4 5 6 7

Undertaking a degree work placement will increase the following skills:

40. IT Skills   1 2 3 4 5 6 7

41. Literacy Skills   1 2 3 4 5 6 7

42. Numeracy Skills   1 2 3 4 5 6 7

43. Oral Communication   1 2 3 4 5 6 7

44. Problem Solving   1 2 3 4 5 6 7

45. Teamwork   1 2 3 4 5 6 7

46. Time Management   1 2 3 4 5 6 7

Economic Expectations

47. How much do you expect to be earning six months after graduation?

☐ Less than £20,000   ☐ £20,000 to £24,000   ☐ £25,000 to £29,000

☐ £30,000 to £34,000   ☐ £35,000 to £39,000   ☐ £40,000 to £44,000

☐ £45,000 to £49,000   ☐ £50,000 to £54,000   ☐ £55,000 to £59,000

☐ £60,000 or more

Thank you for your participation in this study.

Appendix H: Questionnaire B
Students' Perceptions of Graduate Employability (B)

Thank you for agreeing to participate in this study. Please answer as honestly as you can.

Do not spend too long on each statement as we are wanting to gain your first response.

Demographic Data

1. What is your Student University Email? _____

2. What was your degree classification for last academic year?

☐ 1   ☐ 2.1   ☐ 2.2   ☐ 3   ☐ Prefer Not To Say

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

Attitudes to Work

3. I am energised in new experiences and situations   1 2 3 4 5 6 7

4. I would enjoy working on projects with people from   1 2 3 4 5 6 7
   across many organisations

5. In my ideal career, I would work for only one organisation   1 2 3 4 5 6 7

6. I like the predictability that comes with working continually   1 2 3 4 5 6 7
   for the same organisation

7. For me, career success is how I am doing against my goals and values   1 2 3 4 5 6 7

8. If I have to find a job, it would be easy   1 2 3 4 5 6 7

9. I take responsibility for my own development   1 2 3 4 5 6 7

10. I make my career choices based primarily upon financial considerations   1 2 3 4 5 6 7

11. I am responsible for the success or failures in my career   1 2 3 4 5 6 7

12. I am optimistic that I would find a job if I looked for one   1 2 3 4 5 6 7

13. I could easily switch from one job role to another   1 2 3 4 5 6 7

Economic Expectations

14. How long do you think it will take you to pay back the debt accumulated during your higher education studies?

☐ 1-5 years   ☐ 6-10 years   ☐ 11-15 years   ☐ 16-25 years

☐ 25-30 years   ☐ No Debt Expected   ☐ Will Not Pay Back All Debt

☐ Will Not Pay Back Any Part of the Debt

15. How much do you expect to be earning six months after graduation?

☐ Less than £20,000   ☐ £20,000 to £24,000   ☐ £25,000 to £29,000

☐ £30,000 to £34,000   ☐ £35,000 to £39,000   ☐ £40,000 to £44,000

☐ £45,000 to £49,000   ☐ £50,000 to £54,000   ☐ £55,000 to £59,000

☐ £60,000 or more

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

Employability Influences

16. My pre-university education will help me in securing graduate employment

1 2 3 4 5 6 7

17. Knowledge from my degree course will help me in securing graduate employment

1 2 3 4 5 6 7

18. University has increased my self-esteem and self-confidence

1 2 3 4 5 6 7

19. I expect to secure graduate employment based upon my network of contacts

1 2 3 4 5 6 7

20. The reputation of this university will help me in securing graduate employment

1 2 3 4 5 6 7

21. I feel the benefits of higher education outweigh the associated costs

1 2 3 4 5 6 7

22. I do my best work when my assignments are fairly difficult

1 2 3 4 5 6 7

23. I try very hard to improve on my past performances

1 2 3 4 5 6 7

24. I take moderate risks and stick my neck out to get ahead in life

1 2 3 4 5 6 7

25. I try to take on additional responsibilities in life

1 2 3 4 5 6 7

26. I try to perform better than my peers do

1 2 3 4 5 6 7

27. I will navigate my own career, mostly according to my plans

1 2 3 4 5 6 7

28. Freedom and autonomy are driving forces in my career

1 2 3 4 5 6 7

29. For me, career success means having flexibility in my job

1 2 3 4 5 6 7

30. Advice from the university careers service has increased my employability

1 2 3 4 5 6 7

31. Advice from faculty or subject specific careers advisors has increased my employability

1 2 3 4 5 6 7

32. Advice from graduate recruiters has increased my employability

1 2 3 4 5 6 7

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

Employability Influences

The following will increase my employability

33. Participating in extracurricular activities   1 2 3 4 5 6 7

34. Going to the gym   1 2 3 4 5 6 7

35. Use of social media   1 2 3 4 5 6 7

36. Reading for enjoyment   1 2 3 4 5 6 7

37. Dressing smartly   1 2 3 4 5 6 7

38. Travelling   1 2 3 4 5 6 7

39. Visiting cultural exhibits   1 2 3 4 5 6 7

40. Speaking an additional language   1 2 3 4 5 6 7

41. Socialising and networking   1 2 3 4 5 6 7

42. Volunteering   1 2 3 4 5 6 7

The following people will help me to get a job

43. My parents   1 2 3 4 5 6 7

44. Other family members   1 2 3 4 5 6 7

45. My friends from school   1 2 3 4 5 6 7

46. My friends from university   1 2 3 4 5 6 7

47. My contacts through memberships or affiliations   1 2 3 4 5 6 7

48. My contacts through Linkedin or other social media platforms   1 2 3 4 5 6 7

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

Employability Skills

The following skills are important to securing graduate employment:

49. IT Skills   1 2 3 4 5 6 7

50. Literacy Skills   1 2 3 4 5 6 7

51. Numeracy Skills   1 2 3 4 5 6 7

52. Oral Communication   1 2 3 4 5 6 7

53. Problem Solving   1 2 3 4 5 6 7

54. Teamwork   1 2 3 4 5 6 7

55. Time Management   1 2 3 4 5 6 7

My degree course has improved the following skills:

56. IT Skills   1 2 3 4 5 6 7

57. Literacy Skills   1 2 3 4 5 6 7

58. Numeracy Skills   1 2 3 4 5 6 7

59. Oral Communication   1 2 3 4 5 6 7

60. Problem Solving   1 2 3 4 5 6 7

61. Teamwork   1 2 3 4 5 6 7

62. Time Management   1 2 3 4 5 6 7

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

Work Placement

A work placement includes any placement or internship that you have undertaken during your undergraduate degree programme (organised either by the university or independently).

63. Have you undertaken a work placement?   ☐ Yes   ☐ No

If Yes, please continue. If No, please go to Question 74.

64. Undertaking a degree work placement secured me a graduate job offer   ☐ Yes   ☐ No

65. Undertaking a degree work placement increased my chances of securing graduate employment   1 2 3 4 5 6 7

66. My degree work placement required degree acquired knowledge   1 2 3 4 5 6 7

Undertaking a degree work placement increased the following skills:

67. IT Skills   1 2 3 4 5 6 7

68. Literacy Skills   1 2 3 4 5 6 7

69. Numeracy Skills   1 2 3 4 5 6 7

70. Oral Communication   1 2 3 4 5 6 7

71. Problem Solving   1 2 3 4 5 6 7

72. Teamwork   1 2 3 4 5 6 7

73. Time Management   1 2 3 4 5 6 7

Thank you for your participation in this study.

Please indicate the extent to which you agree or disagree with the statements. Indicate your answer by circling a number between 1-7 according to the scale below on every line.

Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly
1	2	3	4	5	6	7

74. Undertaking a degree work placement will increase my chances of securing graduate employment   1 2 3 4 5 6 7

75. Undertaking a degree work placement will secure me a graduate job offer   1 2 3 4 5 6 7

Undertaking a degree work placement will increase the following skills:

76. IT Skills   1 2 3 4 5 6 7

77. Literacy Skills   1 2 3 4 5 6 7

78. Numeracy Skills   1 2 3 4 5 6 7

79. Oral Communication   1 2 3 4 5 6 7

80. Problem Solving   1 2 3 4 5 6 7

81. Teamwork   1 2 3 4 5 6 7

82. Time Management   1 2 3 4 5 6 7

Thank you for your participation in this study.

Appendix I: Participant Information Sheet (Interviews)

PARTICIPANT INFORMATION SHEET: INTERVIEWS

Study Title: Students' perceptions of graduate employability.

Researcher: Mr. William Donald   **Ethics number**: 23987

**Please read this information carefully before deciding to take part in this research.
If you are happy to participate you will be asked to sign a consent form.**

What is the research about?

My name is Mr. William Donald a PhD Researcher at the University of Southampton, UK. I am kindly requesting your participation in a study regarding the impact of higher education on your perception of future employability. If you consent to participate in the study, you will be asked to take part in a recorded interview, which will last no longer than 60 minutes. Personal information will not be released or viewed by anyone other than researchers involved in this project. A debriefing statement will be given to you upon completion of the study. This study is self-funded by the Researcher.

Why have I been chosen?

You have been chosen to participate in this study because you are a final year undergraduate student at the University of Southampton, studying your degree within one of our target faculties.

What will happen to me if I take part?

You will take part in a recorded interview, which will last no longer than 60 minutes. Confidentiality of your data will be ensured at all times.

Are there any benefits in my taking part?

This research seeks to enhance perceived employability of undergraduate students, such as yourself.

Are there any risks involved?

There are no risks involved in taking part in this study.

Will my participation be confidential?

All responses are treated as confidential, and in no case will responses from individual participants be identified. The names of participants will be changed prior to publication of results to ensure anonymity.

What happens if I change my mind?

Participation is voluntary, refusal to take part in the study involves no penalty or loss of benefits to which participants are otherwise entitled, and participants may withdraw from the study at any time without penalty or loss of benefits to which they are otherwise entitled.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you may wish to contact the research support officer, Ying Ying Cheung (risethic@soton.ac.uk) or Head of Research Governance (02380 595058, rgoinfo@soton.ac.uk)

Where can I get more information?

If participants have further questions about this study, they may contact the principal investigator, Mr. William Donald at w.e.donald@soton.ac.uk.

Appendix J: Consent Form (Interviews)

CONSENT FORM: INTERVIEWS

Study title: Student views of the graduate labour market.

Researcher name: William Donald

Ethics reference: 23987

I give consent for this interview to be recorded. By taking part in this interview I give consent to the research team to use the data for academic research purposes only. My participation is voluntary.

Data Protection

I understand that information collected during my participation in this study will be stored on a password-protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Print Name: _____

Signature: _____

Date: _____

Appendix K: 32 Item Two Wave Model of Graduate Employability (n=387)

	Table 40: Social Capital Wave One				
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
1	Network of Contacts	Baruch et al. (2005)	I expect to secure graduate employment based upon my network of contacts	Likert Scale (1-7)	*H1a*

	Table 41: Cultural Capital Wave One				
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
2	University Reputation	Esson et al. (2013)	The reputation of this university will help me in securing graduate employment	Likert Scale (1-7)	*H1b*

	Table 42: Psychological Capital Wave One				
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
3	Esteem and Confidence	Baruch et al. (2005)	University has increased my self-esteem and self-confidence	Likert Scale (1-7)	*H1c*

	Table 43: Scholastic Capital Wave One				
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
4	IT	Jackson and Chapman (2012)	My degree course has improved my IT Skills	Likert Scale (1-7)	*H1d*
5	Literacy	Jackson and Chapman (2012)	My degree course has improved my Literacy Skills	Likert Scale (1-7)	*H1d*
6	Numeracy	Jackson and Chapman (2012)	My degree course has improved my Numeracy Skills	Likert Scale (1-7)	*H1d*
7	Oral Communication	Jackson and Chapman (2012)	My degree course has improved my Oral Communication Skills	Likert Scale (1-7)	*H1d*
8	Problem Solving	Jackson and Chapman (2012)	My degree course has improved my Problem Solving Skills	Likert Scale (1-7)	*H1d*
9	Teamwork	Jackson and Chapman (2012)	My degree course has improved my Teamwork Skills	Likert Scale (1-7)	*H1d*

Table 43: Scholastic Capital Wave One (Continued)					
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
10	Time Management	Jackson and Chapman (2012)	My degree course has improved my Time Management Skills	Likert Scale (1-7)	*H1d*
11	Degree Course	Baruch et al. (2005)	Knowledge from my degree course will help me in securing graduate employment *See Rothwell and Arnold (2007)*.	Likert Scale (1-7)	*H1d*

Table 44: Market-Value Capital Wave One					
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
12	Employable	Purcell et al. (2005)	Undertaking a degree work placement will increase my chances of securing graduate employment	Likert Scale (1-7)	*H1e*
13	Job Offer	Purcell et al. (2005)	Undertaking a degree work placement will secure me a graduate job offer	Likert Scale (1-7)	*H1e*
14	IT	Purcell et al. (2005)	Undertaking a degree work placement will increase my IT Skills	Likert Scale (1-7)	*H1e*
15	Literacy	Purcell et al. (2005)	Undertaking a degree work placement will increase my Literacy Skills	Likert Scale (1-7)	*H1e*
16	Numeracy	Purcell et al. (2005)	Undertaking a degree work placement will increase my Numeracy Skills	Likert Scale (1-7)	*H1e*
17	Oral Communication	Purcell et al. (2005)	Undertaking a degree work placement will increase my Oral Communication Skills	Likert Scale (1-7)	*H1e*
18	Problem Solving	Purcell et al. (2005)	Undertaking a degree work placement will increase my Problem Solving Skills	Likert Scale (1-7)	*H1e*
19	Teamwork	Purcell et al. (2005)	Undertaking a degree work placement will increase my Teamwork Skills	Likert Scale (1-7)	*H1e*
20	Time Management	Purcell et al. (2005)	Undertaking a degree work placement will increase my Time Management Skills	Likert Scale (1-7)	*H1e*

Table 45: Skills Wave One

ID	Variable	Reference	Question	Measure	Rational
21	IT	Jackson and Chapman (2012)	IT Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
22	Literacy	Jackson and Chapman (2012)	Literacy Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
23	Numeracy	Jackson and Chapman (2012)	Numeracy Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
24	Oral Communication	Jackson and Chapman (2012)	Oral Communication Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
25	Problem Solving	Jackson and Chapman (2012)	Problem Solving Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
26	Teamwork	Jackson and Chapman (2012)	Teamwork Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
27	Time Management	Jackson and Chapman (2012)	Time Management Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*

Table 46: Employability Wave One

ID	Variable	Reference	Question	Measure	Rational
28	Employability	Rothwell and Arnold (2007)	I could easily switch from one job role to another	Likert Scale (1-7)	*H2*
29	Employability	Rothwell and Arnold (2007)	If I have to find a job, it would be easy	Likert Scale (1-7)	*H2*
30	Employability	Rothwell and Arnold (2007)	I am optimistic that I would find a job if I looked for one	Likert Scale (1-7)	*H2*

Table 47: Objective Data Wave One

ID	Variable	Reference	Question	Measure	Rational
31	UCAS	UCAS	How many UCAS Tariff Points did you have when applying for university?	Tick Box	Objective Data
32	Bursary	Esson et al. (2013)	Do you have a government bursary towards the cost of your undergraduate studies?	Tick Box	Objective Data

Table 48: Moderators Wave One					
ID	Variable	Reference	Question	Measure	Rational
33	Gender	Baruch et al. (2005)	What is your Gender?	Tick Box	*Moderator I*
34	Degree Subject	Esson et al. (2013)	What is your Degree Subject?	Tick Box	*Moderator II*
35	Year of Study	Purcell et al. (2005)	What is your year of study?	Tick Box	*Moderator III*

Table 49: Linked Anonymity Wave One					
ID	Variable	Reference	Question	Measure	Rational
36	Code Number	Baruch et al. (2005)	What is your Student University Email?	Student University Email	Linked Anonymity

Table 50: Debt and Earnings Wave One					
ID	Variable	Reference	Question	Measure	Rational
37	Debt	Esson et al. (2013)	How long do you think it will take to pay back the debt accumulated during your higher education studies?	Tick Box	*Research Question III*
38	Earnings	Esson et al. (2013)	How much do you expect to be earning six months after graduation?	Tick Box	*Research Question III*
39	Financial Considerations	Baruch (2014)	I make my career choices based primarily upon financial considerations	Likert Scale (1-7)	*Research Question III*

Appendix L: 61 Item Model of Graduate Employability (n=387)

ID	Variable	Reference	Question	Measure	Rational
Table 51: Social Capital Wave Two					
1	Network of Contacts	Baruch et al. (2005)	I expect to secure graduate employment based upon my network of contacts	Likert Scale (1-7)	*H1a*
2	Parents	Steinfield et al. (2008)	My parents will help me to get a job	Likert Scale (1-7)	*H1a*
3	Family	Steinfield et al. (2008)	My other family members will help me to get a job	Likert Scale (1-7)	*H1a*
4	School Friends	Steinfield et al. (2008)	My friends from school will help me to get a job	Likert Scale (1-7)	*H1a*
5	University Friends	Steinfield et al. (2008)	My friends from university will help me to get a job	Likert Scale (1-7)	*H1a*
6	Membership	Steinfield et al. (2008)	Contacts through memberships or affiliations will help me to get a job	Likert Scale (1-7)	*H1a*
7	LinkedIn	Steinfield et al. (2008)	Contacts through Linkedin or other social media platforms will help me to get a job	Likert Scale (1-7)	*H1a*

ID	Variable	Reference	Question	Measure	Rational
Table 52: Cultural Capital Wave Two					
8	University Reputation	Esson et al. (2013)	The reputation of this university will help me in securing graduate employment	Likert Scale (1-7)	*H1b*
9	Extracurricular	Jaeger (2010)	Participating in extracurricular activities will increase my employability	Likert Scale (1-7)	*H1b*
10	Gym	Jaeger (2010)	Going to the gym will increase my employability	Likert Scale (1-7)	*H1b*
11	Social Media	Jaeger (2010)	Use of social media will increase my employability	Likert Scale (1-7)	*H1b*
12	Reading	Jaeger (2010)	Reading for enjoyment will increase my employability	Likert Scale (1-7)	*H1b*
13	Dressing	Jaeger (2010)	Dressing smartly will increase my employability	Likert Scale (1-7)	*H1b*
14	Travelling	Jaeger (2010)	Travelling will increase my employability	Likert Scale (1-7)	*H1b*

	Table 52: Cultural Capital Wave Two (Continued)				
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
15	Cultural Exhibits	Jaeger (2010)	Visiting cultural exhibits will increase my employability	Likert Scale (1-7)	*H1b*
16	Additional Language	Jaeger (2010)	Speaking an additional language will increase my employability	Likert Scale (1-7)	*H1b*
17	Networking	Jaeger (2010)	Socialising and networking will increase my employability	Likert Scale (1-7)	*H1b*
18	Volunteering	Jaeger (2010)	Volunteering will increase my employability	Likert Scale (1-7)	*H1b*

	Table 53: Psychological Capital Wave Two				
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
19	Difficult Assignments	Cook et al. (1981)	I do my best work when my assignments are fairly difficult	Likert Scale (1-7)	*H1c*
20	Past Performance	Cook et al. (1981)	I try very hard to improve on my past performances in life	Likert Scale (1-7)	*H1c*
21	Moderate Risks	Cook et al. (1981)	I take moderate risks and stick my neck out to get ahead in life	Likert Scale (1-7)	*H1c*
22	Additional Responsibility	Cook et al. (1981)	I try to take on additional responsibilities in life	Likert Scale (1-7)	*H1c*
23	Peer Performance	Cook et al. (1981)	I try to perform better than my peers do	Likert Scale (1-7)	*H1c*

Table 54: Scholastic Capital Wave Two

ID	Variable	Reference	Question	Measure	Rational
24	IT	Jackson and Chapman (2012)	My degree course has improved my IT Skills	Likert Scale (1-7)	*H1d*
25	Literacy	Jackson and Chapman (2012)	My degree course has improved my Literacy Skills	Likert Scale (1-7)	*H1d*
26	Numeracy	Jackson and Chapman (2012)	My degree course has improved my Numeracy Skills	Likert Scale (1-7)	*H1d*
27	Oral Communication	Jackson and Chapman (2012)	My degree course has improved my Oral Communication Skills	Likert Scale (1-7)	*H1d*
28	Problem Solving	Jackson and Chapman (2012)	My degree course has improved my Problem Solving Skills	Likert Scale (1-7)	*H1d*
29	Teamwork	Jackson and Chapman (2012)	My degree course has improved my Teamwork Skills	Likert Scale (1-7)	*H1d*
30	Time Management	Jackson and Chapman (2012)	My degree course has improved my Time Management Skills	Likert Scale (1-7)	*H1d*
31	Degree Course	Baruch et al. (2005)	Knowledge from my degree course will help me in securing graduate employment *See Rothwell and Arnold (2007).*	Likert Scale (1-7)	*H1d*
32	Pre-University	Esson et al. (2013)	My pre-university education will help me in securing graduate employment	Likert Scale (1-7)	*H1d*

Table 55: Market-Value Capital Wave Two

ID	Variable	Reference	Question	Measure	Rational
33	Employable	Purcell et al. (2005)	Undertaking a degree work placement will increase my chances of securing graduate employment	Likert Scale (1-7)	*H1e*
34	Job Offer	Purcell et al. (2005)	Undertaking a degree work placement will secure me a graduate job offer	Likert Scale (1-7)	*H1e*
35	IT	Purcell et al. (2005)	Undertaking a degree work placement will increase my IT Skills	Likert Scale (1-7)	*H1e*
36	Literacy	Purcell et al. (2005)	Undertaking a degree work placement will increase my Literacy Skills	Likert Scale (1-7)	*H1e*

			Table 55: Market-Value Capital Wave Two (Continued)		
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
37	Numeracy	Purcell et al. (2005)	Undertaking a degree work placement will increase my Numeracy Skills	Likert Scale (1-7)	*H1e*
38	Oral Communication	Purcell et al. (2005)	Undertaking a degree work placement will increase my Oral Communication Skills	Likert Scale (1-7)	*H1e*
39	Problem Solving	Purcell et al. (2005)	Undertaking a degree work placement will increase my Problem Solving Skills	Likert Scale (1-7)	*H1e*
40	Teamwork	Purcell et al. (2005)	Undertaking a degree work placement will increase my Teamwork Skills	Likert Scale (1-7)	*H1e*
41	Time Management	Purcell et al. (2005)	Undertaking a degree work placement will increase my Time Management Skills	Likert Scale (1-7)	*H1e*

			Table 56: Skills Wave Two		
ID	**Variable**	**Reference**	**Question**	**Measure**	**Rational**
42	IT	Jackson and Chapman (2012)	IT Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
43	Literacy	Jackson and Chapman (2012)	Literacy Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
44	Numeracy	Jackson and Chapman (2012)	Numeracy Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
45	Oral Communication	Jackson and Chapman (2012)	Oral Communication Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
46	Problem Solving	Jackson and Chapman (2012)	Problem Solving Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
47	Teamwork	Jackson and Chapman (2012)	Teamwork Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*
48	Time Management	Jackson and Chapman (2012)	Time Management Skills are important to securing graduate employment	Likert Scale (1-7)	*H1f*

ID	Variable	Reference	Question	Measure	Rational
49	Protean Self-Directed	Baruch (2014)	I take responsibility for my own development	Likert Scale (1-7)	*H4*
50	Protean: Self-Directed	Briscoe et al. (2006)	I am responsible for the success or failure in my career	Likert Scale (1-7)	*H4*
51	Protean: Self-Directed	Baruch (2014)	I will navigate my own career, mostly according to my plans	Likert Scale (1-7)	*H4*
52	Protean: Self-Directed	Baruch (2014)	Freedom and autonomy are driving forces in my career	Likert Scale (1-7)	*H4*
53	Protean: Self-Directed	Baruch (2014)	For me, career success is how I am doing against my goals and values	Likert Scale (1-7)	*H4*
54	Protean: Self-Directed	Baruch (2014)	I can easily find a job after university	Likert Scale (1-7)	*H4*
55	Protean: Self-Directed	Baruch (2014)	For me, career success means having flexibility in my job	Likert Scale (1-7)	*H4*

Table 57: Protean Career Orientation Wave Two

ID	Variable	Reference	Question	Measure	Rational
56	Careers Service	Holmes (2015)	The university careers service has enhanced my employability	Likert Scale (1-7)	*H5*
57	Faculty Specific Career Advisor	Holmes (2015)	Faculty or subject specific careers advisors have enhanced my employability	Likert Scale (1-7)	*H5*
58	Graduate Recruiter	Holmes (2015)	Graduate recruiters have enhanced my employability	Likert Scale (1-7)	*H5*

Table 58: Careers Advice Wave Two

Table 59: Employability Wave Two

ID	Variable	Reference	Question	Measure	Rational
59	Employability	Rothwell and Arnold (2007)	I could easily switch from one job role to another.	Likert Scale (1-7)	*H2-H5*
60	Employability	Rothwell and Arnold (2007)	If I had to find a job, it would be easy.	Likert Scale (1-7)	*H2-H5*
61	Employability	Rothwell and Arnold (2007)	I am optimistic that I would find a job if I looked for one	Likert Scale (1-7)	*H2-H5*

Table 60: Linked Anonymity Wave Two

ID	Variable	Reference	Question	Measure	Rational
62	Code Number	Baruch et al. (2005)	What is your Student University Email?	Student University Email	Code

Table 61: Moderators Wave Two

ID	Variable	Reference	Question	Measure	Rational
63	Gender	Baruch et al. (2005)	What is your Gender?	Tick Box	*Moderator I*
64	Degree Subject	Esson et al. (2013)	What is your Degree Subject?	Tick Box	*Moderator II*
65	Year of Study	Purcell et al. (2005)	What is your year of study?	Tick Box	*Moderator III*

Table 62: Objective Data Wave Two

ID	Variable	Reference	Question	Measure	Rational
66	UCAS	UCAS	How many UCAS Tariff Points did you have when applying for university?	Tick Box	Objective Data
67	Bursary	Esson et al. (2013)	Do you have a government bursary towards the cost of your undergraduate studies?	Tick Box	Objective Data
68	Degree	Esson et al. (2013)	What was your degree classification for the last academic year?	Tick Box	Objective Data

ID	Variable	Reference	Question	Measure	Rational
		Table 63: Boundaryless Career Orientation Wave Two			
69	Boundaryless: Mobility	Briscoe and Hall (2006)	In my ideal career, I would work for only one organisation	Likert Scale (1-7)	*H3*
70	Boundaryless: Mobility	Briscoe and Hall (2006)	I like the predictability that comes with working continually for the same organisation	Likert Scale (1-7)	*H3*
71	Boundaryless: Mindset	Briscoe and Hall (2006)	I am energised in new experiences and situations	Likert Scale (1-7)	*H3*
72	Boundaryless: Mindset	Briscoe and Hall (2006)	I would enjoy working on projects with people from across many organisations	Likert Scale (1-7)	*H3*

ID	Variable	Reference	Question	Measure	Rational
		Table 64: Debt and Earnings Wave Two			
73	Debt	Esson et al. (2013)	How long do you think it will take to pay back the debt accumulated during your higher education studies?	Tick Box	*Research Question III*
74	Earnings	Esson et al. (2013)	How much do you expect to be earning six months after graduation?	Tick Box	*Research Question III*
75	Benefits v Costs	Esson et al. (2013)	I feel the benefits of higher education outweigh the associated costs.	Likert Scale (1-7)	*Research Question III*

Appendix M: Interview Questions

Appendix M evidences the interview questions asked of participants.

1. What does the term employability mean to you?

2. What factors do you perceive as important to enhance your employability?

3. What challenges do you see in finding a job after university?

4. Just remind me, what degree course are you studying? What difference do you think there may be between studying different degree subjects and perception of employability?

5. How would you expect your UCAS points or university bursary status to influence your perceived employability?

6. How do you think that your social networks – like your family, friends, or society memberships – influence your employability?

7. Have you made use of the careers service or graduate recruiters during your university studies?

    If Yes: What positive and negative experiences did you have?

    If No: Why? What could the careers service and graduate recruiters do to improve your employability?

8. What do you think are some of the barriers to undertaking a work placement during your degree studies?

9. Would you rather work for a single organisation or move around multiple organisations?

    If single organisations: Why for a single organisation – and locally, nationally or internationally based?

    If move around: Why move around – and locally, nationally or internationally?

10. How would you expect gender to influence employability?

11. How would you expect your year of study to influence employability?

12. Do you think you will be able to repay your university debt?

13. Do you think the benefits of higher education outweigh the associated costs?

Appendix N: Questionnaire A Coding Key

Table 65: Questionnaire A Coding Key		
Method	Online	2
	Paper	1
Gender	Male	2
	Female	1
UCAS	360 or more	4
	300 to 359	3
	240 to 299	2
	Less than 240	1
Faculty of Study	Business, Law & Art	5
	Engineering and the Environment	4
	Humanities	3
	Natural and Environmental Sciences	2
	Social, Human & Mathematical Sciences	1
Degree Subject	Mathematics	12
	Modern Languages	11
	Engineering	10
	Business & Law	9
	Criminology, Education & Psychology	8
	Biological Sciences & Chemistry	7
	English & History	6
	Civil & Environmental Sciences & Geography	5
	Social Sciences	4
	Ocean & Earth Sciences	3
	Art	2
	Archaeology, Music, Philosophy & Politics	1

The twenty-one degree subjects were grouped into P1/P2 (1-8) and P3 (9-12) for

analysis (Justification Chapter 2.6.2: Moderation by Degree Subject).

Table 65: Questionnaire A Coding Key (Continued)		
Year of Study	Final	2
	Penultimate	1
Bursary	No Bursary	3
	Partial Bursary	2
	Full Bursary	1
Repay Debt	No Debt Expected	8
	1-5 years	7
	6-10 years	6
	11-15 years	5
	16-25 years	4
	25-30 years	3
	Will Not Pay Back All Debt	2
	Will Not Pay Back Any Part of the Debt	1
Likert	Agree Strongly	7
	Agree	6
	Agree Slightly	5
	Neutral	4
	Disagree Slightly	3
	Disagree	2
	Disagree Strongly	1
Salary	£60,000 or more	10
	£55,000 to £59,000	9
	£50,000 to £54,000	8
	£45,000 to £49,000	7
	£40000 to £44,000	6
	£35,000 to £39,000	5
	£30,000 to £34,000	4
	£25,000 to £29,000	3
	£20,000 to £24,000	2
	Less than £20,000	1

Appendix O: Questionnaire B Coding Key

<table>
<tr><td colspan="3" align="center">Table 66: Questionnaire B Coding Key</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Method</td><td>Online</td><td>2</td></tr>
<tr><td></td><td>Paper</td><td>1</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Likert</td><td>Strongly Agree</td><td>7</td></tr>
<tr><td></td><td>Agree</td><td>6</td></tr>
<tr><td></td><td>Agree Slightly</td><td>5</td></tr>
<tr><td></td><td>Neutral</td><td>4</td></tr>
<tr><td></td><td>Disagree Slightly</td><td>3</td></tr>
<tr><td></td><td>Disagree</td><td>2</td></tr>
<tr><td></td><td>Disagree Strongly</td><td>1</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Repay Debt</td><td>No Debt Expected</td><td>8</td></tr>
<tr><td></td><td>1-5 years</td><td>7</td></tr>
<tr><td></td><td>6-10 years</td><td>6</td></tr>
<tr><td></td><td>11-15 years</td><td>5</td></tr>
<tr><td></td><td>16-25 years</td><td>4</td></tr>
<tr><td></td><td>25-30 years</td><td>3</td></tr>
<tr><td></td><td>Will Not Pay Back All Debt</td><td>2</td></tr>
<tr><td></td><td>Will Not Pay Back Any Part of the Debt</td><td>1</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Salary</td><td>£60,000 or more</td><td>10</td></tr>
<tr><td></td><td>£55,000 to £59,000</td><td>9</td></tr>
<tr><td></td><td>£50,000 to £54,000</td><td>8</td></tr>
<tr><td></td><td>£45,000 to £49,000</td><td>7</td></tr>
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<tr><td>Work Placement</td><td>Yes</td><td>2</td></tr>
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<tr><td></td><td></td><td></td></tr>
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<tr><td></td><td>No</td><td>1</td></tr>
</table>

Table 66: Questionnaire B Coding Key (Continued)		
Degree Classification	1	4
	2.1	3
	2.2	2
	3	1

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