Modelling Graduate Employability:

Factors Influencing Job Search Outcome in Pakistan

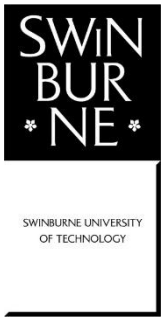
Isra Sarfraz

BE (Electrical Engineering)

MS (Engineering Management)

2020

Submitted in total fulfilment of the requirement of the degree of Doctor of Philosophy in the Faculty of Business and Law at Swinburne University of Technology, Australia.



Abstract

Graduate employability has attracted attention from researchers due to changes in employment arising from globalisation, including the increased trend towards higher education and job automation, and labour mobility across cultural and national borders that leads to increased competition in the market. Despite the increasing number of studies on the concept of employability, there is a dearth of research on developing countries, although research has shown the varying impact of country-based macro- and micro-level societal factors on employability and job search outcomes of individuals. Hence, the current study aims to develop a model of graduate employability in the context of Pakistan by investigating the impact of various personal and social factors on job search outcomes and by understanding the influence of selected demographic variables (including gender, cumulative grade point average, number of years of work experience, mother's level of education and father's level of education) on the employability of graduates.

An extensive literature review identified factors contributing to graduate employability in general, and for job seekers graduating from Pakistani higher education institutions in particular. Social cognitive career theory's career self-management model was used as the theoretical lens for the study and a model for graduate employability has been proposed by defining the links between predictors of job search outcomes.

A cross-sectional study design was adopted to collect data. A questionnaire was made available on the online survey platform, Opinio, to collect data from potential respondents. Statistical package SPSS v.23 was used for preliminary data analysis (data cleansing and screening, descriptive statistics and testing reliability of the measurement model); after data cleansing and screening, 533 usable responses were obtained. Descriptive statistics show that the population sample used has attributes similar to the whole population; hence, the sample is a true representation of the population. To test the proposed model, the technique of partial least squares structural equation modelling was employed, using SmartPLS 3 as the tool.

The findings indicate that a job seeker's career development learning and self-confidence directly impact job search self-efficacy and mediate the relationship between employability skills and job search self-efficacy. Emotional intelligence and self-confidence both directly

influence job search clarity and mediate the path between career development learning and job search clarity. Self-efficacy influences job search clarity, number of interview calls and job offers received, and reduces the time taken to find a job. Job search intensity is enhanced by job search clarity and impacts number of interview calls and time taken to find a job. Job search outcome was measured as the outcome variable to determine the quality of the job secured. Job search outcome is influenced by the number of job offers received, time taken to find a job, social support and emotional intelligence. The impact of gender, number of years' work experience, the job seeker's grades, and parents' education are also assessed for impact on relationships in the graduate employability model.

This study contributes to the literature by testing a unique model of graduate employability by identifying the interrelationship and impact of various predictors of employability on job search outcomes in Pakistan. The findings can be used to study graduate employability in other job markets by adapting the constructs relevant to cultural and social norms of specific societies. Stakeholders of employability – job seekers, educators, higher educational institutions and employers – can use the findings to understand employability and explain and address the expectations of the job market, and hence, prepare job seekers to meet those expectations. Policymakers can introduce the concept of graduate attributes in higher educational institutions to help job seekers and educators understand the expectations of employers and hence, work towards meeting them. The study also discusses directions for future researchers.

Keywords: employability; graduate employability; graduate job search; social cognitive career theory; career self-management; employability skills; psychological determinants

Acknowledgements

This thesis would not have been possible without the support and encouragement of many people but first and foremost, I would thank ***Allah the Almighty*** who bestowed His blessings upon me to endeavour on this journey four years ago and blessed me with the knowledge and wisdom to work on it, the persistence to keep on moving forward, the resilience to undergo stressful times and the commitment to finish this journey.

I would like to thank Commonwealth Government of Australia for providing me with a place in the Research Training Scheme that helped me to embark upon this PhD journey; without it I would never have been able to commence a PhD. Thank you to Swinburne University of Technology for providing with the necessary resources which helped me to finish this journey.

I would like to thank my supervisors. My principal supervisor, Dr Diana Rajendran, has been crucial in the completion of this journey. Her support, guidance, encouragement and trust in me helped me to go through the stressful times of PhD and finish this journey on time.

My coordinating supervisor, Dr Chandana Hewege, joined my supervisory team one year into my PhD and it changed its course with his guidance. He has always provided me with insightful feedback and invaluable directions, along with encouragement, all of which have helped me to finish this thesis.

Dr Mohan Dass Mohan was instrumental in my starting this journey in accepting me as his PhD student; however, he left Swinburne University of Technology after one year and remained on the panel as an external supervisor. Thank you for your support and encouragement always.

I would take this opportunity to thank Dr Jeffrey Keddie of Monash University and Central Queensland University for proofreading the thesis in its final form.

I would like to thank the members of my panels for the yearly reviews who provided me with valuable feedback. I would like to thank Dr Hassan Gholipour and Dr Chamila Perera for guiding me when I was 'blocked' in my writing phase. Your guidance helped me to emerge from that block and move forward.

A special thank you to all the research participants who took the time to complete the survey. Without your responses, this study would not have been possible.

I would like to thank Dr Muhammad Jamil especially for helping and guiding me in starting my PhD. Thank you for your supportive and encouraging discussion every time I came to you with my problems.

I would like to say thank you to my PhD colleagues who have helped me keep going, knowing that we are all in the same boat. Thank you, my dear friends, Linda, Rini, Neelam, Dr Amelia, Dr Pradeepa, Huyen, Dr Tra, Maryam, Humaira, Ridmi, Subha, Abhishek, Leroy, Angela, Shan, Ric, and all the others. Apart from having serious discussion on how to solve our issues, you made this journey fun with funny conversations, lunch time gossip, birthday parties, monthly lunches and much more. It would had been hard without you. Thank you, Dr Ngoc Diep Su for always sharing your knowledge and wisdom with me.

I would like to thank my siblings, Rabia, Dr Anum and Usman, for always encouraging me and listening to my stories that made no sense to you, but this helped me to get through stressful times. Thank you for all the love and support.

A very special thanks to my parents, Dr Abdul Ghani Akram and Nabeela Akram, who made me capable to start this daunting journey. It was only possible for me to finish it with their continuous prayers, support and love. I am sorry for not calling you on the days when I was stressed or drowning in my responsibilities and was unable to come to meet you for years at times. You have been instrumental in every achievement of my life and I owe all this to you. Thank you for being proud of me, though I do not meet even 10% of your expectations. I love and miss you both.

An extra special thanks to my beloved husband, Sarfraz Ali Syed. You have a huge role in me starting my PhD and completing it (although I do not admit it in front of you). Thank you for your continuous support and encouragement throughout this stressful journey. You had been kind enough to ignore my bad temper when I was stressed and happier than me with each milestone passed. You had more faith in my ability to finish it than I had in myself. Thank you for always telling me that I am capable of undertaking anything that comes my way and I will always be victorious on the other end. Thank you for always proudly boasting to people that ‘my wife is doing her PhD’. I love you!

Last but not the least, a very special thank you to my darling daughter, Irha. You are one of the main reasons I started it and you have been instrumental in its completion. Although you

had no idea what mommy was doing at the age of 2, you were always patient with me. Thank you for the days when you had to go to childcare early, sit with me on my desk for six hours straight or go to after-care and before–care, though you wanted me to pick or drop you at school. Your love, hugs and kisses at the end of a tiring day kept me going. Lately, you have been asking me when I will graduate just as you have already graduated from kindergarten. I am so proud of what you have become at the age of 6. I love you to the moon and back!

Declaration

I declare that this thesis contains no material that has previously been published or written by another person except where due reference is made in the text of the examinable outcome, or has been accepted for the award of any other degree or diploma. Joint publications have resulted from this research however the thesis is not based on joint research or publications.

Recoverable Signature

X Isra Sarfraz

Isra Sarfraz

Signed by: 4b43d512-b14b-4007-a087-028b4bb2cccd

17 February 2020

Date

Publications associated with this thesis

"An Exploration of Global Employability Skills: A Systematic Research Review", *International Journal of Work Organisation and Emotion*, 2018, vol. 9, no. 1, pp. 63–88.

"Role of Higher Educational Institutions in Developing Employability Skills" presented at *31st Annual Australian & New Zealand Academy of Management Conference, 2017* conducted on 5-8 Dec, 2017 at RMIT University Melbourne, Australia.

"Facets of Employability Skills across the Globe: Evidence from a Systematic Literature Review" presented at *The 2nd International Conference on Organisation and Management, 2016* conducted on 20-21 Nov, 2016 at Abu Dhabi, UAE.

List of Abbreviations

CCC – Cross cultural competence

CDL – Career development learning

CGPA – Cumulative grade point average

Com – Communication

Creat - Creativity

E.Int – Emotional intelligence

E.Q – Employment quality

HEC – Higher Education Commission (of Pakistan)

HEI – Higher education institutions

ICT – Information, communication and technology

ILO – International Labour Organisation

I.Q – Intention to quit

JSC – Job search clarity

LLL – Lifelong learning

L.ship - Leadership

MGA – MultiGroup Analysis

^{ns} – Non-significant

PLS SEM – Partial least square structure equation modelling

P.Sol – Problem solving

Sat – Satisfaction with job

SCCT – Social cognitive career theory

SCCT CSM – Social cognitive career theory's career self-management model

S.Con – Self-confidence

SCT – Social cognitive theory

S.Eff – Self-efficacy

SEM – Structure equation modelling

S.Est – Self-esteem

S.Mgt – Self-management

SPSS – Statistical Package for Social Sciences

S.Sup – Social support

T.wk – Team work

UBIs – University based Incubations

UK – United Kingdom

USA – United States of America

Contents

Abstract i
Acknowledgements iii
Declaration vi
Publications associated with this thesis vii
List of Abbreviations viii
List of Tables xvi
List of Figures xix
Chapter 1 – Introduction 1
1.1 Introduction 1
1.2 Background of the Research 1
1.3 Research Gaps 4
1.4 Aims, Objectives and Research Questions 6
1.5 Significance of the Research 8
1.6 Overview of Methodology 9
1.7 Organisation of Thesis 10
1.8 Chapter Summary 13
Chapter 2 – Literature Review 14
2.1 Introduction 14
2.2 The Worldview of employability 14
2.2.1 Development of Employability through various stages 14
2.2.1.1 Dichotomised Employability 14
2.2.1.2 Socio-Medical Employability 15
2.2.1.3 Manpower Policy Employability 15
2.2.1.4 Flow Employability 15
2.2.1.5 Labour Market Performance Employability 16
2.2.1.6 Initiative Employability 16
2.2.1.7 Interactive Employability 16
2.3 The Concept of Employability 17
2.4 Graduate Employability 21
2.4.1 Previous studies on Graduate Employability 24
2.4.1.1 DOTS Model - 1977 24
2.4.1.2 Hillage and Pollard's Employability Framework - 1998 25
2.4.1.3 'Magic Bullet' Employability Development Model - 2001 27
2.4.1.4 The USEM Account of Employability - 2002 28
2.4.1.5 Psycho-Social Construct of Employability - 2004 29

2.4.1.6 CareerEDGE- Key to Employability - 2007 31
2.4.1.7 Bridgstock's Conceptual Model of Graduates Attributes for Employability - 2009 32
2.4.2 Theories used to Address Graduate Employability 35
2.4.2.1 Theory of Planned Behaviour 35
2.4.2.2 Self Determination Theory 37
2.4.2.3 Career Construction Theory 38
2.4.2.4 Social Cognitive Theory 39
2.5 Social Cognitive Career Theory 40
2.5.1 Self-Efficacy 41
2.5.2 Outcome Expectations 42
2.5.3 Goals 43
2.5.4 Actions 43
2.5.5 Learning Experiences 43
2.5.6 Contextual and Personality Factors 44
2.5.7 Ability 44
2.5.8 Distal Antecedents and Experiential Sources of Adaptive Career Behaviours 45
2.6 Chapter Summary 45
Chapter 3 – Contextualizing the Research 47
3.1 Introduction 47
3.2 Social Structure of Pakistan 47
3.3 Education System in Pakistan 50
3.3.1 Higher Education in Pakistan 53
3.4 Graduate Employability in Pakistan 54
3.4.1 Graduate Attributes in Pakistani Universities 56
3.4.2 Career Guidance in Higher Education Institutions in Pakistan 57
3.5 Previous Research on Graduate Employability in Pakistan 58
3.5.1 Skills Gap 61
3.5.2 Role of Educators 63
3.5.3 Predictors of Employability 64
3.5.4 Employers' Demands 65
3.5.5 Perceived Employability 65
3.5.6 Employability Model 66
3.6 Chapter Summary 66
Chapter 4 – Conceptual Model and Hypotheses Development 68
4.1 Introduction 68
4.2 Factors Contributing to Graduate Employability 68

4.3 The Proposed Model for Graduate Employability 79
4.3.1 Self-Efficacy 79
4.3.2 Goal – Job Search Clarity 80
4.3.3 Action – Job Search Intensity 80
4.3.4 Outcome 85
4.3.5 Learning Experiences 86
4.3.6 Contextual and Personality Affordances 87
4.3.6.1 Self-Esteem 87
4.3.6.2 Self-Confidence 88
4.3.6.3 Emotional Intelligence 88
4.3.6.4 Social Support 88
4.3.7 Ability 89
4.3.7.1 Employability Skills 89
4.3.8 Person Inputs and Background Affordances as Control Variables 99
4.3.9 Rationale for Exclusion of Outcome Expectations from the Model 99
4.4 Research Questions and Hypotheses Development 100
4.5 Chapter Summary 104
Chapter 5 – Research Methodology 105
5.1 Introduction 105
5.2 Research Paradigm 105
5.2.1 Positivism 106
5.2.2 Rationale for Selecting the Positivist Paradigm for the Current Research 108
5.3 Research Design 108
5.3.1 Survey Research 109
5.3.2 Rationale for Using Survey Research 110
5.3.3 Research Process for the Current Study 111
5.4 Development of the Survey Instrument 112
5.4.1 Operationalising the Constructs 113
5.4.1.1 Self-Efficacy 113
5.4.1.2 Goal 114
5.4.1.3 Action 114
5.4.1.4 Outcome 115
5.4.1.5 Learning Experiences 117
5.4.1.5 Personal Influences 119
5.4.1.6 Contextual Influences 121
5.4.1.7 Person Input and Background Contextual Affordances 121

5.4.2 Measurement Scale 122
5.5 Sampling 123
5.5.1 Sampling Technique 123
5.5.2 Sample Size 124
5.6 Data Collection 124
5.6.1 Survey Participants 124
5.6.2 Data Collection 125
5.7 Data Analysis 126
5.8 Ethical Considerations 126
5.9 Chapter Summary 128
Chapter 6 – Results 129
6.1 Introduction 129
6.2 Overview of the Survey/ Data Screening, Cleansing and Preparation 129
6.2.1 Sample selection and data collection 129
6.2.2 Handling Missing Values 130
6.2.3 Screening of Outliers 131
6.2.4 Normality of Distribution 131
6.3 Descriptive Analysis / Respondents' Demographic Profile 132
6.4 Validation of the Questionnaire 135
6.4.1 Content Validity 135
6.4.2 Construct Validity 136
6.5 Data Analysis – Partial Least Square Structural Equation Modelling (PLS-SEM) 137
6.5.1 Outer Model Assessment/Assessment of the Measurement Model 139
6.5.1.1 Assessment of Reflective Construct 141
6.5.1.2 Assessment of Formative Constructs 143
6.5.2 Inner Model Assessment/Assessment of the Structural Model 144
6.5.2.1 Significance of the Structural Model's Path Coefficients 144
6.5.2.2 Coefficient of Determination R^2 145
6.5.2.3 Effect size f^2 145
6.5.2.4 Predictive Relevance Q^2 Criterion 146
6.5.2.5 Effect size q^2 146
6.5.2.6 Goodness-of-fit 146
6.5.3 Mediation Analysis 147
6.5.4 Moderation Analysis 148
6.6 Results of Data Analysis Using PLS-SEM 149
6.6.1 Results of Outer Model Assessment 149

6.6.1.1 Assessment of First-Order Reflective Constructs 150
6.6.1.2 Assessment of Second-Order Formative Constructs 157
6.6.2 Results of Structural Model Assessment 159
6.6.2.1 Assessment of Structural Model's Path Coefficients and Hypotheses Testing 159
6.6.2.2 Assessment of Coefficient of Determination R^2 163
6.6.2.3 Assessment of Effect Size f^2 164
6.6.2.4 Assessment of Predictive Relevance Q^2 165
6.6.2.5 Assessment of Effect Size q^2 166
6.6.3 Test of Mediation 167
6.6.4 Results of Hypotheses Testing and Final Model 168
6.6.5 Test of Moderation 171
6.6.5.1 Moderating Effect of Gender 172
6.6.5.2 Moderating Effect of Cumulative Grade Point Average 173
6.5.2.3 Moderating Effect of Work Experience 175
6.5.2.4 Moderating Effect of Mother's Highest Qualification 177
6.5.2.5 Moderating Effect of Father's Highest Qualification 178
6.6 Questions Related to Job Search Method and Time 180
6.7 Chapter Summary 182
Chapter 7 – Discussion 183
7.1 Introduction 183
7.2 Overview of the Research 183
7.3 Findings associated with RQ1 184
7.4 Findings associated with RQ2 186
7.5 Findings associated with RQ3 189
7.6 Findings associated with RQ4 190
7.7 Findings associated with RQ5 193
7.8 Findings associated with RQ6 195
7.9 Findings associated with RQ7 197
7.10 Findings associated with RQ8 199
7.11 Findings associated with RQ9 201
7.12 Findings associated with RQ10 203
7.13 Discussion Related to the Additional Paths Added to the Model 207
7.14 Findings associated with RQ11 209
7.14.1 Moderating Effect of Gender 210
7.14.2 Moderating Effect of Cummulative Grade Point Average 210
7.14.3 Moderating Effect of Work Experience 212

7.14.4 Moderating Effect of Mother's Education 214
7.14.5 Moderating Effect of Father's Education 215
7.15 Chapter Summary 216
Chapter 8 – Conclusion, Implications and Limitations 217
8.1 Introduction 217
8.2 Concluding Remarks 217
8.3 Implications of the study 220
8.3.1 Theoretical Contribution 220
8.3.2 Practical Contribution 224
8.3.2.1 Implications for Individuals 224
8.3.2.2 Implications for Higher Education Institutions 225
8.3.2.3 Implications for Policymakers 226
8.3.3 Implications of the Current Study in the Pakistani Employability Context 227
8.4 Limitations of the Study 228
8.5 Directions for Future Research 230
References 232
Appendix A - Survey Instrument 255
Appendix B - Project Information Sheet 260
Appendix C - Invitation for Participation 262
Appendix D - Ethics Clearance Letter from SUHREC 263
Appendix E - Results of Assessment of Measurement Model 265
Appendix F - Results of Assessment of Structural Model 266

List of Tables

Table 1.1 Specific Research Questions ……7

Table 3.1 Unemployment Rate in Pakistan……55

Table 3.2 Studies conducted in Pakistan on Graduate Employability……59

Table 4.1 Review of Literature – Factors Contributing to Employability……69

Table 4.2 Review of Literature – Job Search Methods……82

Table 4.3 Review of Literature – Employability Skills Required for Employability……90

Table 4.4 Hypotheses Relevant to Specific Research Questions……103

Table 5.1 Positivism/Post-Positivism Research Paradigm……107

Table 5.2 Items Measure for Self-Efficacy……114

Table 5.3 Items Measure for Job Search Clarity……114

Table 5.4 Items Measure for Job Search Intensity……115

Table 5.5 Items Measure for Outcome……116

Table 5.6 Items Measure for Learning Experiences……117

Table 5.7 Items Measure for Personal Influences……120

Table 5.8 Items Measure for Contextual Influences……121

Table 5.9 Items Measure for Person Input and Background Contextual Affordances……122

Table 6.1 Demographic Information – Year of graduation……132

Table 6.2 Demographic Information – Major Field of Study……132

Table 6.3 Demographic Information – Gender……133

Table 6.4 Demographic Information – Fathers' Highest Qualification……133

Table 6.5 Demographic Information – Mothers' Highest Qualification……133

Table 6.6 Demographic Information – Province of Residence……134

Table 6.7 Demographic Information – Cumulative GPA……134

Table 6.8 Demographic Information – Years of experience……135

Table 6.9 Steps Involved in PLS-SEM……138

Table 6.10 Guidelines for Application of PLS-SEM……139

Table 6.11 Types of Mediation Output……148

Table 6.12 Outer loadings, Cronbach's Alpha, Composite reliability and AVE……151

Table 6.13 Item Loadings and Cross loadings……154

Table 6.14 VIF values for Multi-Collinearity Assessment……157

Table 6.15 Outer weights, T-statistics and p-values……158

Table 6.16 Outer loadings, T-statistics and p-values……158

Table 6.17 Standardised path coefficients, t-statistics and significance level……160

Table 6.18 Standardised path coefficients, t-statistics and significance level for modified model with additional paths……161

Table 6.19 Coefficient of determination R2 for Model's constructs……163

Table 6.20 Effect Size f^2……164

Table 6.21 Predictive Relevance Q^2……165

Table 6.22 Effect Size q^2……166

Table 6.23 Direct Effect……167

Table 6.24 Result of Mediation – Direct and Specific Indirect Effects……168

Table 6.25 Consolidated Results of Hypotheses Testing……169

Table 6.26 Sample Size of Various Moderating Variables……172

Table 6.27 Moderating Effect of Gender……173

Table 6.28 Moderating Effect of CGPA (Comparison between Respondents with CGPA above 3.00 and CGPA below 3.00)……174

Table 6.29 Moderating Effect of CGPA (Comparison between Respondents with CGPA above 3.50 and CGPA below 3.50)……175

Table 6.30 Moderating Effect of Work Experience (Comparison between respondents with no work experience and with work experience)……176

Table 6.31 Moderating Effect of Work Experience (Comparison between respondents with less than 1 year's work experience and respondents with more than 1 year's work experience)……177

Table 6.32 Moderating Effect of Mother's Highest Qualification (Comparison between respondents with mother's qualification below bachelor and respondents with mother's qualification bachelor degree or above)……178

Table 6.33 Moderating Effect of Father's Highest Qualification (Comparison between respondents with father's qualification of bachelor or above and respondents with father's qualification below a bachelor degree)……179

Table 6.34 Moderating Effect of Father's Highest Qualification (Comparison between respondents with father's qualification of master's or below and respondents with father's qualification of PhD or Post-doctorate)……180

Table 6.35 Most Successful Job Search Method……181

Table 8.1 Main Conclusions of Specific Research Questions……217

List of Figures

Figure 1.1 Organisation of Thesis.....11
Figure 2.1 'Magic Bullet' Employability Model.....28
Figure 2.2 USEM Account of Employability.....29
Figure 2.3 Psycho-Social Construct of Employability.....30
Figure 2.4 CareerEDGE–Key to Employability.....32
Figure 2.5 Bridgstock's Model of Graduate Attributes for Employability.....33
Figure 2.6 Theory of Planned Behaviour.....35
Figure 2.7 Self-Determination Theory.....37
Figure 2.8 Social Cognitive Theory.....39
Figure 2.9 Social Cognitive Career Theory.....41
Figure 3.1 Population Growth in Pakistan.....47
Figure 3.2 Pakistani Culture on Hofstede's Cultural Dimensions.....48
Figure 3.3 Literacy Rate in Pakistan over Time.....50
Figure 4.1 Proposed Model for Graduate Employability in Pakistan.....100
Figure 5.1 Research Process Followed for the Current Study.....112
Figure 6.1 Reflective vs Formative Construct.....140
Figure 6.2 Mediation Analysis Procedure.....148
Figure 6.3 Proposed Model for Graduate Employability in Pakistan.....159
Figure 6.4 Hypothesised Path Model Results.....160
Figure 6.5 Path Model Results after Adding New Paths.....163
Figure 6.6 Revised Model for Graduate Employability in Pakistan.....171

Chapter 1 – Introduction

1.1 Introduction

This thesis aims to develop and test a model of graduate employability for students and graduates in Pakistan. Chapter 1 focuses on providing background information and an overview of the research and thesis. The chapter commences with the background of the research, discussing the global context of employability, its changing nature and the motivation behind the study. The next section outlines the study's aim, objectives developed to achieve that, and the research questions postulated to address the objectives. The significance of the study is discussed by identifying the gaps in the literature. Then the chapter provides an overview of the methodology adopted, followed by the discussion of the structure of the thesis.

1.2 Background of the Research

With the advent of 21st century, the world has observed drastic changes resulting from globalisation, internationalisation and technological advancements (Griffin & Annulis 2013; Sarfraz et al. 2018). The global economy has been impacted by these changes and the concept of permanent employment has been replaced by non-standard, part-time, contractual and fixed-term employment, which leads to frequent periods of unemployment and underemployment. New roles and opportunities are created and existing ones are redefined to keep up with the changing demands of the 21st century labour market that requires exploring and designing new solutions and products (Greenwood, O'Leary & Williams 2015). Global connectivity, smart mechanical devices and new media applications are some of the drivers that impact our understanding and expectations of work and the skills needed to be a productive worker (Davies, Fidler & Gorbis 2011).

The higher education sector, among others, is where the impact of these changes has been observed most. The employment market has become increasingly competitive, creating a challenging environment for higher education institutions to not only update the curriculum to keep up with changes but also to prepare their students for competing in such a competitive market.

The global financial crisis of 2008 was another factor impacting employability and the job market in the recent past. Although the world's economy continued to expand after the global economic crisis, the rate was well below expectation and it took nine years for the global unemployment rate to return to the pre-financial crisis rate. In 2018, 172 million people were unemployed globally, with an unemployment rate of approximately 5%, the same as the pre-global financial crisis level (ILO 2019). The conditions are far more challenging for young people because the youth global unemployment rate stands at 11.8% (ILO 2019), i.e., more than double the overall unemployment rate. Hence, young workers need to remain abreast of employer demands if they are to remain competitive in the job market.

In today's competitive job market, holding a university degree is not sufficient for graduates to secure meaningful employment in the labour market which is characterized by volatile changes. Instead, the qualification is expected to be value–added, with specific skills to cater for the changing and challenging nature of work (Syed, Abiodullah & Yousaf 2014). Students' unawareness of labour market circumstances, ever-changing job requirements due to globalization, increases in expectations of skills and standards from employers when hiring new recruits, replacement of human jobs with machines and an increasing world working population but with depleting job opportunities are some of the challenges that make job searches for new graduates more complex.

Employability is a complex construct (Andrews & Higson 2008) with no consensus among researchers on how to define it due to its inherent multidimensionality. The concept of employability was first introduced at the beginning of the 20th century as a dichotomous variable: employability was synonymous with having a job. The concept has since evolved and it has now emerged as interactive employability, with various stakeholders of employability (including higher education institutions, employers and government) being involved in the employability challenge. Due to the changing dynamics of the world, graduates need to develop and demonstrate the skills and attributes most desired by their employers (that is, to become employable) in order to enhance their chances of being employed (Sarkar et al. 2016).

Employability can be studied from various perspectives, including models of employability, theories used to define employability, and factors contributing towards it. To understand the landscape of employability, it is important to study and address various streams of

employability in order to develop a holistic study. Another important observation is that the construct definition of and factors impacting employability depend on diverse economic, social and cultural aspects of the context. The main purpose of this research is to understand the landscape of employability for graduates in Pakistan and develop a holistic model of graduate employability.

To address that purpose, the literature will be reviewed in three stages. First, the models of employability and the theories used to address it will be reviewed to identify an appropriate framework or theory on which this study will be built. Second, the research already conducted in Pakistan will be reviewed to understand the landscape of employability there by analysing the findings of that research and to identify any gaps. Third, the studies analysing the impact of various factors on employability outcomes will be reviewed to list the contributing factors of employability and their relationships with each other. From the list of contributing factors, the factors impacting employability that are relevant to the context of the higher education system, social structure and graduates in Pakistan will be identified. Based on the findings of the literature review, a framework will be proposed with the help of chosen theory and framework and factors will be identified for testing in the current research.

This study is motivated by the author's interest in helping graduate students in Pakistan to overcome the challenges of the labour market and secure decent employment at the end of their studies. The author is a graduate of a highly ranked university in Pakistan and at the conclusion of her studies she found that she had no idea about the job market and how to approach it. The author found that there was no support from the university or educators to help students with understanding the employers' needs, with developing those attributes required by the employers, with creating resumes and preparing for interviews – and these conditions remain today. Thousands of graduates enter the job market every year in Pakistan with no understanding of how it works. Hence, the author wants to understand the situation of Pakistani graduates and how they found their jobs in order to develop a model of graduate employability. This study is only one piece of the puzzle and, to understand and develop a whole workable and sustainable system of graduate employability, there is a need to understand not only the perspective of students but also of employers, educators, government and policy makers.

1.3 Research Gaps

The subject of graduate employability has been researched widely (a few studies includes Bakari & Hunjra 2018; Bakari & Khoso 2017; Marshall 2018; Sarkar et al. 2016). However, due to the multidimensionality of the construct, there is a lack of research that has the aim of studying most of the dimensions simultaneously. A wide range of literature is published on employability skills (Ghazali & Bennett 2017; Messum et al. 2016; Rajapakse 2017; Sarfraz et al. 2018; Tsitskari et al. 2017), but research supports the idea of employability skills being a part of the whole employability equation rather than being synonymous with employability itself (Bridgstock 2009; Eden 2014; Pool & Sewell 2007; Sumanasiri, Ab Yajid & Khatibi 2015). Many researchers have studied the effect of a few antecedents on a job seeker's employability and job search outcome (Coen et al. 2015; Fabio & Kenny 2015; Liu et al. 2014; Saks 2006), whereas others have developed models of job search and employability (Bridgstock 2009; Pool & Sewell 2007; Van Hoye et al. 2015). However, these studies are unable to grasp all dimensions of graduate employability. Hence, there is a need to develop a model of graduate employability that gauges all dimensions of job search antecedents and employability.

The review of literature concluded that most studies on the subject have been conducted in more developed and Western countries such as the United States of America (Lim, Lent & Penn 2016; Russell, Holmstrom & Clare 2015; Schaffer & Taylor 2012), the United Kingdom (Eden 2014; Furnell & Scott 2015; Poon 2012), Australia (Carroll 2013; Green 2012; McArdle et al. 2007), Belgium (Coen et al. 2015; Van Hoye et al. 2015), Italy (Fabio & Kenny 2015), Canada (Guerrero & Rothstein 2012; Saks, Zikic & Koen 2015) and Singapore (Tay, Ang & Van Dyne 2006). Guiso, Sapienza and Zingales (2006) argue that national culture and social structure influence beliefs, values and broader political outcomes, and the socio-cultural environment of the specific countries explains the variation in human resource practices, thus making it difficult to generalise the HR practices of the West to other socio-cultural environments (Aycan et al. 2009). These arguments are also supported by recent researchers (Farndale & Sanders 2017; Obeidat et al. 2016). Ariss and Sidani (2016), using the divergence approach, state that human resources practices are influenced by sociocultural and institutional practices of each society, which points to the need to study the unique characteristics of each society instead of the applying the Western style of so-called "best

practices". Rowley et al. (2016) develop a multilevel (macro, meso and micro levels) analytical framework to address the HR trends at each level in the Asia Pacific region and identify the distinctiveness of the practices in each country based on political conditions, economic status, institutional values, cultural features and belief systems. Hence, it can be concluded from previous research that Western theories and practices cannot be generalised for Eastern societies and there is a need to study and contextualise theories and practices according to the unique characteristics of each society.

Few studies have been undertaken in developing countries, particularly in the South Asian region, and most of these only focus on employability skills (Mirza, Jaffri & Hashmi 2014; Pradhan 2015; Srivastava & Khare 2012; Warraich & Ameen 2011). Studies from Pakistan (see Table 3.1 for the complete list) were reviewed and their focus can be classified into skills gaps (Abbasi, Ali & Bibi 2018; Saeed & Rashidi 2017), the role of educators (Ashraf et al. 2018a; Junejo, Memon & Mohammad 2018), predictors of employability (Khan 2014; Syed, Abiodullah & Yousaf 2014), employers' demands (Ghauri & Ayub 2018; Mirza, Jaffri & Hashmi 2014) and perceived employability (Bakari & Hunjra 2018; Bakari & Khoso 2017). Studies on determining the predictors of employability only focus on emotional intelligence, interpersonal skills and grades. Haque (2013) proposes a model of graduate employability in Pakistan, recommending that the government introduce a six-month compulsory course after graduation with a focus on developing graduate employability under a new ministry of graduate employability. This model is impractical and cumbersome to implement because it includes policy development and implementation at the national level, but the current political and economic climate make such changes infeasible. Hence, there is a need to develop a practical model of graduate employability for the graduates in Pakistan.

Social cognitive career theory's career self-management model (SCCT CSM) is based on Bandura's (1977) Social Cognitive Theory (SCT). SCCT CSM was postulated in 2013 (Lent & Brown 2013) which makes it a fairly new theory. Since its emergence, many researchers have used it to study job search. Researchers such as Dahling, Melloy and Thompson (2013), Lim, Lent and Penn (2016), Lent et al. (2016) and (Kim, Fouad & Lee 2018) have used SCCT CSM but only some of the underlying relationships, not the whole framework, to test their hypotheses. Lent et al. (2019a), Lent et al. (2017) and Lent et al. (2016) used SCCT CSM to study career exploration and decision making. Dahling, Melloy and Thompson (2013) looked

at financial strain and regional unemployment rate as a barrier to self-efficacy. Lent et al. (2019b) adapted it to develop a theoretical model of career indecision profile. Although most of the relationships defined by SCCT CSM are tested in these studies, there are some relationships that remain to be tested (Thompson et al. 2016). Thompson et al. (2016) use SCCT CSM to develop a model for job loss and reemployment by employing all the theory's dimensions. Perez-Lopez, Gonzalez-Lopez and Rodriguez-Ariza (2019) apply SCCT CSM to the population of graduates but their focus is on the entrepreneurial intentions of final year university students. Hence, there is a lack of literature on the theory's application to the context of graduates' job search and employability.

From this discussion the following four major gaps in the literature are identified:

1. There is a need for a model of graduate employability addressing most dimensions of the construct;
2. There is a lack of research in Pakistan on graduate employability;
3. A limited number of studies examine the complete model of career self-management; and
4. There is a lack of research employing the social cognitive career theory career self-management model in the context of graduate job search/employability, particularly in developing countries.

1.4 Aims, Objectives and Research Questions

The current study aims to develop a model of graduate employability for the graduates of the higher education system in Pakistan. Numerous studies (see Chapters 2, 3 and 4) have been reviewed to form a base for the development of such a model. The Social Cognitive Career Theory's Career Self-Management Model proposed by Lent and Brown (2013) is used as the theoretical base. The constructs of the theory are operationalised by reviewing previous research on graduate employability and analysing the contributing factors in the light of the context of current research (Chapter 4).

To achieve the study's aim, the overarching research question is: ***"To investigate the interaction of a graduate's various personal and social characteristics and their impact on job search outcome?"***. Three objectives are defined to answer this question:

1 To identify the factors that influence job search behaviour of new graduates in Pakistan;

2 To develop and test a conceptual model for graduate employability in Pakistan; and

3 To investigate the effect of demographic variables (gender, work experience, cumulative grade point average, parent's educational status) on graduate job search.

The first objective is met with the help of a literature review. The literature is analysed in three overarching streams. First, the models of employability and the theories used to address employability are reviewed; second, the research already conducted in Pakistan is reviewed; and third, the studies analysing the impact of various factors on employability outcome are reviewed. The results obtained for the first objective help develop a model of graduate employability which is then tested using the statistical technique of partial least squares structural equation modelling, so that the second research objective can be achieved. Next the role of various demographic variables is tested on graduate job search, using the same statistical technique, to achieve the third objective.

Based on the proposed model, 11 specific research questions and a set of nine hypotheses are defined (Chapter 4). These research questions and hypotheses help test the relationships between the selected variables of graduate employability. Table 1.1 presents the research questions developed for testing the proposed model.

Table 1.1 Specific Research Questions

Specific Research Questions
RQ1: *Is self-efficacy positively influenced by the learning experience (career development learning) and ability (employability skills) constructs?*
RQ2: *Does self-efficacy positively impact job search clarity, job search intensity and the outcome construct (including number of interview calls received, number of job offers received, time taken to find the job and job search outcome)?*
RQ3: *Does job search clarity enhance the job search intensity? Does job search intensity positively impact the number of interview calls and time taken to find the job?*
RQ4: *Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence self-efficacy?*
RQ5: *Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence job search clarity?*
RQ6: *Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence job search intensity?*
RQ7: *Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence job search outcome?*

RQ8: *Does the number of interview calls positively influence the number of job offers received? Is a better job search outcome associated with a higher number of job offers and longer time taken to find the job?*
RQ9: *Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) mediate the relationship between job search clarity and job search intensity?*
RQ10: *Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) mediate the relationship between job search intensity and job search outcome?*
RQ11: *Does respondents' demographic profile (gender, education, experience, parents' highest qualification) impact their job search?*

1.5 Significance of the Research

The motivation behind this study is to help students and educators understand what attributes and skills are required by employers so that as graduates they can work on and polish those skills before joining the workforce, and hence, get a head start in the highly competitive job market. The model developed and tested will help address the gaps in the literature identified in section 1.3. The tested model will provide a well-rounded understanding of the concept of employability and determine the relationships between nominated antecedents of employability. It will help students and educators to understand the dynamics of labour force entry and the requirements to succeed in a highly competitive environment. The study will provide a foundation for future research in Pakistan because research on graduate employability there is in its initial stages and requires development to compete at the global level. As the model developed is based on the SCCT CSM, the study will add to the literature by testing the whole model and identifying significant relationships. It will also contribute towards global research on graduate employability by employing SCCT CSM and testing the defined relationships in the context of graduate employability.

The model will not only be applicable to Pakistan but to other countries in the Asia Pacific region, because countries in the region share many social, cultural and economic similarities. However, there will remain a need to contextualise the model for each society, using the developed model as the base. Hence, the current study tests the complete model of SCCT CSM in the context of graduate employability in Pakistan; it will act as a foundation for future research both within Pakistan and in other countries in the region; and it will provide the

students and graduates in Pakistan with an understanding of the dynamics of employability and hence, further enhance their employability.

1.6 Overview of Methodology

The theoretical foundation and the factors relevant to the context of the study in predicting job search outcome are used to form constructs and develop hypotheses (i.e., the relationships between various constructs). As the hypotheses defined are required to be tested to accept or reject them, a positivist paradigm is selected for use because it focuses on hypothetic-deductive methods and aims to verify prior-defined relationships between differing parameters (hypotheses) to explain the prediction and control on phenomena (Ponterotto 2005). Based on the positivist paradigm, a survey was chosen for collecting data. As Dorsten and Hotchkiss (2005) say, a well-designed survey enables the researcher to gather abstract information using well-defined questions and it provides accurate estimates of the population. Internet-based surveys are cheaper and quicker to administer and they provide the researcher with the ability to collect data from geographically dispersed respondents who can answer at their own convenience (Bryman 2008; Cooper & Schindler 2006).

The constructs and relationships applied in this study have been tested earlier by researchers in various contexts (see Table 4.1) – for example, while analysing the job search experience of mid-career job seekers or migrant job seekers, which is different to the job search experience of graduates. Hence, the constructs used in this study were operationalised by identifying appropriate scales from previous studies and modifying them according to this study's context. A five-point Likert scale was chosen in line with previous studies.

The population sample for this study comprised those individuals who had graduated in the past two years from universities in Pakistan and were employed at the time of data collection. The probability sampling technique of simple random sampling was selected. According to the guidelines provided by Heck and Thomas (2000) and (Sekaran 2003), a minimum sample size of 200 is deemed sufficient for the study. However, the minimum sample size should be 250 for conducting structural equation modelling (Schumacker & Lomax 2010) and hence, a sample size of minimum 250 participants was selected.

An internet-based survey, using Opinio, was used to collect data from the participants. Participants were provided with a link to the survey and general guidelines to complete; they could respond to the survey at their own convenience. As the data collected from surveys are quantifiable, they can be used for testing hypotheses. The Partial Least Square Structural Equation Modelling (PLS SEM) technique was used to analyse the data. The statistical package SPSS was used to conduct preliminary analysis and SmartPLS was employed for conducting SEM and hypothesis testing.

1.7 Organisation of Thesis

The thesis is divided into eight chapters (Figure 1.1). The following section provides a brief description of the chapters.

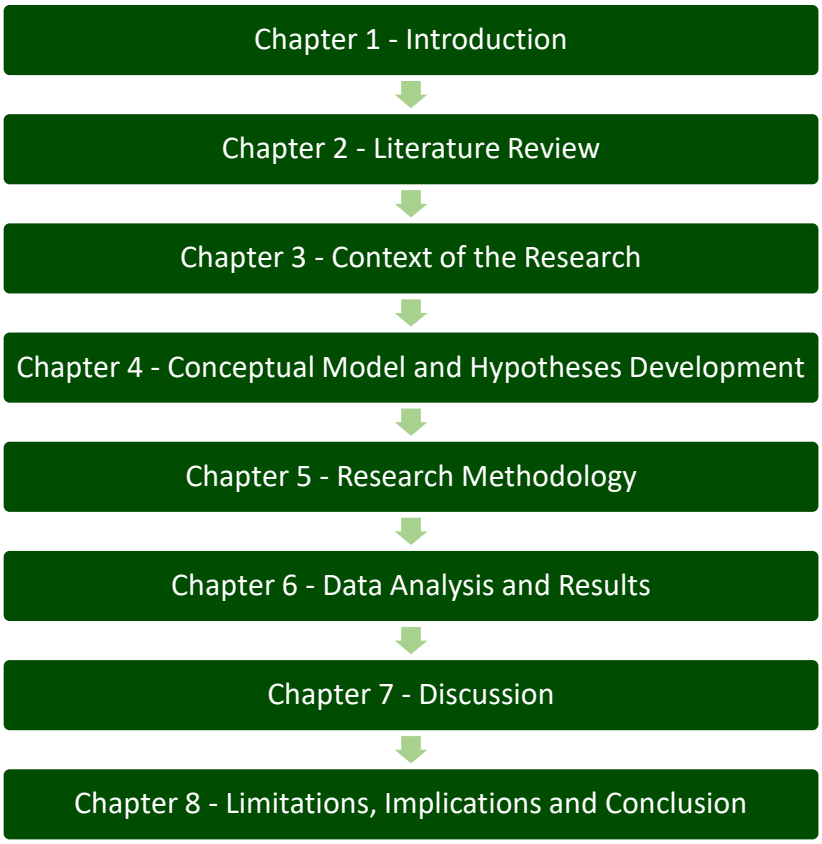
Chapter 1 – Introduction

Chapter 1 introduces the study. It sets the background, explaining global economic conditions and their impact on graduate employability. The study's overall aim, research question and objectives are discussed. The significance and contribution are discussed, and the methodology and organisation of the thesis are outlined.

Chapter 2 – Literature Review

The purpose of Chapter 2 is to review the literature on graduate employability. It outlines the worldview of employability and the progression of the concept over time. The concepts of employability and graduate employability are outlined. Models of employability developed by researchers and organisations are reviewed, followed by review of theories used to address graduate employability. The chapter concludes by identifying and explaining the Social Cognitive Career Theory's Career Self-Management model used in the current study.

Figure 1.1 Organisation of Thesis



Chapter 3 – Context of the Research

The main aim of Chapter 3 is to set the context of the study on the basis of research conducted for Pakistan. It discusses Pakistan's social structure and education system, with a particular emphasis on the higher education system. Graduate employability, the concept of graduate attributes in higher education institutions and career guidance provided by higher education institutions in Pakistan are presented in overview. The chapter concludes by reviewing studies on graduate employability in Pakistan and discussing the main themes. This leads into the development of the conceptual model in the next chapter by emphasising the gaps in the literature.

Chapter 4 – Conceptual Model and Hypotheses Development

Chapter 4 focuses on development of the conceptual model of graduate employability based on SCCT CSM. It reviews studies on graduate employability and job search. The factors contributing to successful job search and employability and their relationships are listed. The model is proposed based on SCCT CSM, the list of factors and the relationships presented in

Table 4.1. The chapter develops specific research questions and hypotheses for the proposed model.

Chapter 5 – Research Methodology

Chapter 5 addresses the research methodology used. It outlines the research paradigm used, the rationale for its selection and the research design based on it. The development of the survey instrument is presented, along with operationalisation of constructs. The sampling technique and sample size are discussed, and the data collection procedure outlined. The chapter provides an overview of the data analysis procedure.

Chapter 6 – Data Analysis and Results

Chapter 6 presents the results of the data analysis. It explains the process of data preparation for analysis, including data screening and cleansing. Descriptive statistics are outlined. The validity of the questionnaire is discussed, taking into consideration content validity and construct validity. The latter half of the chapter is presented in two sections. First, the process of data analysis is explained by outlining the procedures of outer model assessment, inner model assessment, mediation and moderation. Next, the results of data analysis obtained by applying the procedures discussed earlier are presented. The chapter concludes by providing the results of hypotheses testing and the tests of moderation.

Chapter 7 – Discussion

The results obtained from data analysis are discussed in Chapter 7 in light of the literature and context of the research. Chapter 7 revisits the conceptual model. The results are discussed for each specific research question developed in Chapter 4. The chapter concludes by discussing the impact of the selected demographic variables on job search constructs and relationships.

Chapter 8 – Limitations, Implications and Conclusion

Chapter 8 discusses the concluding remarks, implications and limitations of the research, together with directions for future research.

1.8 Chapter Summary

This chapter has established the background for the current study. It provided an overview of the international landscape of the labour market, changes in traditional work practices, impacts of the global financial crisis of 2008, the slow recovery after that crisis and the high youth unemployment rate (compared to the overall unemployment rate). The streams of literature and the personal motivation of the author were discussed. The aims of the study were defined, objectives were formulated to fulfil that aim, and research questions were defined to achieve those objectives.

The literature has been analysed and four major gaps in literature were identified: the need for a model of graduate employability addressing most of the dimensions of the construct; the lack of research in Pakistan on graduate employability; the limited number of studies examining the complete model of career self-management; and lack of research employing SCCT CSM in the context of graduates' job search/employability, particularly in developing countries. The significance of the study was discussed in relation to testing the model and its applicability in Pakistan, and in its foundation basis for future study.

The chapter discussed the research methodology adopted, the use of the positivist paradigm, the process of operationalisation of constructs, survey development, sample size selection and data collection. The thesis organisation was explained.

Chapter 2 – Literature Review

2.1 Introduction

In Chapter 1, the research question was explored, together with the research gap and significance of the study. Based on the research question, this chapter will explore further the concept of graduate employability with the help of a literature review. Section 2.2 will focus on the world view of employability by exploring the origin and development of the concept over time. The concept of employability as defined by researchers and organisations is discussed in section 2.3. Section 2.4 will critically analyse the previous models developed for employability and their relevance to the current study. The theories used by researchers to examine employability will also be discussed and a suitable theory for use in the current study will be identified. Section 2.5 will focus on the chosen theory to understand the underlying constructs and their relationships.

2.2 The Worldview of employability

The issue of employability has emerged recently due to changing global economic conditions (McGrath 2009), leading to increased interest of researchers in the subject. The concept of employability dates back to 1909 in *Unemployment: A problem of industry* by William Beveridge, who discusses the problem of underemployment (Bezuidenhout 2011; McGrath 2009). Despite the large amount of research carried out, there remains no single definition of employability and there is no consensus on how to measure it.

2.2.1 Development of Employability through various stages

Gazier (1998) describes the evolution of the concept of employability through seven stages in the past century as discussed by Bezuidenhout (2011); McGrath (2009); McQuaid and Lindsay (2005) and summarized below.

2.2.1.1 Dichotomised Employability

This concept emerged at the beginning of the 20th century in the UK and the USA as the simplistic version of employability. As the name suggests, the concept focuses on two opposite poles of being employable and unemployable. Employable refers to those who are

able to work whereas unemployable applies to those who cannot not work and are in the need of relief.

2.2.1.2 Socio-Medical Employability

The theme of socio-medical employability emerged around the 1950s in the UK, the USA and Germany in particular (McGrath 2009). It focused on those physically, emotionally or socially challenged individuals who were unfit for work because of their condition and the requirements of their employment (Gazier 2001). In the post-war period, there was a shortage of qualified workers, which diverted the attention of policy makers towards underprivileged people (De Grip, Van Loo & Sanders 2004).

2.2.1.3 Manpower Policy Employability

This concept emerged in the 1960s in the USA as an extension of socio-medical employability but also taking other societal groups into account. It focused on social and physical disabilities, along with mobility issues (for example, the possession a of driver's licence or police record) and presentation (for example, if the individual looks to be a drug user in physical appearance). The concept once again was based on the gap between labour market requirements and individuals' knowledge, skills and attitudes (McGrath 2009). The concept was only for macroeconomic purposes. Policymakers focused on employees' attitudes towards employment and development of their self-perception to improve their employability (De Grip, Van Loo & Sanders 2004). Hence, the labour market re-entry of potential employees with low self-confidence was enhanced by improving their view of themselves.

2.2.1.4 Flow Employability

The approach of flow employability emerged in the French literature in the 1960s. About this time, the attention was on how easily certain individuals and groups could find employment. Flow employability was a demand-side approach and emphasised the ease of accessibility of employment prospects in local and national economies (Gazier 2001). Employability, during this period, was defined as "the objective expectation, or more or less high probability, that a person looking for a job can have of finding one" (Ledrut 1966; cited in Gazier 1998, p.44). Sanders and de Grip (2004) conclude in their literature review that in the 1970s the focus shifted from employees' attitudes to their occupational knowledge and skills: they were

required to have knowledge of basic occupational skills, along with the knowledge of the possibilities they have, their position in the labour market and the employment situation of the market in general. By the end of the 1970s, it was realised that having occupation skills alone was not the only requirement for being in demand by employers. To overcome this employability issue in times of industrial recession, Hoyt (1978) introduced the concept of transferable skills to help employees work in different environments and contexts (Sanders & de Grip 2004).

2.2.1.5 Labour Market Performance Employability

In the late 1970s, the concept of employability was defined in an international context focusing on future labour market outcomes for individuals, including the probability of becoming employed, the probable hours worked on the job and future expected wages (De Grip, Van Loo & Sanders 2004; Gazier 2001).

2.2.1.6 Initiative Employability

The concept of initiative employability emerged in the North American and European human resource development literature in the late 1980s when the focus began to be on the end of a 'job for life' and the discontinuities in career life that arose. It focused on employees' individual responsibility to develop skills and attitudes required to excel in their present jobs and to be motivated to look for better career prospects outside their current workplace (McGrath 2009). De Grip, Van Loo and Sanders (2004, p.8) termed this "marketability of an individual's cumulative skills", which can be measured by human and social capital (Gazier 2001). Human capital indicated the individual's skills, knowledge and learning ability, whereas social capital referred to the quality and size of the support network that exists around the individual. Hence, employable individuals are those who develop their skills, attitudes and connections to remain and progress in their employment careers.

2.2.1.7 Interactive Employability

In the 1990s, the concept of interactive employability emerged because it was argued that, apart from individual agency, employability is associated with and viewed relative to the employability of others in the labour market (McGrath 2009). The concept incorporated further stakeholders, including government, employers, organisations and policymakers. The demand for labour in international and national markets was also considered, hence,

increasing the dependence of employability on the labour market situation, knowledge of the labour market and company policies (De Grip, Van Loo & Sanders 2004). Thus, interactive employability defines employees, employers and policymakers as equal stakeholders in the employability challenge.

This discussion of 'employability' makes it clear that the concept has evolved over the last century from a simple dichotomous variable to a complex notion that considers a range of internal and external factors. With increasing complexity of the concept of employability, the differences in opinion on what employability is and how it should be measured have also increased. In the literature, the concept of employability is defined and measured in various ways, depending on the context – whether the context of the study is narrow or broad, and whether it is approached from the employer (demand) side or the employee (supply) side. The following section will discuss the concept of employability as it is addressed in today's world.

2.3 The Concept of Employability

The International Labour Organisation (ILO 2000, p.16) has defined employability as

> *an individual's ability to secure and retain employment and improve his or her productivity and income-earning prospects, compete effectively in the labour market and be occupationally mobile, "learning-to-learn" for new labour market and job opportunities, integrate fully into economic and social life, and generally work and live well in an advanced knowledge, communications and technological society. Individuals' employability assets comprise their knowledge, skills and attitudes on at least three levels:*
>
> *Baseline assets, such as basic skills and essential personal attributes (for example reliability and integrity),*
>
> *Intermediate assets, such as occupation-specific skills (at all levels) generic or key skills (such as communication and problem solving) and key personal attributes (such as motivation and initiative) and*
>
> *High level assets, involving skills that help to contribute to organisational performance (such as team working and self-management).*

The concept of employability originated from the changing nature of employment policy due to skills-based solutions to economic competition and work-based solutions to social deprivation (Hillage & Pollard 1998). It is associated with both those people currently unemployed and seeking work and those already employed but in search of better job opportunities within their current or another organisation (McQuaid, Green & Danson 2005). A broad spectrum of the population conceives of employability as being about securing a job or getting into the labour market (Pool & Sewell 2007), but the concept is a vast one and it needs to be understood completely to take advantage of it. Researchers and organisations around the world have presented various definitions of employability. According to the Confederation of British Industry (CBI):

> *Employability is the possession by an individual of the qualities and competencies required to meet the changing needs of employers and customers and thereby help to realise his or her aspirations and potential in work* (CBI 1999, p.1).

This definition of CBI deals with meeting employers' demands and realising potential by utilizing the possessed attributes. The concept of employability defined by the UK government centres around the government's priority to promote individuals' employability development:

> *Employability means the development of skills and adaptable workforces in which all those capable of work are encouraged to develop the skills, knowledge, technology and adaptability to enable them to enter and remain in employment throughout their working lives* (HM Treasury 1997, p.1).

These definitions deal with the employers' needs and employees' possession of required attributes but they do not consider contextual factors. Although many researchers have used employability as analogous to employability skills, it is far more than the possession of those employability skills regarded as desirable by employers (Bridgstock 2009). De Grip, Van Loo and Sanders (2004) argue that the definitions that deal only with "supply" characteristics (characteristics of an individual that they offer to the employer) ignore the perspective of industry. Hence, they provide a more holistic notion of employability by incorporating the supply side, demand side and institutional effects:

> *Employability involves the capacity and the willingness of workers to remain attractive for the labour market (supply factors), by reacting and anticipating on changes in tasks and work environment (demand factors), facilitated by the human resource development instruments offered to them (institutions)* (De Grip, Van Loo & Sanders 2004, p.10).

Beukes (2010) argues that individuals continuously develop their competencies and attributes through an iterative development process in order to enhance their access to and sustain employment opportunities. Despite all the efforts made by an individual to become employable, many factors are out of the individual's control. These include employer's discriminatory behaviour towards specific groups, preferences or hidden policies, government regulations, economic conditions, and other external factors. However, individuals can work towards the development of their skills and competencies, build their knowledge base by getting required qualifications, and engage in other behaviours such as developing their social networks that can help them increase their marketability compared to other job seekers. In line with this, the concept of employability presented by Hillage and Pollard (1998) sufficiently captures the effect of an individual's assets and the way they deploy and present their assets in their given context:

> *Employability is the capability to move self-sufficiently within the labour market to realise potential through sustainable employment. For the individual, employability depends on the knowledge, skills and attributes they possess, the way they use those assets and present them to employers and the context (e.g., personal circumstances and labour market) within which they seek work* (Hillage & Pollard 1998, p.12).

McQuaid and Lindsay (2005), however, present employability as having three main components: individual factors (including employability skills and attributes, demographic characteristics, health and wellbeing, job seeking, adaptability and mobility), personal circumstances (household circumstances, work culture, access to resources) and external factors (demand factors and enabling support factors). Synonymous with the external factors presented in this notion, Bridgstock (2009, p.33) states that labour markets are "slimming down and speeding up" because of globalisation, technology advancements and competition. This in turn affects employability prospects because organisations are looking for more

mobile and adaptable workers who are able to adapt to changing work practices (in terms of contractual, part-time and self-employment opportunities).

McQuaid, Green and Danson (2005) present two perspectives on employability: a narrowly defined supply-side focus and a broader perspective. In their opinion, the narrow supply-side view is a sub-set of the broader perspective of employment. The narrow view takes into account the individual's personal readiness for work. It includes the skills and attributes required by individuals in their own circumstances. A broader view of employability focuses on the individual's capacity to move into new employment (either from unemployment to employment, or from one job to another). The broader view takes into account job demand in the specific labour market and time-period in which the individual is looking for a job, along with employability skills and attributes (which are the focus of the narrow view). For example, in the Pakistani context, the narrow perspective depends upon an individual's personal circumstances such as holding a degree and employability skills, whereas the broader perspective relates to the region they belong to, the region where they are applying for a job and employment conditions in the region. To fully understand the concept of employability, it is important to look at the broader perspective such as the discrimination faced by individuals based on their gender or region of belonging (which could be evident from their appearance, language or dress).

Despite all the efforts of researchers to define employability by examining various contexts, it is an "extremely complex, and somewhat vague concept", with no coalesced view on how to define it (Andrews & Higson 2008, p.32). McQuaid, Green and Danson (2005, p.191) suggest that "employability remains a contested concept in terms of its use in both theory and policy, and throughout the past century has been used as both a predominantly labour supply and a labour demand concept". Martini, Mariani and Cavenag (2018) agree with previous researchers and argue that this concept can be assessed from various perspectives but broadly it can be divided into two parts: internal and external employability. Internal employability can be explained as the ability of an individual to access and find a new job (i.e., obtaining a job), whereas external employability is focused on the ability of an individual to achieve further promotion within the organisation (i.e. maintaining the job and progressing through the desired career path).

Research has suggested that it is difficult to identify a fundamental theory of employability because many factors contribute towards the idea of being employable (Weerasekara 2013). McIlveen, from his research on psychological and career development perspective of employability in both young and older workers (Luke, McIlveen & Perera 2016; McIlveen & Pensiero 2008; Pensiero & McIlveen 2006), concludes "there is no fundamental theory of student employability. There are several approaches to measuring employability, (both) objectively and subjectively" (McIlveen 2014). The literature also shows that employability is discussed more from the demand side (GMAC 2012; Ramadi, Ramadi & Nasr 2015; Srivastava & Khare 2012) rather than taking into account the perspective of the supply side. It is ironic that policymakers are accepting the world's sporadic labour market practices but that 'full-time employment' remains the employability indicator for many government and university funding bodies (Bridgstock 2009).

2.4 Graduate Employability

The factors contributing to the rise of unemployment around the world influence the youthful population the most. Graduate unemployment has been on the rise for the past decade following globalisation and the rise of the knowledge-driven economy. The International Labour Organisation has observed that the youth unemployment rate is three times that of adult unemployment and it has remained constant between 2014 and 2018 (ILO 2015, 2018). In 2015, the youth unemployment rate was at 11.1%, up from 10.9% in 2014, despite the rise in the education attainment rate (ILO 2016), whereas in 2018 the youth unemployment rate rose to 13% (ILO 2018). A reason for a rise in that rate is the world's ever-increasing population (Wanberg 2012) and global mobility. Even in Europe, Central Asia and North America, where unemployment is expected to decline, long-term unemployment and youth unemployment remain significant labour market and social challenges (ILO 2016, 2018). With the increase in youth unemployment, research on graduate employability has also attracted researchers' attention.

Human capital theory suggests that economic benefits could be achieved by investing in people (Sweetland 1996), so that governments around the world expect higher educational institutions to develop graduates' employability (Knight & Yorke 2002; Sumanasiri, Yajid & Khatibi 2015). Governments internationally are in fact funding higher educational institutions

to emphasise developing and continuously updating "demonstrable graduate outcomes" and produce "work ready graduates" who are equipped with the necessary skills and knowledge to work in their disciplinary field and also across the world of work (Bridgstock 2009, p.31). Employability is also used as a measure of quality of education provided by an institution by accreditation bodies (Sumanasiri, Yajid & Khatibi 2015). Graduate employability is not only dependent on the knowledge possessed by graduates; co- and extra-curricular activities also play a role in developing graduates' employability (Yorke & Knight 2004). The role of education in developing employability is widely studied in the literature (Armatas & Vincent 2013; Gokuladas 2010; Papadopoulos & Armatas 2013; Yusof et al. 2014). Yet, despite all the research, differences are present in every aspect of employability in the higher education agenda, including defining, measuring, developing, and transferring (Cranmer 2006) employability.

Initially the concept of employability was equated with the ability of an individual in gaining and retaining a job (Hillage & Pollard 1998) but the concept has evolved since and has now become a complex construct. Eden (2014, p.268) states that "graduate employability [is] about developing a whole, employable person who integrates skills, qualities, values and relationships … with a personal history through the embodied experience of work". This notion of graduate employability captures the effect of various personal traits and skills developed by an individual by their personal experience. Yorke and Knight (2004, p.3) define graduate employability in a more holistic manner:

> *a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefit themselves, the workforce, the community and the economy*.

Yorke and Knight's concept of graduate employability is widely accepted and includes the potential benefits cultivated by the individual, the economy and society by utilising an individual's personal skills and abilities. The view of higher educational institutions on graduate employability differs across the world (Cranmer 2006). In some countries, attaining a first degree is deemed sufficient for gaining employment. But, in today's competitive globally mobile job market, holding a university degree is not sufficient for graduates to secure meaningful employment; rather it is expected to be value-added to with specific skills

to cater for the changing and challenging nature of work (Syed, Abiodullah & Yousaf 2014). Hence, other countries have integrated graduate attributes and learning outcomes as a measure of employability.

Graduate employability is a key issue for higher educational institutions because graduates face highly competitive and rapidly changing labour markets these days (Sarkar et al. 2016). Research reveals that 80.3% of university graduates from 50 countries around the globe (74% in Pakistan) intend to start their careers right after university by choosing a job that will help them to achieve their career goals (Bakari & Khoso 2017). Hence, educators are responsible for developing their graduates' employable skills and attitudes by promoting lifelong learning. The expectations of employers from graduates is similar across the globe (Harvey & Bowers-Brown 2004). Hence, many countries have moved towards an integrated employability agenda in the higher education (Cranmer 2006). Governments have emphasized enhancing graduate employability that has resulted in the development of graduate employability attributes in various countries. Bowden et al. (2000) describe graduate attributes as "the qualities, skills and understandings a university commonly agrees its students would desirably develop during their time at the institution and, consequently, shape the contribution they are able to make to their profession and as a citizen" (cited in Bridgstock (2008, p.32)).

To address this issue, universities (including in Australia, New Zealand, Canada, the USA, the UK and South Africa) have developed graduate attributes to which they aspire in their programs. Governments, in conjunction with universities in some countries, have developed frameworks that enable them to measure and enhance graduate employability. For example, the New Zealand Qualifications Framework (NZQF), developed by the New Zealand Qualifications Authority (NZQA), outlines the knowledge, skills and attributes expected to be demonstrated by the graduates of secondary and tertiary education; and the Danish Qualification Framework for Higher Education provides information about the knowledge, skills and competences that can be gained at Danish educational institutions.

Despite the efforts of educators, employers are not satisfied with the work-readiness of graduates and a mismatch between skills required by employers and those possessed by employees exists (Cranmer 2006). Employers have criticized graduates' inability to work and contribute effectively towards their businesses. The need is to redirect resources from classroom-based learning to employer-based training that can help improve employability

(Cranmer 2006) by hands-on training. Andrews and Higson (2008) state that employers when recruiting give preference to graduates who have previous work experience. Formal work experience is particularly valuable because it enhances graduates' learning experience while providing an opportunity to improve work-related skills. Part-time experience, on the other hand, proves a graduate's willingness to work and ability to balance work and study.

2.4.1 Previous studies on Graduate Employability

The debate on how to measure employability and what factors contribute towards the development of employability has been going on for decades. An enormous number of studies have been conducted in order to understand the construct of employability. These studies may be classified into three groups: studies looking at the effect of various variables on output, studies that have developed models to define employability, and studies that have used theories to conceptualise the construct of employability. Despite the amount of research conducted and the number of factors identified as contributing to graduate employability, the concept still lacks a "theoretical control and politicization" which hinders the further development and refinement of the concept (Sumanasiri, Yajid & Khatibi 2015, p.75). The following sections will therefore critically review the previous studies and models of graduate employability in order to understand the context, and this will help to conceptualise the model for the current study.

2.4.1.1 DOTS Model - 1977

The DOTS model developed by (Law & Watts 1977) is one of the first and respected models of employability aiming at developing students' employability by utilising their personal capital. According to this model, each student must accomplish four career education tasks to facilitate the development of their employability: opportunity awareness, self-awareness, decision learning and transition learning.

Opportunity awareness is the ability to stay aware of the job market circumstances, available opportunities, demands of those opportunities and rewards that can be reaped from them. It also encompasses awareness of different paths and strategies that can lead an individual to available opportunities. Non-occupational aspects, like the awareness of family, leisure and community opportunities, are also included. **Self-awareness** means developing the sense of self as a unique individual, and understanding what characteristics are similar and different

from other individuals. It deals with exploring one's own potential and strengths, such as qualifications, aptitudes, practical skills, etc.; it also involves the awareness of the self's needs and how they can be satisfied – such as job level, salary and type of work. **Decision learning** is the knowledge that enables an individual to make decisions keeping in view all the possibilities, expectations and pressures. It also deals with the styles of decision-making, skills required to take decisions and the ability to take responsibility, authority and accountability related to the decision made. **Transition learning** deals with the ability to effectively cope with transitions in life and develop skills to make transitions easier, e.g., school to work transition, or the transition from one job to another.

In simple terms, the DOTS model deals with 'who I am' (self-awareness), 'where I am' (opportunity awareness), 'what I will do in my situation' (decision learning) and 'where I will do it' (transition learning). Pool and Sewell (2007) say that the strength of this model lies in its simple representation – the way it has incorporated complex career development learning into a manageable framework. Despite the ease of use of this model and its dominance in the UK's career education sector (McCash 2006), it attracted some criticism. The model fails to address the various contextual factors because it does not incorporate the effect of social, political and environmental linkages (McCash 2006). Based on the factors addressed in the DOTS model, it can be used as a component of the whole employability concept but cannot be used as an employability model itself.

2.4.1.2 Hillage and Pollard's Employability Framework - 1998

Hillage and Pollard (1998) developed an employability framework in collaboration with the Institute of Employability Studies, as commissioned by the UK Department of Education and Employability. This model was developed by summarising all the major models of employability present at the time. According to the framework, there are four interrelated elements of employability: assets, deployment, presentation and context.

Assets represent what people have to offer to their employers. They comprise their knowledge (what they know), skills (what they do with what they know) and attitudes (how they do it). The assets can be divided into baseline assets (comprising basic skills and personality attributes, e.g., integrity), intermediate assets (representing profession-specific skills, generic skills, e.g., communication and problem solving and key personal attributes,

e.g., motivation and initiative) and high-level assets (involving skills contributing to organisational performance, e.g., team working, and commercial awareness).

Deployment refers to the awareness of possession of assets and the knowledge of how to use personal assets. It comprises career management skills and transition skills. Career self-management skills enable an individual to recognise personal career interests and abilities (self-awareness), identify the available opportunities in the labour market and their requirements (opportunity awareness) and develop a plan to get to their desired career opportunity (decision-making skills). Transition skills include the ability to find a suitable job by accessing formal and informal networks (job search skills) and being adaptable to job-specific and organisational circumstances (e.g., willingness to travel for a job).

Presentation refers to the ability of an individual to demonstrate their employability to employers. It includes the presentation of the self in a tailored CV according to the job description with the help of qualifications attained, references and testimonials, and in interviews with the help of appropriate oral and body language.

Context represents the context or circumstances in which an individual is seeking employment and their impact on the job search outcome. It includes personal circumstances and external contextual factors. Personal circumstances are dependent on age, gender, caring responsibility, and physical or intellectual disability. External contextual factors include potential barriers to seeking employment: e.g., an employer's recruitment and selection behaviour, macro-economic and labour market conditions, labour market circumstances, regulations and benefit rules and job matching process.

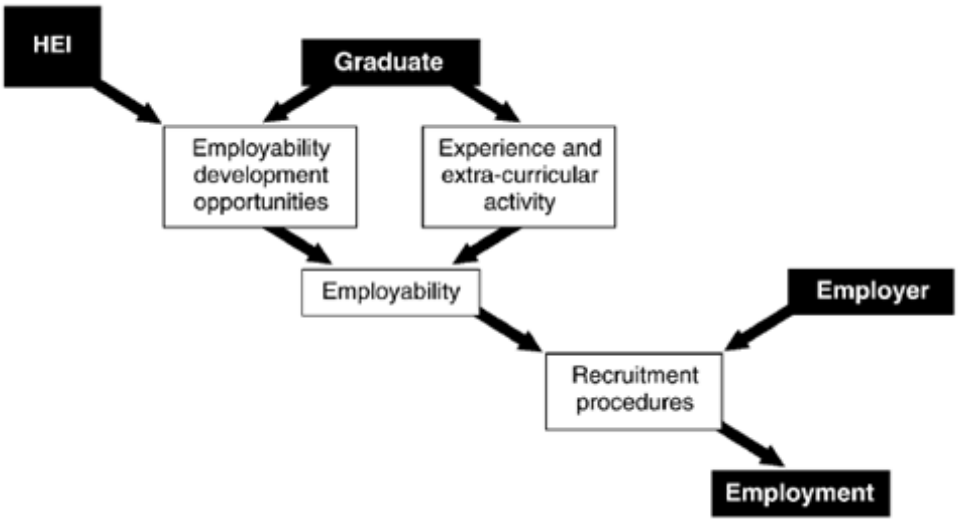
Although the model was a serious attempt to summarise all that was known about employability it failed to explain the underlying factors of employability or their association (Sumanasiri, Yajid & Khatibi 2015). Moreover, despite the framework presenting a systematic notion of employability, it mainly focused on the individual level factor assets of deployment and presentation, and everything outside an individual's control was defined with a single component of context (McQuaid & Lindsay 2005). It did not address the various factors that contribute to employability other than the labour market conditions, and the former are vital for the complete understanding of the concept of employability.

2.4.1.3 'Magic Bullet' Employability Development Model - 2001

Harvey (2001) constructed employability as an achievement of an educational institution rather than the ability of an individual graduate to find employment. This concept coincides with the notion presented by Sumanasiri, Yajid and Khatibi (2015) that employability is used as an educational institution's performance indicator by accreditation bodies. The model of employability development, also termed the 'magic bullet' model of employability development, was developed on the assumption that "higher educational institutions provide employability-development opportunities that enable the graduate to develop 'employability' and hence, get employed" (Harvey 2001, p.101). The graduate employment rate for a given institution was used as the institution's employability rating in this model and was conceptualised back from using data in hand to operationalise the concept. Although the model has a simple representation, where higher education institutions (HEIs) provide employability development opportunities to graduates to develop their employability, which helps them to achieve employment, Harvey (2001) presents a more detailed representation due to the complex nature of the employability concept. The model takes into account the experience, extracurricular activities, career intentions and social network, along with the employability development opportunities provided by HEIs. The employer perspective is also explored in this model in that it influences the recruitment procedure and ultimately the employment outcomes. The employers' influence on the recruitment process is a complex notion and needs to be evaluated from various angles because it can vary from individual to individual.

Although this model tries to cover most of the factors contributing to employability known at that time, the complex and qualitative nature of the model makes it difficult to test and implement. The researcher of this model did not explain how to measure the various factors addressed and failed to incorporate the effect of various important factors, including an individual's psychological capital. This model is based on what is known, i.e., the employment rate, and does not consider the quality of employability possessed by graduates.

Figure 2.1 'Magic Bullet' Employability Model



Source: Harvey (2001, p.102)

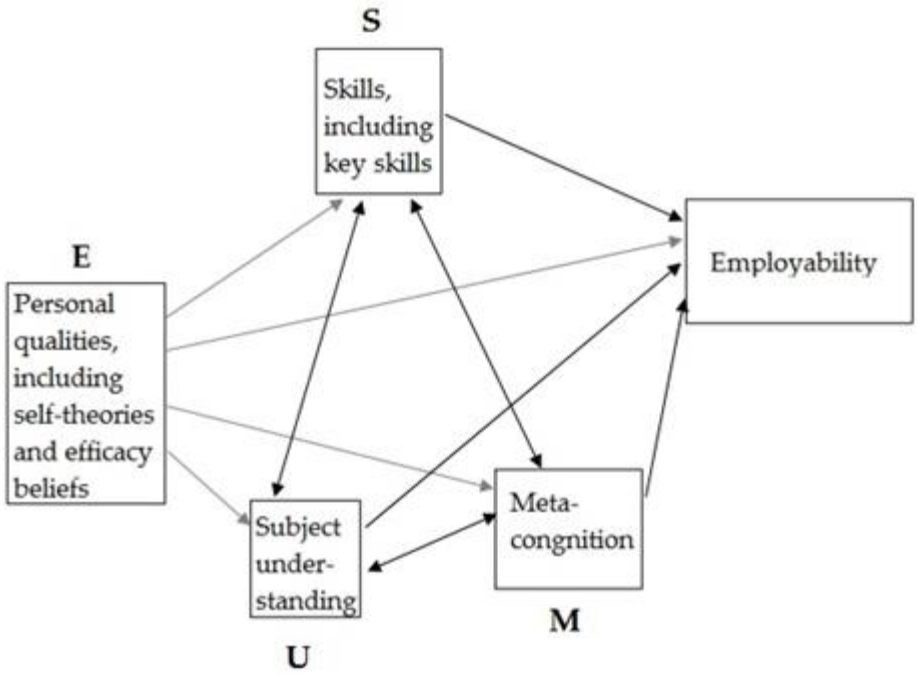
2.4.1.4 The USEM Account of Employability - 2002

The USEM model of employability developed by Knight and Yorke (2002) is influenced by the concept of 'capability' proposed by Stephenson (1998), together with insights from the literature on cognitive and social psychology. According to Stephenson (1998, p.1),

> *Capable people have confidence in their ability to take effective and appropriate action, explain what they are about, live and work effectively with others and continue to learn from their experiences, as individuals and in association with others, in a diverse and changing society.*

The USEM model is a representation of understanding, skills, efficacy beliefs and meta-cognition (Knight & Yorke 2002). As per the model, understanding refers to the subject-based knowledge and skills attained by an individual at a higher educational institution, whereas 'skills' represents an individual's possession of skills required to perform a job. It is skilled practice or skilful practice of an individual as awareness of or responsiveness to present context. Efficacy beliefs, self-theories and personal qualities are an individual's beliefs in their abilities to make a difference in a probabilistic manner, and meta-cognition refers to an individual's awareness of their learning and the ability to reflect on, in and for action to be taken according to the circumstances.

Figure 2.2 USEM Account of Employability



Source: Knight and Yorke (2002, p.265)

The USEM model was considered a major development in the research on employability because this complex concept was conceptualised with the help of constructs such as skills, metacognition, personal qualities and subject-based knowledge for the first time (Sumanasiri, Yajid & Khatibi 2015), but the model also had shortcomings and was criticised by researchers (Pool & Sewell 2007). The USEM account of employability was used as a basic framework by a large body of research work but the complex representation and expert language of the model makes it difficult for students, graduates and parents to understand the concept and apply it to their own context (Pool & Sewell 2007).

2.4.1.5 Psycho-Social Construct of Employability - 2004

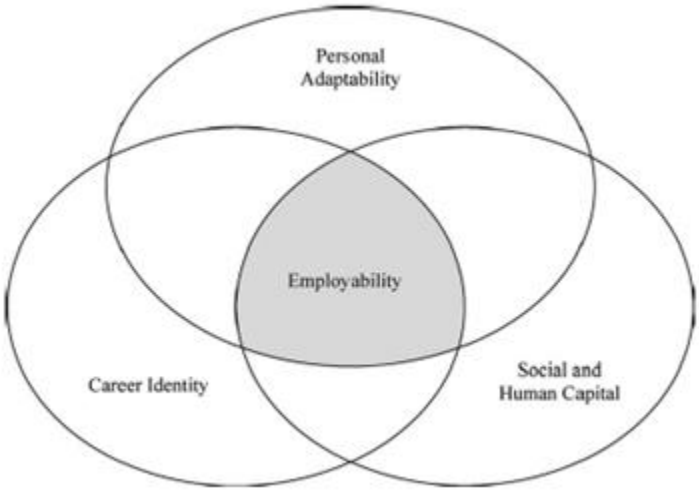
Fugate, Kinicki and Ashforth (2004) developed a model of employability based on the idea that employability is dependent on person-centred constructs to deal with career-related changes. It comprises three components: career identity, personal adaptability, and social and human capital.

Career identity is similar to the constructs of role identity, occupational identity and organisational identity. It is a comprehensive entity that represents career experiences and aspirations, including an individual's career-related goals, hopes, fears, personality traits,

values, beliefs, norms and interaction styles (Fugate, Kinicki & Ashforth 2004). Career identity, because of its cognitive-affective nature, assists in identification of available career opportunities by combining the individual differences such as dispositions, knowledge, skills and abilities. Studies assert that it adds a motivational component to employability by replacing the institutionalised career structures with individualised psychological structures.

Personal adaptability refers to an individual's ability to alter their dispositions, behaviours, knowledge, skills, abilities and other characteristics according to the demands of the situation. Individuals with an adaptable personality are attractive to employers and are employable because they are able to positively respond to any changes in employment (McArdle et al. 2007). Fugate, Kinicki and Ashforth (2004) integrate a number of personal attributes in the personal adaptability dimension of employability: optimism, propensity to learn, openness, internal locus of control, and generalized self-efficacy (p.22).

Figure 2.3 Psycho-Social Construct of Employability



Source: Fugate, Kinicki and Ashforth (2004, p.19)

Social and human capital is the third dimension of employability described in this model. Social capital refers to the size and quality of an individual's social network that can provide social support (Gazier 2001). Human capital refers to the factors that influence an individual's career path e.g., education, work experience, training, knowledge, skills and abilities (McArdle et al. 2007). In the context of employability, human capital influences an individual in identifying opportunities, whereas a social network enables an individual to get information

and access to available opportunities (Fugate, Kinicki & Ashforth 2004). Franzen (2006) asserts that people with higher social capital tend to get better job opportunities with higher income.

2.4.1.6 CareerEDGE- Key to Employability - 2007

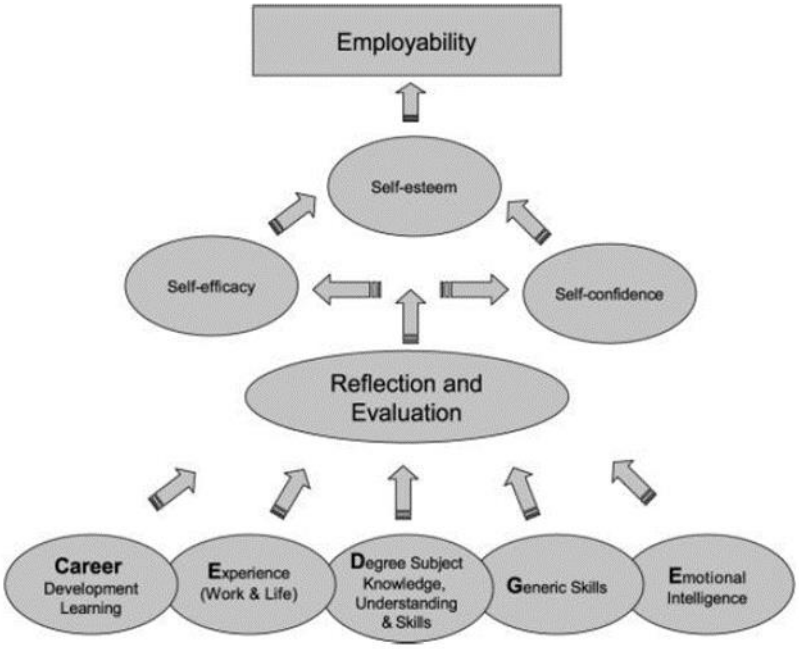
Pool and Sewell (2007) developed the CareerEDGE–key to employability model by integrating all the major constructs of the USEM model together with employability skills. The strength of this model lies in the clarity with which it is presented and its simplicity. It was based on the following definition:

> *Employability is having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful* (Pool & Sewell 2007, p.280).

The CareerEDGE model is devised by showing an interaction of factors and how they contribute to employability. It is a three-tier model, with the first tier representing basic knowledge and skills required by graduates to develop their employability. The five components present at the first tier are **Career** development learning, **E**motional intelligence, **D**egree subject knowledge, understanding and skills, **G**eneric skills, and **E**xperiences (work and life). Students and graduates utilise substantial time and resources to develop these five components. Reflecting on and evaluating the possession of such employability attributes helps in developing high levels of tier 2 components: self-efficacy, self-esteem and self-confidence. The interaction of the five first-tier components with second-tier social concepts enables graduates to enhance their employability (tier 3).

The pictorial representation of this model makes it easier to understand and implement. This model encompasses major elements of employability in a holistic manner and is used widely by researchers to study graduate employability (Jollands 2015; Stoica 2010; Sumanasiri, Ab Yajid & Khatibi 2015). It was the first attempt in graduate employability research to test the model quantitatively (Pool & Sewell 2007), allowing for the generalisation of results to the wider population. The earlier models such as USEM or Hillage and Pollard (1998) were limited in being tested qualitatively or with the help of case studies, which restricted the generalisation of the results. Despite being comprehensive and a widely accepted model of employability, Smith, Ferns and Russell (2014) categorise it as a “snap-short view” of employability, which restricts its application.

Figure 2.4 CareerEDGE–Key to Employability



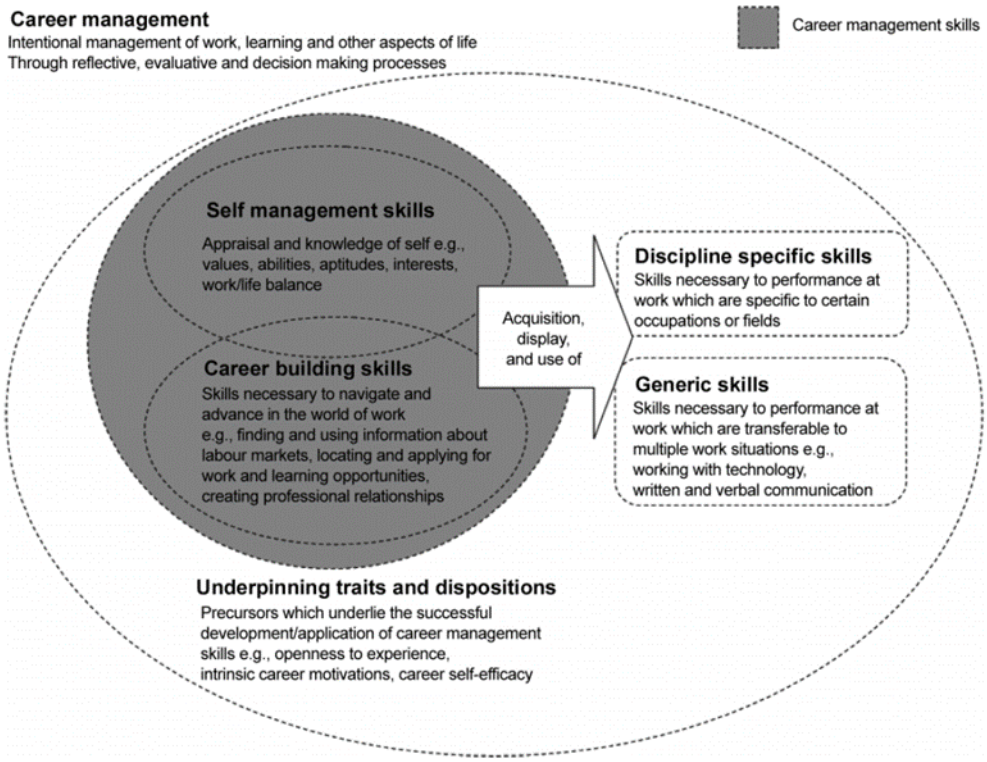
Source: Pool and Sewell (2007, p.280)

2.4.1.7 Bridgstock's Conceptual Model of Graduates Attributes for Employability - 2009

Bridgstock (2009) developed a conceptual model for graduate employability based on the notion that generic skills alone are not sufficient, and universities should invest in broader career management competences for enhanced graduate outcomes. The model is based on seven dimensions: career management, self-management skills, career-building skills, discipline specific skills, generic skills, employability skills and underpinning traits and dispositions.

Career management involves continuously practising reflection, evaluation and decision-making processes by applying self-management and career-building skills (grounded in particular basic traits and dispositions) to effectively successfully acquire, exhibit and use generic and discipline-specific skills in the dynamic labour market. In the short term, it involves obtaining and maintaining employment. Career management activities encompass creating realistic and personally meaningful career goals, identifying and involving strategic work decisions and learning opportunities, understanding work life balance and realizing the correlation between work, the economy and society.

Figure 2.5 Bridgstock's Model of Graduate Attributes for Employability



Source: Bridgstock (2009, p.36)

Self-management skills, which are related to career identity (Arthur, Inkson & Pringle 1999), refer to an individual's perceptions and evaluation of their values, abilities, interests and goals. An individual must engage in self- and career-management activities to realise their potential for their new career (Hall & Moss 1998). De Vos and Soens (2008) suggest that career self-management has two components: reflective (referring to the insights an individual has for their own career aspirations) and behavioural (referring to behaviours exhibited by an individual to manage their career). Career insight and self-management behaviours are crucial for career success (De Vos & Soens 2008) and research has shown that individuals with better career self-management skills show better career satisfaction and career success (Ali et al. 2014).

Career building skills refers to the skills required to find and utilise information regarding jobs, careers and the labour market in order to gain and maintain employment, followed by advancing in the desired career. Bridgstock (2009) says that career-building skills include:

i. Familiarity with one's industry – opportunities, threats, factors crucial to success, industry structure, beliefs, norms, values and culture, along with unemployment rate and median salaries;
ii. Ability to effectively identify and choose the best available opportunities for securing and advancing the career;
iii. Knowledge of how long to stay in a role, when to move to new employment, avail oneself of a training opportunity or utilise a new opportunity;
iv. Knowledge of how to represent skills and knowledge to an employer or client to apply for and obtain work; and
v. Creating social capital by networking with and creating personal and professional relationships with potential providers of opportunities or resources.

Discipline specific skills refer to the skills derived from specific domains, disciplines or subject matter present in university curricula to satisfy occupation specific requirements. Discipline specific skills are part of most employability models because they provide the basis for building a career in a particular field.

Generic skills are skills, dispositions or attributes that are not discipline specific and are transferable to other occupations and situations (Bridgstock 2009). In the literature, generic skills are also known as key skills, soft skills, employability skills, key competencies or transferable skills (Jackson 2014; Lauder 2013; Messum, Wilkes & Jackson 2015; Pool & Sewell 2007). Generic skills are the most widely acknowledged employability skills and are often used as synonymous with employability skills; employability skills frameworks or graduate attributes defined by universities and governments around the world only list generic skills (DoE 2006).

Employability skills are the skills required to obtain and maintain a job (McQuaid & Lindsay 2005). Bridgstock (2009) suggests that employability skills encompass generic skills, discipline specific skills, and career management skills (comprised of self-management and career building). Career management skills are used to determine "…which, to what extent, in what manner, when and where generic and discipline specific skills are learned, displayed (e.g., in applying for a job) and used" (Bridgstock 2009, p.36).

Bridgstock (2009) describes **underpinning traits and dispositions**, based on the work of other researchers, as the foundations of successful development and application of career management skills. Underpinning traits and dispositions comprise openness to experience, agreeableness, sociability, self-confidence, initiative, intrinsic motivation and career self-efficacy.

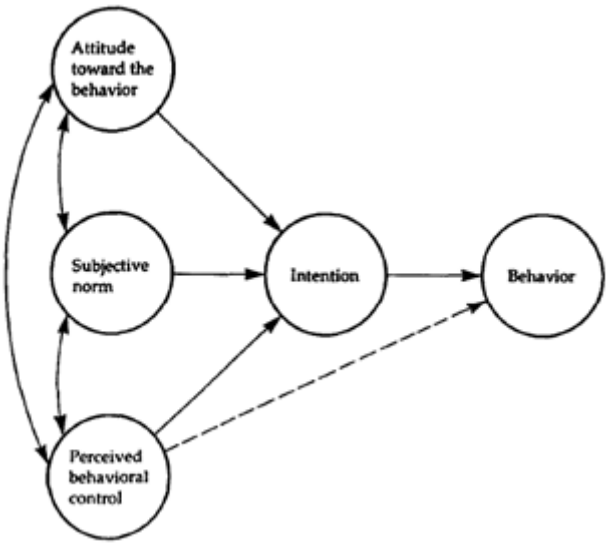
2.4.2 Theories used to Address Graduate Employability

The previous section discussed models of employability explaining factors and contributors of job search outcome. Though employability is a multi-faceted concept, most research on job search and employability considers a particular aspect of the whole range of employability.

2.4.2.1 Theory of Planned Behaviour

Ajzen (1985) defined the theory of planned behaviour to predict and explain human behaviour in a specific context. According to this theory, an individual is expected to indulge in a certain behaviour if they have intentions to portray that behaviour, whereas the intention is shaped by attitude towards the behaviour, subjective norm and perceived behavioural control. Researchers have used the theory of planned behaviour; an overview of these studies is presented below.

Figure 2.6 Theory of Planned Behaviour



Source: Ajzen (1991, p.182)

van Hooft et al. (2004) conducted a study to understand the job search behaviour of minority groups in The Netherlands by using the theory of planned behaviour. The results revealed partial support for the use of the theory where the impact of job search attitude and subjective norm was observed on job search intention. Job search intention was found to be a significant predictor of job search behaviour. Self-efficacy was found not to have any significant impact on intention and behaviour. van Hooft and De Jong (2009) also used the theory of planned behaviour to examine the role of behavioural, normative and control beliefs on job seeking for temporary employment in the Netherlands. Their results coincided with those of van Hooft et al. (2004). Song et al. (2006) studied unemployed job seekers in China to test the hypotheses developed by the theory of planned behaviour and determined that subjective norm and attitudes determine job search intensity, which contributes to job search behaviour, whereas the relationship between perceived behavioural control and job search intensity was not found to be significant. Lin (2010) conducted a study to determine Taiwanese job seekers' intentions to use job search websites while looking for a job; the study employed the theory of planned behaviour. Job search attitude, subjective norm and perceived behavioural control presented as a significant impact on job seekers' intentions to use job search websites. Fort, Pacaud and Gilles (2015) used the theory in a French sample by adding job search experience and two personality dimensions as moderating variables to the theory relationships. This study revealed a significant impact of subjective norm, job search behaviour and attitude on job search intensity. These results are in line with the results of Lin (2010). Personality dimensions (extraversion and conscientiousness) moderated the relationship between job search attitude and job search intention.

The results of the study presented above were all focused on determining the actions (job search behaviour of job seekers) based on intentions and the impact of three discussed factors (subjective norm, job search attitude and perceived behavioural control, conceptualised as self-efficacy) on job search intention. These results provide an insight into some of the contributing factors to job search behaviour but lack the understanding of other factors. Hence, the theory of planned behaviour fails to address the impact of other contributing factors to job search such as contextual factors (e.g., social support, a job seeker's demographic background, a job seeker's parents' education), personality factor (e.g., self-confidence, emotional intelligence) and learning experiences (e.g., work experience,

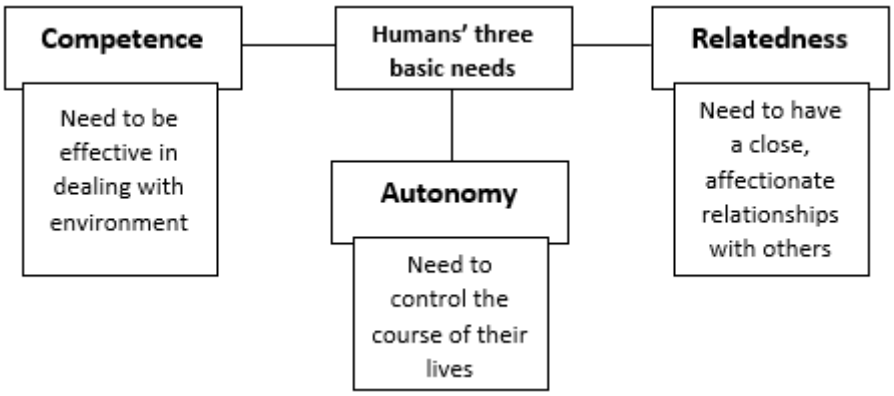
education). Hence, it is not a robust theory to be used to achieve the aim of understanding and developing a functional model of graduate employability.

2.4.2.2 Self Determination Theory

Self-determination theory is focused on "investigating people's inherent growth tendencies and innate psychological needs that are basis for their self-motivation and personality integration as well as for the conditions that foster those positive processes" (Ryan & Deci 2000, p.68). It is concerned with the choices made by individuals that are not influenced by external factors or sources. It grew from the work on human motivation during the 1970s and 1980s by Deci and Ryan. According to the theory, human motivation helps individuals to meet three basic needs: competence, autonomy and relatedness, and the motivation can be either controlled or autonomous.

Many studies have employed self-determination theory to examine the effect of motivation on job search. Veiga and Gabriel (2016) conducted a study on job seekers to examine the effect of two types of motivation of job search effort and metacognitive strategies. The results revealed that autonomous job search of an individual had a positive impact on metacognitive strategies, whereas controlled motivation had a variable effect throughout the job search process. Job search effort was impacted by motivation via cognitive strategies (Savolainen 2018; Soenens & Vansteenkiste 2005; Vansteenkiste et al. 2005).

Figure 2.7 Self-Determination Theory



Source: Based on Ryan and Deci (2000, p.72)

This theory has provided insight into the role of two types of motivation on job search but does not consider the impact of many other factors which are critical for the job search process. These factors include education, knowledge, experience, and personal psychological factors other than motivation (for example, self-efficacy, self-confidence, and emotional intelligence), and contextual factors like location, gender, parent's education, etc.

2.4.2.3 Career Construction Theory

Career construction theory is a theory of career development that "explains the interpretive and interpersonal processes through which individuals construct themselves, impose direction on their vocational behaviour, and make meaning of their careers" (Savickas 2013, p.147). The theory was proposed by Savickas (2005) with the aim of addressing career counselling and career development from a constructivist and narrative perspective (Del Corso & Rehfuss 2011), particularly for use in a multicultural society and global economy (Savickas 2013). It focuses on the process of building careers adopted by an individual by using personal constructivism and social constructionism. The concept is based on the notion that individuals cannot construct reality, but rather only the representation of reality.

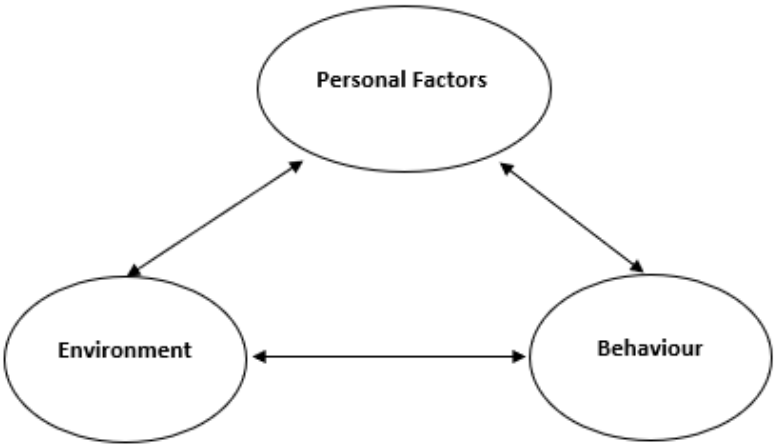
Review of research has revealed that not many studies have used this theory to examine job search in graduates. Guan et al. (2013) use career construction theory to examine the role of career adaptability in the job search process among university graduates in China. The results reveal a positive association between career adaptability and job search outcome. Xie et al. (2016) explore the relationship of calling with work engagement and subjective career success, and the mediating role of career adaptability using career construction theory. The results conclude the hypothesised relations are positive.

The underlying notion of career construction theory enables researchers to address and examine career adaptability, i.e., the ability of an individual to cope with and adapt to the career related tasks. As the current study is focused on university graduates who are trying to enter the job market, this theory is not appropriate for application in context, as the population of the current study does not possess the relevant experience and knowledge to address and apply the career adaptability concept. Also, the focus of the theory on career adaptability does not align with the purpose of this study, i.e., to examine the effect of various psycho-social and personal factors on job search outcome.

2.4.2.4 Social Cognitive Theory

Bandura (1986) presented Social Cognitive Theory based on his previous work on social learning theory (1977). Social cognitive theory is focused on the notion that individuals, their environment and their cognition interact with each other and affect their behaviours. It basically explains human psychological functioning with the help of interactions between an individual's behaviour, cognitive and other personal factors and environmental events (Zikic & Saks 2009). Compeau and Higgins (1995, p.118) explain Social Cognitive Theory postulates thus: "watching others perform a behaviour,…, influences the observers perception on their own ability to perform the behaviour, or self-efficacy and the expected outcomes that they perceive, as well as providing strategies for effective performance". Bandura (1986) identified the three main factors that influence behaviour as self-efficacy, goal representation and outcome expectations.

Figure 2.8 Social Cognitive Theory



Source: Wood and Bandura (1989, p.362)

Many researchers (Brown et al. 2008; Compeau & Higgins 1995; Lent & Brown 1996; Lent & Brown 2006a) have used social cognitive theory to explain the way humans behave in certain situations and the impact of their personal agency and environment on the behaviour. Lent, Brown and Hackett (1994) expanded social cognitive theory in the context of career development and developed Social Cognitive Career Theory (SCCT). Their initial SCCT explained "central dynamic processes and mechanisms through which (a) career and academic interests develop, (b) career relevant choices are forged and enacted, and (c) performance outcomes are achieved" (Lent, Brown & Hackett 1994, p.80). The theory aimed

to adapt, explain and expand on the early career relevant aspects of social cognitive theory and hence, two more models were added. SCCT now encompasses five conceptual models, explaining different professional outcomes: career interests, career choice and behaviour, work performance, work satisfaction and career self-management. In all five models, three person-cognitive factors are found in common, i.e., self-efficacy, outcome expectation and personal goals. The current study will focus on Social Cognitive Career Theory's Career Self-Development Model (2013), as this model is based on the notion that job seekers have control over their career development in initial stages of their career and hence, aligns with the aim of this study. An overview of SCCT CSM is presented in the next section.

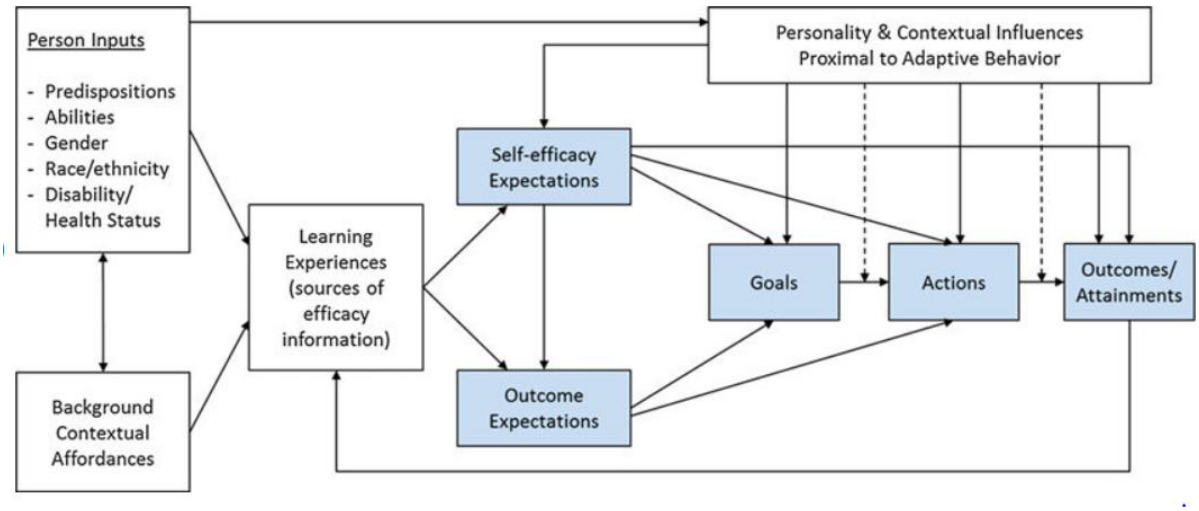
2.5 Social Cognitive Career Theory

Lent, Brown and Hackett (1994) developed social cognitive career theory (SCCT) to explain individuals' control on their career development process and the effect of extra-personal factors on their personal agency. SCCT comprises five models: career interests, career choice and behaviour, work performance, work satisfaction, and career self-management. The initial models of SCCT were more focused on the factors influencing people's interest in certain fields and were unable to explain life transitions such as the shift from school to work (Lent & Brown 2013). Hence, the career self-management model was designed in 2013 to particularly address these questions. SCCT's Career Self-Management (CSM) Model, developed by Lent and Brown (2013), will be used as the theoretical basis of this research to understand graduate job search in Pakistan.

SCCT's CSM is intended to overview the factors that help individuals to portray behaviours and take decisions for their career and educational progress in various situations (e.g., planning, information gathering, deciding, goal setting, job finding, self-asserting, preparing for change, and negotiating transitions). This model of SCCT focuses on processes and mechanisms that dictate individuals' behaviour when entering jobs within and across specific fields (Lent & Brown 2013). SCCT-CSM is based on the assumption that job seekers have control of their career development process, at least in some situations, and focuses on the micro-level processes of adaptive career behaviours. Adaptive career behaviour is the behaviour portrayed by individuals to develop their careers both under normal situations (e.g., job search decisions) and when faced with sudden stressful events (e.g., job loss).

Individuals can learn these behaviours and certain traits, such as environmental support (e.g., friends, family and social circle) and social cognitive factors (e.g., self-efficacy), influence the learning and performance of these behaviours. As depicted in Figure 2.9, self-efficacy, outcome expectations and goals, along with environmental supports and barriers, affect adaptive career behaviours.

Figure 2.9 Social Cognitive Career Theory's Career Self-Management Model



Source: Lent and Brown (2013, p.562)

2.5.1 Self-Efficacy

Bandura (1986, p.391) defines self-efficacy as "people's judgments of their capabilities to organise and execute courses of action required to attain designated types of performances". It is the judgment of one's own capabilities to perform a particular task or behave in a particular situation to get a desired outcome (Dahling, Melloy & Thompson 2013). Self-efficacy governs the activities and social settings, together with efforts, persistence, thinking patterns and emotional reactions displayed by an individual during times of difficulty (Lent, Brown & Hackett 1994). In the context of SCT, self-efficacy is a dynamic belief, rather than a static concept, that changes according to the context and interacts with other personal, behaviour and contextual factors (Lent, Brown & Hackett 1994). SCCT hypothesizes that self-efficacy influences career performance both directly and indirectly through the mediating effect on performance goals (Lent, Brown & Hackett 1994). Job seekers with higher self-efficacy tend to set and work harder towards their performance goals in comparison to job

seekers with lower self-efficacy. When job seekers underestimate their self-efficacy, they set lower or vague goals, avoid challenges, and give up easily, whereas overestimation of self-efficacy may encourage job seekers to apply for jobs that are not suitable for them and hence, face rejection and discouragement (Lent & Brown 1996). Research has shown that individuals with stronger self-efficacy in certain dynamics direct all their efforts towards the demands of the situation with confidence, stay persistent, and intensify efforts when faced with difficulty (Moynihan et al. 2003).

Self-efficacy can be measured in several ways but, consistent with the research on SCCT, i.e., to assess task specific self-efficacy (Lent & Brown 2013), job search self-efficacy will be used in this research. Job search self-efficacy (referred as self-efficacy hereafter) refers to one's beliefs about the ability to perform job search tasks effectively, which includes writing resumes, looking for opportunities, contacting employers, gathering information and presenting themselves in the interview.

2.5.2 Outcome Expectations

Outcome expectation, that is the outcome expected by an individual in response to a certain behaviour, is an important component in social cognitive theory (Lent, Brown & Hackett 1994). According to Bandura (1986, p.231), "people's actions are based on their judgment of what they can do and their belief about the expected effects of their actions" – that is, outcome expectations. This can be viewed as an individual's beliefs about the level of satisfaction they will attain from their primary goals if they get to engage in their desired career paths (Lent & Brown 2006b). Self-efficacy has an influence on outcome expectation since people with higher efficacy beliefs can have better job search outcome as they have a positive insight into the expected outcomes. According to SCT, individuals are expected to put in more effort into their desired behaviours when they have confidence that their abilities and that effort will produce the desired outcome. On the other hand, when people doubt their abilities or expect a negative outcome, they may put in less effort or quit quickly (Lent & Brown 2013). Bandura (1986) cited three types of expected outcomes: social, material and self-evaluative.

2.5.3 Goals

"A goal is the object or aim of an action, for example, to attain a specific standard of proficiency, usually within a specified time limit" (Locke & Latham 2002, p.705). It determines the expectation for a future outcome or participation in a certain activity (Bandura 1986). SCT posits that pre-defined goals regulate an individual's actions and behaviours. According to SCCT-CSM, adaptive behaviour is influenced by self-efficacy and outcome expectations both directly and indirectly through the mediating effect of goals (Lent & Brown 2013). People with higher self-efficacy are expected to set higher goals, are more committed to their goals, and find and implement better approaches to achieve those goals and take setbacks more optimistically than do people with lower self-efficacy (Locke & Latham 2002). People are also more likely to transform their goals into actions when the goals are clear, well-defined, declared in front of others and are in line with personal morals (Lent & Brown 2013). According to Locke and Latham (2002), goals affect performance through four mechanisms: (i) by directing attention towards goal relevant activities; (ii) by energising effort towards goal attainment; (iii) by enhancing persistence towards goal achievement; and (iv) by affecting action indirectly through discovery or use of task relevant activities. It is more likely that a desired outcome will be achieved when actions are driven by pre-defined clear goals.

2.5.4 Actions

Lent and Brown (2013, p.559) define adaptive career behaviours (actions cited in the model) as "behaviours that people employ to help direct their own career (and educational) development, both under ordinary circumstances and when beset by stressful conditions". Locke et al. (1989) say that actions can be specific when goals are defined clearly, because this reduces the ambiguity in performance (since performance is controllable). Goals provide a motivation to become involved in particular actions and behaviours to achieve desired outcomes. As self-efficacy impacts the commitment to performance goals, it can be increased by training (by providing success experiences), role modelling and communicating persuasive messages to increase confidence (Bandura 1997).

2.5.5 Learning Experiences

According to the career self-management model, adaptive career behaviours are facilitated and enhanced by social learning experiences. Learning experiences can be explained as

previous academic and social experiences that help to enhance an individual's self-efficacy and shape their outcome expectations (Lent & Brown 2013). Learning experiences can be derived from the perceptions of outcomes an individual has developed by experiencing relevant events, analysing second-hand information acquired by observing family and community members, receiving performance feedback, modelling, obtaining education and previous work experience (Lent & Brown 1996; Lent 2013; Lent & Brown 2013). According to the career self-management model of SCCT, individuals can expand their self-efficacy and outcome expectations by exposing themselves to relevant learning experiences in school and work settings (Brown et al. 2011; Lent & Brown 1996) to develop relevant skills and abilities required to perform a job.

2.5.6 Contextual and Personality Factors

Individuals generally define and achieve their goals when they have support from their environment (e.g., social and financial support) and have no barriers restricting their actions (Lent & Brown 2013). According to SCCT-CSM (Figure 2.9), contextual and personality influences can either support goals and actions directly or can moderate the path between goal-actions and action-outcomes. The effect of support and barriers on goals can also be observed via their impact on self-efficacy and outcome expectations. That is, the presence of support factors and absence of barriers enhance an individual's self-efficacy, help to define clear and high goals, perform actions to achieve the described goals and hence, achieve the desired outcome. Personality factors either can facilitate the practice of adaptive behaviours (for example, self-esteem helps to plan and persistently practise career exploration or job search) or may be relevant to adaptive behaviours that involve social interaction (for example, networking, interviewing skills, and emotional intelligence).

2.5.7 Ability

Ability can be assessed by achievement, aptitude or past performance (Lent & Brown 1996), and can be described as an individual's past performance related to the task at hand or other factors that contribute to the achievement of given tasks. These are cognitive and interpersonal talents and constitute an important factor in the SCCT model of task performance (Lent, Brown & Hackett 1994). According to SCCT, graduates get a job because they have developed (i) the required knowledge and skills to get a job through their education

and (ii) the skills required to look for a job effectively via their previous work experience (internships and work placements) and career development learning. This factor can be included in SCCT-CSM to understand "the quality of performance (i.e. how well job seekers perform their adaptive behaviours rather than which behaviours they attempt)" (Lent & Brown 2013, p.563).

2.5.8 Distal Antecedents and Experiential Sources of Adaptive Career Behaviours

A variety of distal antecedents and experiential sources are included in SCCT-CSM consistent with SCCT's general model of choice behaviour (Lent, Brown & Hackett 1994). These distal antecedents and experiential sources influence an individual's self-efficacy and outcome expectations. The distal antecedents consist of personal inputs (e.g., gender, race, sexual orientation, disability status) and contextual affordances (socio-economic status, educational quality). Personal inputs and contextual affordances together define an individual's social address, which offers individuals a basic environment where they can develop their self-efficacy and outcome expectation for their adaptive career behaviours (Lent & Brown 2013). These variables also have an influence on goals and actions, as they provide information about what goals are socially acceptable and which actions can help to achieve the goals in the given environmental context.

2.6 Chapter Summary

This chapter focused on the literature review in the context of employability and job search in order to understand the basic concept of employability, how it has developed over the years and previous research conducted on it. The worldview of employability is discussed by explaining the origin of the concept and how it has changed over time. The development of employability through seven phases is outlined. Employability started as a dichotomous variable synonymous with being employable or not. Currently, however, employability is viewed as an interactive concept where various stakeholders interact with each other to enhance the employability of an individual because this is dependent on various social, psychological and cognitive factors. The chapter explained the concept of employability and the way various stakeholders in employability define it.

Section 2.4 focused on the critical analysis of the previous research conducted in the context of graduate employability by providing an overview of the various models of graduate employability developed over time. This section also highlighted the theories used by researchers to understand employability. SCCT was chosen after careful analysis for use as the underlying concept to develop a model of graduate employability in this study. Hence, section 2.5 focused on explaining the theory and its underlying constructs.

The next chapter will focus on research conducted in Pakistan to provide a context for the overall research study. The conceptual model and hypotheses will be developed in Chapter 4 by using the description of social cognitive career theory presented in this chapter together with the literature review to be discussed in Chapter 3.

Chapter 3 – Contextualizing the Research

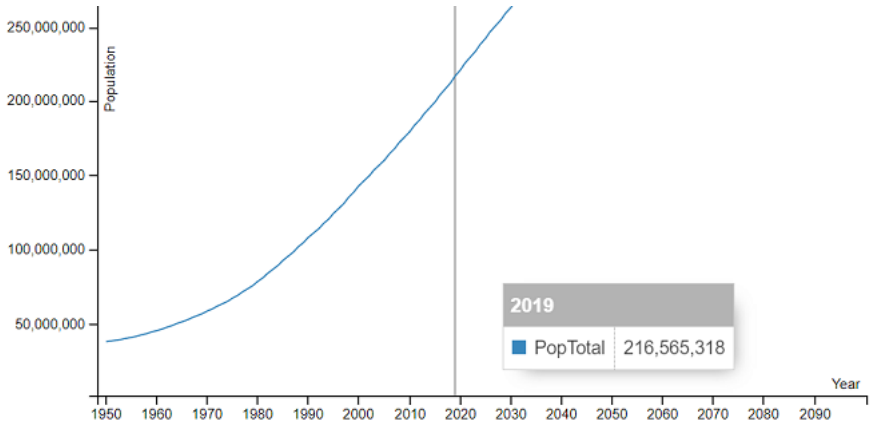
3.1 Introduction

This chapter addresses the context for the current research. Section 3.2 explains the social structure of Pakistani society with an emphasis on Hofstede's cultural dimensions and their relevance to the employability agenda. Section 3.3 presents an overview of the education system in Pakistan with an emphasis on the higher education system. Section 3.4 explores the landscape of graduate employability in Pakistan by comparing the system and policies in Pakistani universities with universities in developed countries. Section 3.5 reviews the current literature on graduate employability with reference to the Pakistani context.

3.2 Social Structure of Pakistan

Countries around the globe are facing a challenge of changing composition of population. Developed countries are challenged by their increasing aged population, whereas developing countries are observing a rise in their working population (Ahmad & Azim 2010). Pakistan is a densely populated country, with a current population standing at around 21 billion, and increasing at an alarming rate of 2.4% per annum (PBS 2019). Pakistan has also observed an increase in its youth population, with 64% of the population under the age of 30 and 29% between the ages of 15 and 29 regarded as youth (Ahmad 2018).

Figure 3.1 Population Growth in Pakistan



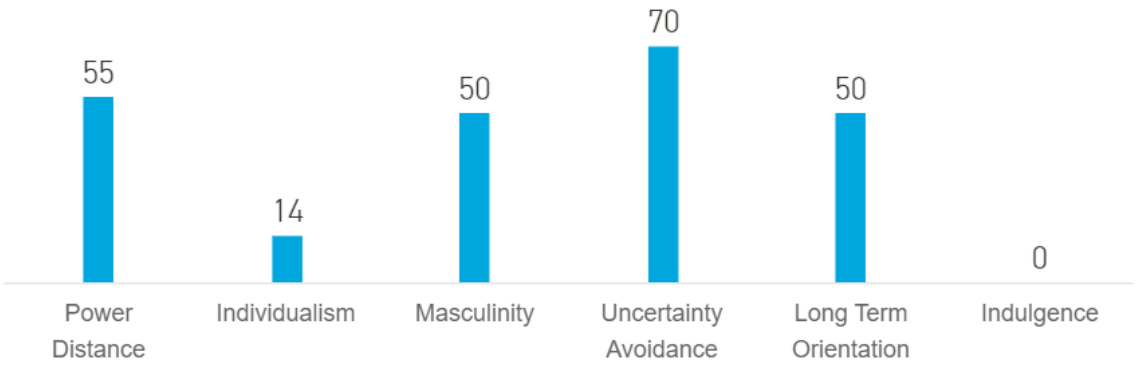
Source: Pakistan Population 2019 (2019)

Pakistan, as a society, faces many challenges, including increasing population, stagnant economic growth, a high unemployment rate, a low literacy rate and stratification of social

classes. These challenges interfere with the ability of an individual to contribute to the development of society on merit and the ability of the social circle to provide correct career guidance to the younger generation (Zahid, Hooley & Neary 2019). The social structure of Pakistan is heavily influenced by religious and cultural values. A proportion of the society has strong, rigid beliefs on which they are unwilling to compromise, despite the changing dynamics of the world. These values and beliefs heavily influence the dynamics of job search in Pakistani society.

The cultural values of the country are similar to those of other Asian countries in the region. On Hofstede's cultural dimensions, Pakistan scores high on uncertainty avoidance and collectivism, moderate on power distance, masculinity and long-term orientation and very low on indulgence (Hofstede Insights 2019). These dimensions provide a good indication of the way society works in various life situations. A high score on **uncertainty avoidance** explains the stressful behaviour of people when faced by an uncertain situation. Pakistan scores high on this dimension, i.e., Pakistanis prefer to avoid ambiguous and uncertain situations, have very rigid beliefs and are intolerant towards unpopular behaviours or ideas. Individuals tend to avoid new ventures and situations when it comes to employment and adhere to the classic ways of finding and undertaking employment. Although the dynamics of employability have changed globally, people in Pakistan find it hard to accept the changing rules and laws and hence, are unable to keep up with the changes.

Figure 3.2 Pakistani Culture on Hofstede's Cultural Dimensions



Source: Hofstede Insights (2019)

The notion of **collectivism** in society leads an individual to value being a part of the group and shows long-term commitment to that group. People in Pakistan are loyal to their groups (family, religious group, cultural group, etc.), and any offence is believed to lead to shame and loss of face for the whole group in the society. This leads to social pressure on an individual to secure employment because unemployment is seen as an act of shame in the society. The processes of hiring and promotion are also influenced by these values and the decision maker's ingroup members are given priority.

A moderate score on **masculinity** indicates that Pakistani society is somewhat dominated by achievement and success. Competition remains high in the society and individuals strive to be the best in every field of life. This dimension of the society impacts the way people search for and maintain their job because competitors are happy to go to any lengths to get the desired results.

The dimension of **power distance**, where Pakistan scores a moderate level, indicates that the less powerful individuals of the society do accept the unequal distribution of power. Individuals belonging to powerful sections of the society tend to receive benefits ahead of others, even if they are low on merit. Finding and maintaining employment is more difficult for individuals who do not have the backing of these power segments and hence, they have to work harder than others.

Long-term orientation describes the way society maintains links with the past while dealing with the challenges of the present and future. Pakistan scores 50 on this dimension, which indicates that, although some sections of the society prefer to adhere to their traditions and norms, others are more open to changes in the society and encourage changes in education to prepare for the future. This explains the heterogeneity of job seekers in the society, where some are open to changes, yet others retain their traditional ways of finding and maintaining their jobs.

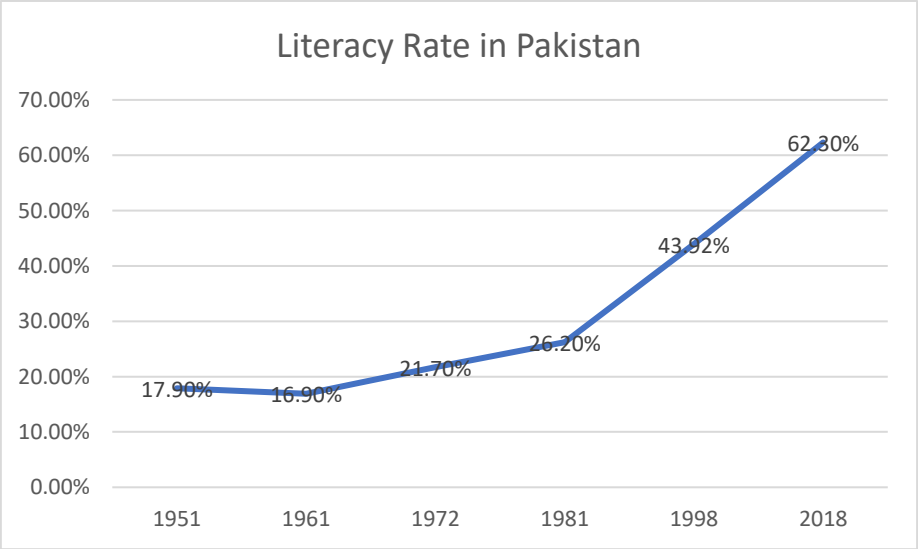
From this summary discussion, it can be concluded that on the whole Pakistani society values respect, certainty, loyalty and togetherness. This leads to high societal pressure on individuals to be respectful to and listen to their elders, to take their advice and follow through for big life decisions. These societal features also provide a sense of comfort because individuals can rely on their families and social circles in difficult circumstances. This discussion has provided a brief overview of the Pakistani society as a whole, but research by Shah and Amjad (2011)

has also indicated that the provinces in Pakistan have vast differences across their social norms and they score differently on these dimensions. Another distinguishing factor of Pakistani society is the high immigration rate from rural to urban areas (Bakari & Hunjra 2018). Almost 64% of the population lives in rural areas (World Bank 2019) with minimum to no access to basic life facilities such as health and education. This leads to highly populated urban areas without sufficient resources and planning to cater for the demands of a growing population.

3.3 Education System in Pakistan

Education is a basic need of a society which can enhance the social, scientific and technological status of the country. The role of education is to develop the human capital of an individual or nation by raising productivity, enhancing efficiency and producing skilled resources for the labour market (Memon 2007). The quality of human resources is dependent on the quality of education obtained by individuals (Haider 2008). Pakistan was in a state of crisis in education at the time of partition in 1947. Before partition, the region was under British colonial rule and some educational progression was observable but this was mostly limited to those areas that emerged as India (Bengali 1999). According to UNESCO, the literacy rate of Pakistan in 1950 immediately after partition was less than 15% and in rural areas it was even lower (Arifeen 2017). Pakistan has come a long way since 1947 but it has a long way still to go.

Figure 3.3 Literacy Rate in Pakistan over Time



Source: Based on Choudhry (2005)

The education system in Pakistan faces many challenges that include insufficient financial input from the government, lower efficiency for the implementation of programs and poor quality of management, supervision and teaching, resulting in a lower literacy rate which ultimately impacts the quality of graduates produced by universities (Memon 2007). Although progress in the education sector is slow, there is still movement. In 2017-18, the literacy rate was recorded at 62.3% (Govt. of Pakistan 2019). In recent years the literacy rate has been increasing at a steady rate and that increase is observed in both urban and rural areas. The definition of 'literate' for conducting the census has also changed over time. In 1951, a literate person was defined as anyone "who can read a clear print in any language". In the 2017 census, it was defined as the "ability to read and understand simple text in any language from a newspaper or magazine, write a simple letter and perform basic mathematical calculations (i.e. counting and addition/subtraction)" (Sheikh 2017). Despite the promising growth in the education sector, it is concerning that the latest definition of literacy considers any individual with basic reading, writing and numeracy skills as literate.

According to the constitution, it is the duty of the state to provide free education to every individual between the ages of 5 and 16 (Bibi 2015), but the government is unable to deliver that and in 2017 there were 5,324,181 children out of school (UNESCO 2019). To achieve the goal of providing free education at primary and secondary level, the government is focusing on quantity rather than quality, which leads to the decline in the quality of education imparted (Awan & Zia 2015).

The education system can be broadly classified into three categories: primary, secondary and tertiary. According to another classification, the education system can also be divided into madrassah, public and private systems (Nuffic 2012). Both classifications overlap and hence, a vast variation in the quality of education can be observed. Madrassahs focus on religious education. They have no connection to the national education system but are divided into primary, secondary and tertiary levels (Nuffic 2012). At the completion of secondary level, students are awarded a diploma in religious education. Fazila (scholar certificate) is awarded at the conclusion of tertiary education; this is equivalent to a master's degree with a teaching qualification. It also allows the graduates to access a PhD in their chosen field.

The national education system is divided into public and private education providers. At primary and secondary level, most private education is provided in English but public

education is either in English or Urdu. Although the government mainly funds public education providers, the education system is unable to keep up with changing trends due to an outdated curriculum, unqualified teachers and lack of facilities (Ikram 2016). These factors make the private education system more desirable to the public. The private system provides better development opportunities for children in terms of an up-to-date curriculum and co-curricular activities, better test criteria and knowledge creation which enable students to develop their personalities (Awan & Zia 2015). However, the education cost is high in these schools and hence, only a certain portion of the society (upper middle class or upper class) can afford to send their children to these schools. In 2015, the national primary to secondary school transition rate was observed to be at 86% (UNESCO 2019).

Despite the free education promised by the constitution, students are unable to continue their education for a number of reasons. For completion of secondary level, students have an option of either the national education system and presenting for the Secondary School Certificate and Higher Secondary School Certificate board examinations at the end of years 10 and 12, respectively, or enrolling in the British system and presenting for O level and A level examinations. This leads to a difference between the social and intellectual development of students due to differences in the quality of the curriculum, the education of teachers themselves, social development facilities and the nature of testing. All these factors create huge disparities between students even before they finish their secondary school studies. Another huge impact faced by students is the language of teaching because all post-secondary education uses English, whereas in secondary school some students use Urdu for their education.

At post-secondary level, the students either opt for vocational education or attend universities or degree awarding colleges for bachelors degree. In 2017, the gross enrolment ratio for tertiary education was only 10.12% (UNESCO 2019). Students from Urdu-medium educational institutions face a huge challenge at tertiary level because the medium of instruction is English at this level. Tertiary level education is provided as a bachelor (pass), which is a two-year programme, or bachelor (honours), which is a four-year program in a specialised field. Recently the trend to enrol in universities for a bachelor (honours) programme has been increasing. In 2017-18, 1.6 million students were enrolled in universities in Pakistan, an increase of 7.7% from the previous year (Govt. of Pakistan 2019). This has led

to an increasing number of students graduating each year and enhancing competition in the job market but without an increase in potential job numbers.

3.3.1 Higher Education in Pakistan

The purpose of higher education is greater than just educating the population about a particular specialised field. Higher education should aim to inculcate skills in an individual to become a contributing member of the society in innovative, economic, social and cultural development. Siddiq (1978) argued that the people of Pakistan were no less talented or deficient in moral values than people of developed countries, but the long period of foreign rule has harmed their intellectual capacities (Haider 2008). The governance of the country is facing challenges from the moral, political, economic and social aspects of the system and the society, hindering its ability to create a sustainable education system. The major challenges include an increasing population, a lack of qualified individuals, a scarcity of resources, political instability, an inefficient education management system, and poor implementation of policies due to corruption (Rahman & Fazal 2018). Due to the adverse effects on the education system, universities in Pakistan are facing a challenge to rebuild a system where every individual can become a contributing member of the society.

The higher education sector has expanded ever since its creation. At the time of partition in 1947, there was only one university in Pakistan but by 1997 the total number of universities had risen to 35 (Hoodbhoy 2009). The higher education system was modernised between 1999 and 2008 under General Pervaiz Musharraf, who introduced and implemented required policies and reforms (Javed & Ali 2017). The Higher Education Commission was established in 2002, along with the establishment of many other public and private sector universities. Currently, there are 170 public and private universities and institutions (HEC 2016c) providing higher education to 1.6 million students (Govt. of Pakistan 2019). From 2010 to 2015, the number of students graduating from universities almost doubled from 40,352 in 2010-11 to 71,363 in 2014-15 (HEC 2016b). According to another statistic, 0.9 million students were enrolled at the bachelor level in higher education institutions in 2014-15, and a rise of 163% was observed over the decade from 2004-05 to 2014-15 (HEC 2016a).

3.4 Graduate Employability in Pakistan

The job market has observed dramatic changes globally. Increasing competition, customer mobility, technological development and workforce diversity have changed the dynamics of the workforce and organisations (Shahzadi et al. 2014). The employability stakeholders in Pakistan accept the need to produce graduates equipped with relevant knowledge and the skills required to respond to economic, cultural, technological and environmental changes on a global scale (Haque 2013). However, the higher education system is unable to cope with the changing demands of the labour market due to the societal mindset that resists changes and adheres to conventional ways (Farooq 2011b).

As of 2015, Pakistan has the 10th largest labour force in the world, with 56% of the population in the 'productive' age group (15 to 64 years) (Govt. of Pakistan 2015a). As the population is increasing rapidly at the rate of 2.4%, it is difficult to cater for the employment needs of all citizens without substantial economic growth. Pakistan is one of the countries in South Asia whose economy and employment rates have grown below regional averages during recent years (ILO 2015). Although South Asia has the lowest unemployment rate, it has more than half of the world's vulnerable employees, with three out of four workers in vulnerable employment in the region. In Pakistan, the pre-economic crisis unemployment rate was at 5% in 2007-08, which increased to 6% by 2013-14 (Govt. of Pakistan 2015a). Statistics show that 9.7 million people joined the workforce between 2005 and 2013, whereas the employed workforce increased by 9.05 million. This increased the number of unemployed individuals from 3.10 to 3.73 million by the end of 2013 (Govt. of Pakistan 2014).

The increasing trend of obtaining higher education in Pakistan is also adding to unemployment because there is no substantial increase in employment opportunities. In 2012-13, 1.59 million students were enrolled in universities, but this figure increased to 1.83 million in 2014-15 (Govt. of Pakistan 2015b). This shows the number of graduates entering labour market is increasing each year. On the other hand, limited job search expertise, a mismatch between education, aspirations and employers' requirements and a lack of mobility worsen the conditions for graduate employment. In the age group starting their career (aged 15 to 24), there are 39.92 million people out of 191.71 million total population. It is expected that the youth population will increase to 20.06 million by 2020 (Govt. of Pakistan 2015a).

Table 3.1 Unemployment Rate in Pakistan

Civilian Labour Force, Employed and Unemployed in Pakistan (Millions)		
Year	**2012-13**	**2013-14**
Labour Force	60.34	60.09
Employed	56.58	56.52
Unemployed	3.76	3.58
Unemployment Rate (%)	6.24	6.0

Source: Govt. of Pakistan (2015a, p.206)

Researchers, employers and students all agree that it is the responsibility of the higher education institutions (HEIs) to help students develop their employability. Research has proven that access to higher education enhances an individual's self-perceived employability (Bakari & Hunjra 2018) and hence, the government has made investments in the higher education sector in recent years. Yet, despite the efforts of government, policy makers and HEIs, a mismatch is present between the quality of graduates produced by HEIs and the demands of employers in the labour market. This leads to criticism of HEI's inability to produce graduates who are able to meet the needs of the labour market (Zahid, Hooley & Neary 2019). Farooq (2011a), in his study on the mismatch between education and occupation, reports concerns regarding the mis-alignment of the level and types of skills developed by HEIs and industry requirements. Imbalances between the number of students graduating and employment opportunities in the labour market can be observed because the increase in employment opportunities is not enough to keep up with the increasing number of graduates leaving universities each year (Bakari & Hunjra 2018; Farooq 2017).

The increasing labour force and the inability of the system to keep pace with this development and provide sufficient employment to the active labour force (Farooq 2011a) results in a higher unemployment rate, longer job search periods and lower productivity. In 2017-18, the unemployment rate was observed to be 5.79%, a decrease from 5.9% in 2014-15 (Govt. of Pakistan 2019). To improve the unemployment situation, past governments have initiated programs and policies (for example, the Prime Minister Youth Program) to tackle the crippling situation. However, those policies have been unable to solve the problem to any significant extent (Haque 2013). Haque (2013) argues that the employment prospects of an individual are based on that individual's political affiliation. This claim is backed by Farooq (2011b), who

conducted a study on job mismatch and concluded that individuals with a personal or social association with those in power were better matched in their jobs, which also shows the influence of power in Pakistani society rather than merit. Another factor influencing the efficiency of these programs is political instability where each new government moulds and changes policies to align with their agenda instead of moving forward from where the previous government has left off.

In regard to the new and ever-changing demands of socio-economic development of a country, universities and their contribution towards industry needs to be addressed and updated continuously to remain abreast of ever-increasing competition (Ashraf et al. 2018b). As discussed in section 3.2, the social situation of the country is different from Western societies and hence, it is challenging to implement Western theories and philosophies of employability and career guidance because the notion of the individual (in the Western world) as a sovereign choice maker conflicts with the basic norms of the society (Zahid, Hooley & Neary 2019).

3.4.1 Graduate Attributes in Pakistani Universities

Graduate attributes are the "desired learning outcomes that students are expected to have achieved by the time they graduate" (UTS 2019). They include the qualities, knowledge and capabilities a student is expected and encouraged to develop while at university (Adelaide 2018). Universities around the world are working towards creating a system that helps their students to understand and prepare for the requirements of industry. As described by the University of Adelaide (2018), "the Graduate Attributes are not a list of skills to be mastered; rather, they encapsulate for both students and the wider community the defining characteristics of a student's university degree program(s), and describe a set of characteristics that are designed to be transferable beyond the particular disciplinary context in which they have been developed". The concept behind graduate attributes is to provide students with a total university experience along with a carefully designed curriculum to enable them to develop the desired skills and attributes as a part of their personalities.

Universities particularly in the Western world (the UK, New Zealand, Australia, Canada) have adopted the concept of graduate attributes, also described as graduate outcomes, employability attributes, graduate qualities or graduate competencies. Advance HE (previously known as the Higher Education Academy, a professional institution providing

support for the higher education sector in the UK) has created a graduate attributes framework to guide HEIs (Advance HE 2019). The framework describes how graduate attributes differ from institution to institution but include attributes related to study skills, field of knowledge, digital literacy and other 21st century skills.

The University of Glasgow, the University of Edinburgh, the University of Auckland, the University of Canterbury, the University of Otago, the University of Melbourne, the Australian National University and the University of Toronto are some examples of universities who have adopted and implemented the concept of graduate attributes. The excellent employability rate of graduates from these universities explains the importance and effectiveness of graduate attributes. Recruiters ranked the graduates of the University of Toronto as first in Canada and 13th most employable in the world (Lavender 2014). The University of Melbourne is ranked 6th globally for graduate employability, according to a 2019 QS graduate employability ranking (Glass 2018), and the University of Sydney is ranked 5th worldwide (UoS 2019).

A search was conducted on universities in Pakistan but unfortunately the concept of graduate attributes in not prevalent in higher education sector there. Without proper guidance and understanding of industry requirements, students rely on their perception of the labour market that has developed by interacting within their social circle, talking to their peers and their limited interaction with employers and industry. Students are thus unable to prepare themselves for the world of work and lag behind when faced by the challenging circumstances of industry after graduation.

3.4.2 Career Guidance in Higher Education Institutions in Pakistan

In a challenging work setting, employers are demanding higher levels of employability skills among graduates as well as sound academic knowledge (Shahzadi et al. 2014). Researchers such as Shahzadi et al. (2014) agree that HEIs are the best place for individuals to develop and practise their employability skills. For enhanced employability, the changing labour market emphasizes the need to provide career guidance to graduates. The economic, political, technological and social systems change at a rapid rate and hence, greatly impact labour market demand. Graduates need to be aware of these changing conditions to stay on top of the ever-increasing competition. Although the need for career guidance is evident elsewhere, Pakistan lags in this area. The development in the field of career guidance is very slow because

there are very few professionally trained career coaches due to there being only a few degree programs in this field at a professional level (Zahid, Hooley & Neary 2019).

The top five universities of Pakistan were selected according to the HEC's 2018 ranking in order to conduct a search on the career guidance services provided by those universities to their students. The universities were Quaid-i-Azam University, the University of the Punjab, National University of Sciences and Technology, Lahore University of Management Sciences and COMSATS Institute of Information Technology. Quaid-i-Azam University, the largest university in the country, has no career support for its students, as is observed on their website. The University of the Punjab (ranked second in the country) has a "Career Counselling and Placement Centre", according to the website, but the webpage was last updated in 2010. National University of Sciences and Technology, ranked third in the country and first according to an international ranking, has a "Centre for Counselling and Career Advisory" but most of its activities are focused on providing support for mental health services; the latest events calendar was updated in 2016. Lahore University of Management Sciences, the top-ranked management studies university, provides career-related support to its students by providing workshops on resume writing and interview skills, along with job search strategies, career fairs and company presentations. COMSATS Institute of Information Technology also has a Career Development Office and it provides a wide range of career-related services to students. Apart from job fairs, job search assistance, internship programs and industry-academia linkages, it also provides various capacity-building workshops on resume writing, interview skills, presentation skills, job search strategies and mock interview sessions.

Although some of the universities provide better career guidance to their students compared to others, the guidance provided does not meet international standards. Further, the role of these career centres in helping students become desirable employees and finding a fulfilling job is questionable because there are no statistics to support the effectiveness of these activities.

3.5 Previous Research on Graduate Employability in Pakistan

The concept of employability has gained much attention among researchers over the past decade due to the changing dynamics of the labour market, education system and employees'

expectations. The greatest challenge researchers face is the difficulty of gauging the whole concept of employability in a single study due to its multi-dimensionality. The concept of graduate employability can be researched by studying various dimensions: for example, social, psychological, contextual or personal factors. Another challenge faced in the context of employability is the number of stakeholders involved. Ghauri and Ayub (2018) divide the stakeholders of employability into key stakeholders and secondary stakeholders, where the former include employers, students and higher education providers, and the latter involve the local community, employees and economy.

In comparison to the literature published globally on graduate employability, the research conducted, and literature published in Pakistan is very limited. A review of literature published in the context of Pakistan was conducted to understand the current situation of graduate employability there. Due to rapid advances in the labour market and changing demands of employers, only research conducted in the past 10 years was reviewed in order to keep the data current. The studies reviewed were categorised and it was observed that most either addressed the skills gap or the role of educators in developing student employability skills. Only a few sought to understand the predictors of employability and employer demands from employees, despite the importance of these in the context of graduate employability. Perceived employability was also addressed by a couple of studies and one aimed at developing an employability model for Pakistan. An overview of these studies is presented in Table 3.2 and discussed below.

Table 3.2 Studies conducted in Pakistan on Graduate Employability

No.	*Researchers and Year of Publication*	*Purpose, Industry and Respondents*
1.	Saher and Hussain Ch (2019)	To compare the level of self-perceived employability of public and private sector university graduates
2.	Abbasi, Ali and Bibi (2018)	To identify the gap between skills expected by managers and skills possessed by business graduates employed by banking industry
3.	Ashraf et al. (2018a)	To assess the current situation of collaborative university-industry (U-I) linkages in Pakistan
4.	Ashraf et al. (2018b)	To identify the university-industry (U-I) activities and linkages that enhance student skills and employability
5.	Bakari and Hunjra (2018)	To assess the impact of access to higher education and teachers' support on graduates' self-perceived employability and psychological wellbeing

6.	Ghauri and Ayub (2018)	To explore the skills that are valued by service sector HR professionals (public listed) and to identify the top four needed skills by service sector HR professionals
7.	Junejo, Memon and Mohammad (2018)	To investigate the current practices in higher education institutes and gap reduction between industry and academia
8.	Rahman and Fazal (2018)	To identify the causes of the skills gap in the ICT workforce and find ways to reduce it
9.	Bakari and Khoso (2017)	To investigate the level of psychological capital (PsyCap) and self-perceived employability (SEP) of business and agriculture students and investigate the link between PsyCap and SEP
10.	Saeed and Rashidi (2017)	To investigate generic skills, technical abilities and conceptual knowledge required by employers of marketing professionals
11.	Khan (2014)	To investigate empirically the predictors of students' passion for university grades in institutions of higher education in Pakistan in a milieu of dwindling job opportunities under the prevailing economic environment
12.	Mirza, Jaffri and Hashmi (2014)	To examine different assessments of employers and students about job skills leading to differences defined as skill, employability, and perception gaps in the Gujrat-Sialkot-Gujranwala industrial cluster
13.	Shahzadi et al. (2014)	To explore the role of business educators in developing employability skills in business graduates under current trends prevailing in management studies that affect their job marketability
14.	Syed, Abiodullah and Yousaf (2014)	To investigate the factors affecting the quality of Pakistani graduates as potential employees for the 21st century job market
15.	Haque (2013)	To understand the main causes of increasing unemployment of university graduates and how to create employability for university graduates
16.	Hassan and Noreen (2013)	To find out the educational mismatch between graduates' possessed skills and market demands
17.	Warraich and Ameen (2011)	To analyse the opinion of young and senior library and information science (LIS) professionals in Pakistan on LIS curricula and its relevance to market needs to enhance employability
18.	Raza and Naqvi (2011)	To investigate the perceptions of employers about the quality of Pakistani university graduates in terms of intellectual development skills, personal development skills, professional development skills, and social development skills

19.	Raza, Majid and Zia (2010)	To investigate the perceptions of students about roles of teachers engaged in imparting development skills and discussed implications of their perceptions for faculty development
20.	Atiq, Anis and Khan (2009)	To compare skill shortage in Pakistan with the subject's choice of students recently enrolled in institutes of higher learning

3.5.1 Skills Gap

As described by Jackson (2013a, p.778), the skills gap is "the disparity between industry needs and higher education provision". The skills gap can be explained as the difference between the level of skills desired and expected by the employers from their employees for a particular job and the skills shown by employees performing that job. The skills gap is created due to the different level of importance attributed to employability skills by employers, employees and educators (Sarfraz et al. 2018). A survey of business executives conducted across the globe concluded that the skills gap is one of the five most concerning issues in the business world (Aring 2012). Considerable research conducted on graduate employability addresses the skills gap.

Pakistan has shown socio-economic development in recent years but the education system is unable to cope with the industry demands due to its inability to upgrade and incorporate the required changes (Farooq 2011a). The problem of the skills gap has been observed in various studies conducted across the country and this needs to be addressed for efficiently producing an effective and productive workforce. Rahman and Fazal (2018) conducted a study on the skills gap of IT graduates in Pakistan and concluded that, although the country is producing IT graduates to meet high demand, the quality of the employability skills of these graduates is questionable because of the skills gap between the supply and demand of the industry. This leads to reducing opportunities for graduates to join larger firms.

The same trend was observed among business and marketing graduates. Abbasi, Ali and Bibi (2018) identify the skills gap especially in listening, problem solving, communication, leadership, interpersonal behaviour, analytical capacity, self-management, numeracy and critical thinking skills among business graduates working in the banking industry. Saeed and Rashidi (2017) conducted a holistic three-phase study to identify the skills gap among marketing graduates. They first identified the required competencies for marketing graduates

by content analysis of advertisements for marketing. Then the marketing executives ranked the 16 most desirable competencies they looked for when hiring. The exploratory analysis was conducted in the third phase to identify if the required marketing competencies are being delivered through academic curriculum. The results of exploratory analysis concluded that industry-specific knowledge, forecasting and budgeting are the three required skills that are not delivered by curriculum. The results of this study are based on the published curriculum and the researchers do not determine its effectiveness in delivering these competencies.

Hassan and Noreen (2013), from their study on economics graduates, identify that graduates do not address the requirements of employers by, in particular, their lack of communication, strategic thinking, abstraction and research skills. Warraich and Ameen (2011) reveal the skills gap present among library and information science graduates due to poor implementation of LIS curricula and a lack of specialised faculty members in Pakistan. Raza and Naqvi (2011) investigate employers' perceptions on the quality of graduates and find dissatisfaction of employers with the skills displayed by Pakistani graduates. Their study also highlights the need for faculty development to help students develop these skills.

Mirza, Jaffri and Hashmi (2014) conducted a study to identify the reasons behind the skills gap among Pakistani graduates despite the efforts of educators to prepare their students for the world of work. The data were collected from employers and students of the industrial sector in Pakistan. The results showed a skills gap in the professional skills of graduates; employers and employees both reported the possession of professional skills by employees was lower than the actual importance of those skills in work life.

Atiq, Anis and Khan (2009) found that the enrolment trend in Pakistan does not coincide with a skills shortage. They compared the students enrolled in higher education institutions in different parts of the country with the skills required in industry and found that students were not enrolling in the areas of skills shortage, which in turn led to a problem of unemployment. The government can intervene by regulating the number of students being enrolled in each field of study and encourage students towards fields where skills shortages exist in order to deal with the issue of unemployment and address the shortage of skills at the same time.

3.5.2 Role of Educators

A stream of research has explored the role of educators in developing student employability attributes. The focus of this stream of research is on employability skills as compared to the other personality or psychological factors. Shahzadi et al. (2014) conducted a study by collecting data from business school educators and concluded that educators acknowledged the importance of incorporating employability skills into the curriculum and agreed that their course objectives were vital for developing employability skills in their students. However, this study fails to address the effectiveness of those courses or the actual skills gained by students as a result of taking the courses. Ashraf et al. (2018b) have pointed to the high importance of university-industry linkages because these impact students' employability positively. They found internships to be the most important means of developing students' employability, followed by training faculty members. Raza, Majid and Zia (2010) studied the perception of students on the role of their educators in helping them develop the required skills for work. The students were not satisfied by the faculty's role in helping them develop employability skills, with the least help being provided in developing intellectual development skills. The need for faculty development in Pakistani universities was also highlighted.

Junejo, Memon and Mohammad (2018) conducted a systematic review to identify the gap between the practices employed by higher education institutions and the demands of industry and identified gaps in four key areas: internships, university-based incubators, case study teaching and field trips. They concluded that the gaps are present in all four areas. The analysis of the data showed an internship gap because students only do one internship during the summer of their last year of study and the quality of internships is also compromised because students do not take them seriously. Lack of interest is also observed from industry as employers do not assign sufficient work to internees and hand over internship certificates without receiving reports and conducting exit interviews. University based Incubations (UBIs) are a great way to help students develop industry-related skills and universities are under pressure from the government to enhance economic development. However, the lack of interest of faculty members due to copyright issues and minimum support received by HEIs from the government leads to very few UBIs in the country. Case studies are a great way to help students familiarize themselves with real-world situations. However, the case studies used in Pakistani universities are limited to the content in textbooks, which are sometimes

not relevant to the country's context, and the students are unable to develop the critical thinking skills required to solve the case studies and later real-world problems. Field trips are another way to enhance student learning but not many students in Pakistani universities get this opportunity due to budget constraints. Because of the lack of objectives set before field trips, students take these as a social experience and are unable to get the most out of them. The findings of this study are very insightful, especially for policymakers, but it lacks address of the specific requirements of industry.

The Ministry of Science and Technology developed an innovation plan in 2012 to stress the importance of university-industry linkages (MoST 2012). Ashraf et al. (2018a), from their study on university-industry linkages in Pakistan, concluded that the major constraints are from the university side. Heavy workloads and laboratory facility quality impede faculty members' ability to actively participate in collaboration. Industry also blames the lack of interest and low commercialisation potential of universities for hindering linkages. Another interesting finding was that most linkage activities are in the engineering departments of the university whereas humanities departments have the fewest. This study is unable to address the specific consequences of the lack of linkages for the quality of graduates produced and how that can be addressed.

3.5.3 Predictors of Employability

Research on graduate employability worldwide mostly addresses factors that contribute to successful job search outcomes. From the literature review, around 150 factors were identified as contributing to employability and affecting the job search outcomes. However, only a few studies were conducted in Pakistan on the same lines. Syed, Abiodullah and Yousaf (2014) studied the impact of emotional intelligence and interpersonal skills on the employability of university students and found high levels of self-reported emotional intelligence and interpersonal skills, but they did not show any relationship with academic performance. No significant relationship was found between employability skills and employability. However, the results of this study were self-reported by university students, which can lead to over-exaggeration. Khan (2014), in his study on students' passion for grades, found that university students believed higher grades were a predictor of employability and hence, they sought to work on their grades instead of other employability skills.

3.5.4 Employers' Demands

Although it is of vital importance to understand the demands of employers from their employees, because they are one of the key stakeholders of employability, only one study was found from Pakistan which addressed employer demands. Ghauri and Ayub (2018) identified the skills preferred by HR professionals when hiring business graduates, particularly in the in-service sector, and found adaptability, leadership, teamwork and work ethics were the most desired skills. Mirza, Jaffri and Hashmi (2014), in a study on skills gap, identified the importance ascribed by employers to various skills: employers attributed the highest importance to professional skills, followed by core employability skills; professional skills included accuracy, decision making, ability to apply knowledge of the subject, ability to use modern tools, equipment and technologies specific to the job, honesty, persistence, technical skills related to the subject and efficiency. Core employability skills included teamwork, hard work, self-discipline, effectiveness, devotion, productivity, self-motivation and initiative.

3.5.5 Perceived Employability

Perceived employability can be defined as the individual's perception of finding employment in the current labour market conditions (Berntson & Marklund 2007). It is an individual's view of themselves and their standing in the labour market. The HEIs are not only expected to develop the skills, knowledge, attitudes and behaviours of their students to contribute towards their employability, but also to nurture the perceived employability of students to enhance their sense of security to survive in a competitive, turbulent labour market (Jackson & Wilton 2017). Hence, higher levels of self-employability lead to higher self-confidence. Saher and Hussain Ch (2019) conducted a comparison of perceived employability and concluded that students studying at private sector universities have better perceived employability than students from public sector universities, but no difference was found in the perceived employability of individuals based on gender. Bakari and Hunjra (2018) concluded from their study that access to higher education and educators support help to enhance self-perceived employability of graduates without any difference between genders. Bakari and Khoso (2017) tested the impact of psychological capital on self-perceived employability and found three factors, optimism, self-efficacy and hope, had a positive impact on perceived employability. Participants showed no difference in perceived employability and psychological capital based on their gender.

3.5.6 Employability Model

Haque (2013) conducted a study to develop a model of graduate employability particularly for the Pakistani context in order to address the issue of unemployment for university graduates. He proposed six-month long training (divided into three stages) for graduates after their graduation under a new proposed ministry of graduate employability. The graduates would start with developing their foundation competencies relevant to their field of study, followed by training for industry-specific competencies. In the third stage, graduates would gain on-the-job training on skills required to perform the job in their industry. Given Pakistan's social and economic situation, the model Haque (2013) presents is not practical because it requires graduates to work on and develop the skills and attributes they should have already developed during their studies. Further, the idea of creating a new ministry is cumbersome in the highly politicised and bureaucratic society of Pakistan.

3.6 Chapter Summary

This chapter provided the context of the research by addressing the social and education system in Pakistan and its relevance to the employability agenda. Society was analysed in the light of Hofstede's cultural dimensions and it was concluded that Pakistanis are lagging in accepting the changing realities of the world of work, which can be explained by the high score on uncertainty avoidance. Pakistan is a collective society that exerts pressure on graduates to find a good job right after graduation and remain in it for a long time. The high-power distance explains the inequality of power in the society and distribution of jobs based on relationships rather than merit. The different streams of education in the society from the first years of schooling results in disparities between students which result in issues such as lack of confidence and self-esteem. The higher education sector has progressed over the years but there remain many issues that need to be addressed as a priority. The two major issues for employability are the lack of the concept of graduate attributes and insufficient career guidance available to students.

The literature review identified that most studies conducted in Pakistan on employability address the skills gap and that gap is observed in almost all fields of study. Although educators are striving to prepare students for the labour market, employers are not satisfied with the quality of graduates produced. A small volume of literature addresses the predictor of

employability in Pakistan, but this needs to be researched further to understand the determinants of employability. This will also help educators create a program to meet the needs of employers.

The next chapter will focus on the conceptual framework for the study, which will help to address these issues.

Chapter 4 – Conceptual Model and Hypotheses Development

4.1 Introduction

In Chapter 2, the concept of graduate employability and the previous models developed were reviewed to understand the underlying concepts. Chapter 3 presented a review of the literature as applied to Pakistan. The current chapter focuses on the development of a conceptual model for graduate employability in Pakistan. Section 4.2 focuses on reviewing the literature addressing the factors contributing to graduate employability. Section 4.3 focuses on developing a model by conceptualising the constructs of social cognitive career theory's career self-management model. It presents the rationale for inclusion of constructs based on the literature. Section 4.4 presents the conceptual model and relationship between constructs. Specific research questions based on the conceptual model are presented and hypotheses are formulated to answer them.

4.2 Factors Contributing to Graduate Employability

Up to the mid- to late 20th century, a career was synonymous with lifelong employment. Individuals would start a career at a young age and remain in the same job until they retired, with mutual loyalty from both employees and employers. However, the landscape of employability has seen changes over recent decades arising from internationalisation, globalisation, development in information technology and automation of jobs (Crossman & Clarke 2010). Lifelong employment has been replaced by employability – the ability of an individual to secure and keep a job. Technological developments have led to changes in the types of careers, roles and expectations (Kinash & Crane 2015). Globalisation has impacted the workplace by creating free-trade agreements, leading to multicultural group members, off-shore teams and virtual team settings (Truong, Heijden & Rowley 2010). Internationalisation and automation have resulted in displacement and outsourcing of many jobs. A wide array of literature on employability addresses the factors contributing to it. However, a shift has also been observed in impacting factors, for the reasons discussed above.

The literature on employability can be classified into two major groups: employability of graduates and employability of experienced professionals. Although some similarities are observed, significant differences are present between the factors impacting the employability

of these two groups. Employability of experienced professionals (i.e., job search as a result of turnover or lay-off) is facilitated by previous work experience, knowledge of the labour market and professional networks. Job search motivation, family responsibilities, social and psychological pressure, financial constraints and employment commitment also play a major role in this process. Graduates entering the job market, however, have limited knowledge of labour market dynamics and their main motive is to get a job in their field of study and start a career. Hence, it is not possible to replicate the results of the research conducted on one group for another group. An overview of the literature to understand the factors impacting employability is presented in Table 4.1. The literature published after 2000 (particularly 2005) was the focus in order to keep the results relevant and current. The Table outlines the country of study, research participants or population of the study and significant results obtained.

Table 4.1 Review of Literature – Factors Contributing to Employability

No.	Researcher and Year of Publication	Country of Study and Participants	Significant Results
1.	Lim, Lent and Penn (2016)	USA Study 1: unemployed job seekers Study 2: senior year college students	**Study 1** 1. Conscientiousness → self-efficacy. 2. Social support → self-efficacy. 3. Perceived outcome control → self-efficacy. 4. support and self-efficacy jointly predicted outcome expectations. 5. Self-efficacy → job search intention. 6. Outcome expectations → job search intention. 7. Conscientiousness → intention via self-efficacy. 8. Support → intention via self-efficacy. 9. Outcome control → intention via self-efficacy. 10. Self-efficacy → intention via outcome expectations. 11. Support → intention via outcome expectations. 12. Conscientiousness → outcome expectations via self-efficacy. 13. Support → outcome expectations via self-efficacy. 12. Outcome control → outcome expectations via self-efficacy. **Study 2** 1. Conscientiousness → self-efficacy. 2. Social support → self-efficacy. 3. Perceived outcome control → self-efficacy. 4. support and self-efficacy jointly predicted outcome expectations. 5. Self-efficacy → job search intention. 6. Intention → job search behaviour. 7. Outcome control → job search behaviour (in the opposite direction). 8. Conscientiousness → intention via self-efficacy. 9. Support → intention via self-efficacy. 10. Outcome control → intention via self-efficacy. 11. Self-efficacy → job search behaviour via intention.

			12. Conscientiousness → job search behaviour via self-efficacy-intention. 13. Support → job search behaviour via self-efficacy-intention. 12. Outcome control → job search behaviour via self-efficacy-intention. 13. Self-efficacy → intention moderated by outcome control.
2.	Coen et al. (2015)	Belgium Job seekers	1. Employment commitment → search intensity. 2. Financial hardship is not related to job search intensity. 3. Re-employment efficacy is negatively related to job search intensity for young job seekers.
3.	Fabio and Kenny (2015)	Italy High school students	1. Emotional intelligence (includes intrapersonal EI, interpersonal EI, stress, management, adaptability) → resilience. 2. Emotional intelligence → self-perceived employability. 3. Emotional intelligence → career decision self-efficacy. 4. Social support → resilience. 5. Social support → employability. 6. Social support → career decision self-efficacy.
4.	Russell, Holmstrom and Clare (2015)	USA Graduate job seekers	1. Social support → job search self-efficacy 2. Social support → job search behaviour 3. Companionship → job search self-efficacy. 4. Emotional support → job search self-efficacy. 5. Information support does not affect job search self-efficacy. 6. Instrumental support does not affect job search self-efficacy. 7. Information support → job search behaviour. 8. Emotional support → job search behaviour. 9. Instrumental or companionship support does not predict job search behaviour
5.	Sumanasiri, Ab Yajid and Khatibi (2015)	New framework proposed	1. Career development learning → learning outcomes. 2. Work and life experience → learning outcomes. 3. Degree subject knowledge, skills and understanding → learning outcomes. 4. Generic skills → learning outcomes. 5. Emotional intelligence → learning outcomes. 6. Learning outcomes → employability influenced by university reputation.
6.	Saks, Zikic and Koen (2015)	Canada Job seekers	1. JSSE-Behavioural (B) relates more positively with job search intention than JSSE-Outcome (O). 2. JSSE-B relates more positively with job search behaviour than JSSE-O. 3. JSSE-O relates more positively to the number of job offers received JSSE-B. 4. JSSE-B relates more strongly to job search intention than to the number of job offers received. 5. JSSE-B relates more strongly to job search behaviour than to the number of job offers received. 6. JSSE-O relates more strongly to number of job offers received than to job search intention. 7. JSSE-O relates more strongly to the number of job offers received than to job search behaviour.

			8. Career exploration [(a) environmental exploration and (b) self-exploration] relates more strongly to JSSE-B than to JSSE-O. 9. Career planning relates more strongly to JSSE-O than to JSSE-B. 10. Career exploration [(a) environmental exploration and (b) self-exploration] relates more strongly to JSSE-B than career planning. 11. Career planning relates more strongly to JSSE-O than career exploration
7.	Van Hoye et al. (2015)	Belgium Job seekers	1. Conscientiousness → instrumental job search attitude. 2. Employment commitment → instrumental job search attitude. 3. Financial need → instrumental job search attitude. 4. Social support → instrumental job search attitude. 5. Core self-evaluations → affective job search attitude. 6. Financial need → subjective norm. 7. Social support → subjective norm. 8. Extraversion → job search self-efficacy. 9. Conscientiousness → job search self-efficacy. 10. Core self-evaluations → job search self-efficacy. 11. Social support → job search self-efficacy. 12. Instrumental job search attitude → job search intention. 13. Affective job search attitude → job search intention. 14. Subjective norm → job search intention. 15. Job search self-efficacy → job search intention. 16. Job search intention → job search behaviour. 17. Core self-evaluations → instrumental job search attitude.
8.	Araujo, Neves and Banisch (2014)	Portugal Data from Portuguese Labour Force survey	1. Formal job search methods → stable employment. 2. Informal job search methods lead to employment, but job seeker looks for a job via public office and private placement agency.
9.	Eden (2014)	UK Students on work placements	1. Students are more focused on whole person model of employability instead of skills. 2. Placements leads students to push their limits from the comfort zone and become proactive.
10.	Guan et al. (2014)	China University graduates	1. Future Work Self → Employment Status. 2. Future Work Self → Career Adaptability. 3. Career Adaptability → Employment Status via job search self-efficacy. 4. Future work-self → job search self-efficacy via career adaptability. 5. Future work-self → Employment status moderated by career adaptability.
11.	Khan (2014)	Pakistan University students	1. Parents' interest, psychological pressure, academic self-concept, academic recognition, and employability have a significant impact on students' passion for academic grades.
12.	Kuzubas and Szabo (2014)	Indonesia Data from Indonesian Family Life Survey	1. Job seekers find job using their inner circle when the outer circle either too big or too small. 2. Finding a job using inner circle leads to lower pay.

13.	Liu et al. (2014)	China University senior year students	1. Job search behaviour self-efficacy → job search behaviour. 2. Employment self-efficacy → job search behaviour (negatively). 3. Perceived job search progress → job search behaviour via job search behaviour self-efficacy. 4. Perceived job search progress → job search behaviour via employment self-efficacy (negatively). 5. Perceived job search progress → job search behaviour self-efficacy moderated by internal attribution. 6. Perceived job search progress → employment self-efficacy moderated by internal attribution. 7. Job search behaviour → number of job offers.
14.	Syed, Abiodullah and Yousaf (2014)	Pakistan University graduates	1. Self-reported emotional intelligence and interpersonal skills are high for graduates. 2. Self-reported emotional intelligence and interpersonal skills not related to academic achievement.
15.	Bachmann and Baumgarten (2013)	Europe (various countries) EU labour force survey data	1. Job search intensity of male is higher than females under same circumstances. 2. Job search intensity is lowest for highest age group. 3. Job search intensity is higher for highly skilled unemployed job seekers. 4. Job search intensity is related to unemployment duration; low at the start, high for mid duration and low again for long duration.
16.	Guan et al. (2013)	China University graduates	1. Career concern → job search self-efficacy. 2. Career control → job search self-efficacy. 3. Job search self-efficacy → employment status. 4. When controlled for demographics and family background, career adaptability predicts employment status mediated by job search self-efficacy.
17.	Lent and Brown (2013)	Proposed model	1. Job search self-efficacy → search goals. 2. Job search self-efficacy → search actions. 3. Job search self-efficacy → outcomes. 4. Job search self-efficacy → outcome expectations. 5. Outcome expectations → search goals. 6. Outcome expectations → search actions. 7. Support and barriers → job search self-efficacy. 8. Support and barriers → outcome expectations. 9. Support and barriers → search goal. 10. Support and barriers → search actions. 11. Support and barriers → outcomes. 12. Personality → search goal. 13. Personality → search actions. 14. Personality → outcomes.
18.	Chen and Lim (2012)	Singapore Job seekers	1. Higher psychological capital → perceived employability. 2. Psychological capital → job search.
19.	Georgiou et al. (2012)	Greece Job seekers	1. Job search self-efficacy → psychological well-being. 2. Job search clarity → psychological well-being. 3. Job search self-esteem → psychological well-being. 4. Conscientiousness → psychological well-being. 5. Proactive personality → psychological well-being. 6. Conscientiousness → job search effort.

			7. Job search self-efficacy, job search clarity, self-esteem, conscientiousness, and proactive personality are not associated with job search behaviour and job search outcomes (i.e., the number of job search interviews, job offers, and job acceptance). 8. Job search self-efficacy, job search clarity, self-esteem and proactive personality are not associated with daily job search effort.
20.	Green (2012)	Australia Job seekers	1. Informal job search methods reduce wage losses due to job displacement. 2. Informal job search methods can increase the risk of job instability if displacement is due to reduced demand in specific skill.
21.	Guerrero and Rothstein (2012)	Canada Immigrant Job Seekers	1. Language fluency → job search. 2. Cultural knowledge → job search clarity. 3. Language fluency → job search self-efficacy. 4. Cultural knowledge → job search self-efficacy. 5. Social support → job search self-efficacy. 6. Job search clarity → job search intensity. 7. Job search intensity → number of interviews. 8. Number of interviews→ number of job offers. 9. Number of job offers negatively related to underemployment.
22.	Schaffer and Taylor (2012)	USA	1. People with higher job search self-efficacy uses active job search behaviour. 2. Higher self-efficacy leads to look for a job using social networks (social search behaviour). 3. People having social support uses high levels of active job search behaviour. 4. Social support facilitates looking for a job using social networks (social search behaviour).
23.	Fort, Jacquet and Leroy (2011)	France	1. Job search behaviour is not affected by job search goal. 2. Employment goal has no effect on job search behaviour, job search planning or job search effort.
24.	Lin and Flores (2011)	USA (research based on East Asian international students)	1. Higher performance accomplishment (previous experience in job search) → job search self-efficacy. 2. Higher verbal persuasion (social support) → job search self-efficacy. 3. Vicarious learning has no significant effect on job search self-efficacy. 4. Emotional arousal has no significant effect on job search self-efficacy. 5. Performance accomplishment → job search behaviour.
25.	Raza and Naqvi (2011)	Pakistan Employers	Personal development skills → employability. Professional development skills → employability. Intellectual development skills → employability. Social development → employability skills.
26.	Wanberg, Zhang and Diehn (2010)	Job search inventory developed	Following factors impacts successful job search outcome: 1. Job search intensity 2. Internet use. 3. Job search confidence. 4. Job search clarity. 5. Job search support.

			6. Stress and worry. 7. Skills.
27.	Zikic and Saks (2009)	Canada Job seekers	1. Environmental career exploration → to job search clarity. 2. Environmental career exploration → job search self-efficacy. 3. Self-career exploration → job search clarity. 4. Career resources → job search clarity. 5. Career resources → job search self-efficacy. 6. Training → job search clarity. 7. Training → job search self-efficacy. 8. Job search self-efficacy → job search intention. 9. Job search attitude → job search intention. 10. Subjective norm → job search intention. 11. Job search intention → job search intensity. 12. Job search clarity → job search intensity.
28.	Sverko et al. (2008)	Croatia Job seekers	1. Employment commitment → job search intensity. 2. Willingness to accept job → job search intensity. 3. Self-esteem → job search intensity. 4. Financial hardship → job search intensity. 5. Social support → job search intensity. 6. Family responsibility → early employment. 7. Better health → job search intensity.
29.	McArdle et al. (2007)	Australia Job seekers	1. Employability (adaptability, career identity, human, and social capital) → self-esteem during unemployment. 2. Employability → job search during unemployment. 3. Self-esteem is negatively related to job search. 4. Human capital (education) do not contribute to employability.
30.	Pool and Sewell (2007)	Proposed model	1. Career development learning → self-efficacy. 2. Work and life experience → self-efficacy. 3. Degree subject knowledge, understanding and skills → self-efficacy. 4. Generic skills → self-efficacy. 5. Emotional intelligence → self-efficacy. 6. Career development learning → self-esteem. 7. Work and life experience → self-esteem. 8. Degree subject knowledge, understanding and skills → self-esteem. 9. Generic skills → self-esteem. 10. Emotional intelligence → self-esteem. 11. Career development learning → self-confidence. 12. Work and life experience → self-confidence. 13. Degree subject knowledge, understanding and skills → self-confidence. 14. Generic skills → self-confidence. 15. Emotional intelligence → self-confidence. 16. All these factors contribute to employability.
31.	Brown et al. (2006)	USA University senior year students	1. Proactive personality → job search self-efficacy. 2. Job search self-efficacy → job search behaviour. 3. Job search self-efficacy → job search effort. 4. Job search behaviour → job search outcome. 5. Job search self-efficacy → job search outcome. 6. Self-esteem → self-efficacy. 7. Self-esteem → job search success.

32.	Côté, Saks and Zikic (2006)	Canada University students	1. Positive affectivity → job search clarity. 2. Job search clarity → employment success. 3. Job search clarity → job search intensity. 4. Job search clarity → job interviews and job offers. 5. Job search clarity mediates the relationships between positive affectivity and job search intensity. 6. Job search clarity mediates the relationships between job search self-efficacy and job search intensity.
33.	Saks (2006)	Canada University graduates	1. Active job search intensity → number of job offers. 2. Active job search intensity → number of job interviews. 3. Informal job search sources → fewer job offers. 4. Job search self-efficacy → search success. 5. People with low self-efficacy tend to accept job offer faster than with high self-efficacious people.
34.	Tay, Ang and Van Dyne (2006)	Singapore Graduating students	1. Self-efficacy → interview success. 2. Extraversion → self-efficacy. 3. Conscientiousness → self-efficacy. 4. Leadership experience → self-efficacy. 5. Emotional stability is not related to self-efficacy. 6. Academic achievement has no relation with self-efficacy.
35.	Crossley and Stanton (2005)	USA University students	1. Negative affectivity relates negatively to job search success (i.e., number of offers and job lined-up). 2. Distress → job search success. 3. Negative affectivity negatively related to interview success (no. of interviews and rating of interview success). 4. Distress relates negatively to successful interviews. 5. Relation between negative affectivity and interview success is mediated by JSSE and job search intensity.
36.	Liptak (2005)		1. Emotional intelligence helps college students to find a job and succeed in workplace.
37.	Knight and Yorke (2002)	Proposed model	1. Efficacy beliefs → skills. 2. Efficacy beliefs → meta-cognition. 3. Efficacy beliefs → subject understanding. 4. Efficacy beliefs → employability. 5. Meta-cognition → employability. 6. Skills → employability. 7. Subject understanding → employability. 8. Skills and subject understanding interact with each other. 9. Skills and meta-cognition interact with each other. 10. Meta-cognition and subject understanding interact with each other.
38.	Moynihan et al. (2003)	USA College graduates	1. Job search self-efficacy → no. of interviews. 2. Job search self-efficacy → no. of job offers. 3. Leadership role → job search self-efficacy. 3. GPA does not relate to JSSE. 4. Work experience does not predict JSSE.
39.	Saks and Ashforth (2002)	Canada University graduates	1. Job search behaviour → pre-entry P-J and P-O fit perception. 2. Career planning → pre-entry P-J and P-O fit perceptions. 3. Career planning → post-entry P-J. 4. Pre-entry fit perceptions mediates the relationship.

			between job-search and post-entry perceptions of P-J fit. 5. Pre- and post-entry P-J fit perceptions is related to and mediates the relationships between the job search variables and job satisfaction. 6. Pre- and post-entry P-J fit perceptions is related to and mediates the relationships between the job search variables and organizational commitment. 7. Pre- and post-entry P-J fit perceptions is related to and mediates the relationships between the job search variables and organizational identification. 8. Pre- and post-entry P-J fit perceptions is related to and mediates the relationships between the job search variables and intentions to quit. 9. Pre- and post-entry P-J fit perceptions → job satisfaction. 10. Pre- and post-entry P-J fit perceptions → intentions to quit. 11. Pre- and post-entry P-O fit perceptions → organizational commitment.
40.	Vinokur and Schul (2002)	USA Job seekers	1. Mastery → self-efficacy. 2. Mastery reduces depression. 3. Mastery reduces financial strain. 4. Self-efficacy → job-search motivation. 5. Self-efficacy → job-search intensity. 6. Financial strain → motivation. 7. Financial strain → intensity. 8. Financial strain → depression. 9. Motivation → job-search intensity. 10. Motivation → extent of reemployment. 11. Intensity → extent of reemployment. 12. Depression → continued unemployment.
41.	Wanberg, Hough and Song (2002)	USA Job seekers	1. Higher level of education → faster reemployment of better quality. 2. Higher self-reported skills → to faster reemployment. 3. Higher reemployment constraints (transport issue, childcare problems, disability or illness, higher pay or lower working hour expectations) → low job quality. 4. Higher job search intensity → higher reemployment speed. 5. Financial security → better job quality.
42.	Saks and Ashforth (2000)	Canada University graduates	1. Self-esteem → preparatory behaviour and lower job search anxiety. 2. Self-efficacy → preparatory job-search behaviour and job-search anxiety. 3. Job-search self-efficacy → informal job sources. 4. Active job search → job interviews and offers. 5. Job search intensity → more job interviews and offers. 6. Change in job-search behaviour is not affected by self-esteem or job-search self-efficacy.
43.	Saks and Ashforth (1999)	USA, Canada University graduates	1. Job search self-efficacy → job search behaviours. 2. Perceived control over job search outcomes → employment status. 3. Job search self-efficacy → employment status at T1. 4. Preparatory job search behaviour → employment

			status T2. 5. Active job search behaviour → employment status at T1. 6. Job search intensity → employment status at T1. 7. Self-esteem is not related to job search behaviour. 8. Self-esteem is not related to employment status. 9. Job search self-efficacy is not related to employment status at T2. 10. Perceived control over job search outcomes is negatively related to job search behaviours. 11. Preparatory job search behaviour is negatively related to employment status T1.
44.	Wanberg, Kanfer and Rotundo (1999)	USA Job seekers	1. Employment commitment → job search intensity. 2. Financial hardship → job search intensity. 3. Job search self-efficacy → job search intensity. 4. Motivation control → job search intensity. 5. Higher job search intensity → re-employment (significant for WHITE demographic variable).
45.	Hillage and Pollard (1998)	Proposed model	Employability has four components: 1. assets 2. deployment 3. presentation 4. context.
46.	Wanberg, Watt and Rumsey (1996)	USA Job seekers	1. Conscientiousness → job search frequency. 2. Conscientiousness → job search intention. 3. Social support → job search frequency. 4. Social support → job search intention. <u>At T2:</u> 5. Conscientiousness → employment status. 6. Social support → employment status. 7. Job search intention → employment status.
47.	Blau (1994)	Employees and college students	1. Preparatory and active job search behaviour are distinguishable. 2. Financial needs → preparatory job search behaviour. 3. Financial needs → active job search behaviour. 4. Task specific self-esteem → preparatory job search behaviour. 5. Task specific self-esteem → active job search behaviour. 6. Active job search behaviour can lead to voluntary turnover. 7. Preparatory job search behaviour → active job search behaviour moderated by task specific self-esteem.
48.	Blau (1993)	Employees	1. General effort job search, preparatory job search behaviour and active job search behaviour are distinguishable from each other. 2. Active job search behaviour can lead to voluntary turnover.
49.	Eden and Aviram (1993)	Israel	Higher General Self-efficacy (natural or raised through workshop) increases the chances of getting employed.
50.	Ellis and Taylor (1983)		1. Low self-esteem → use of formal sources of job search which ends up with fewer job offers. 2. Lower self-esteem weakens social skills and interview performance. 3. People with lower self-esteem are less viable to achieve their set goals.

51.	(Law & Watts 1977)	Proposed network	1. Opportunity awareness → employability. 2. Self-awareness → employability. 3. Decision learning → employability. 4. Transition learning → employability.

Table 4.1 reports a number of factors contributing to the employability and job search outcomes of an individual. The contributing factors are distinguishable based on study participants and circumstances. Broadly, the factors can be classified into support factors, motivation factors, personal traits, psychological measures, job search methods, job search (process), job search outcome and evaluation. Support factors include social support, companionship, subjective norm, information support, instrumental support and verbal persuasion. Motivation factors include financial need, employment commitment, motivation control, job search motivation, job search goal, vicarious learning, career exploration and performance accomplishment. Self-esteem, self-efficacy, self-confidence, proactive personality, cognitive ability, neuroticism, extraversion, openness to experience, agreeableness, conscientiousness and physical health can be regarded as personal traits. Psychological measures impacting employability include psychological well-being, anxiety, depression, stress, emotional stability, emotional support, optimism, hope, ambition, career control, career confidence, career concern, career planning, perceived control, emotional arousal, emotion control, positive affectivity, negative affectivity, career curiosity and job search constraints. Job search methods include active job search, preparatory job search, planning behaviour, social capital/network, search through social network and careers resources. Job search (process) factors include job search clarity, job search intensity, job search intention, job search attitude, job search behaviour and job search effort. Employment status, employment quality, number of job offers, and number of job interviews are job search outcome factors. Evaluation factors include core self-evaluation, self-reported skills, career identity and perceived employability.

The above classification is based on the factors identified from the review of literature for this study, but not all the factors identified are relevant to the current study. Based on the literature review in Chapter 2, the SCCT CSM discussed in there, research conducted in Pakistan, elaborated in Chapter 3, and factors affecting graduate employability (presented above), a model of graduate employability (in the context of Pakistan) is formulated and discussed in next section.

4.3 The Proposed Model for Graduate Employability

In line with research on graduate employability, the context of Pakistan's higher education system and labour market, and social cognitive career theory's career self-management model, a discussion of the factors contributing towards graduate employability in the context of Pakistani society follows.

4.3.1 Self-Efficacy

According to SCCT CSM, self-efficacy impacts goals, actions and outcomes. Self-efficacy is the most commonly studied factor in the context of job search and employability, where its effect is observed on various job search factors. Self-efficacy is a predictor of outcome expectations, employment status, job search behaviour, job search effort, job search outcome, social job search behaviour, the job seeker's psychological wellbeing and employability (Brown et al. 2006; Fort, Jacquet & Leroy 2011; Georgiou et al. 2012; Guan et al. 2014; Lim, Lent & Penn 2016; Liu et al. 2014; McArdle et al. 2007; Saks & Ashforth 2000; Schaffer & Taylor 2012). An exception is Liu et al. (2014), which concluded that employment self-efficacy negatively relates to job search behaviour. Eden and Aviram (1993) conducted an experiment to observe the effect of self-efficacy on job search outcome. The results revealed that individuals with higher self-efficacy (naturally) were more likely to be employed, as their self-efficacy was positively associated with job search behaviour.Participants whose self-efficacy was boosted via interventions were likely to find jobs as their job search behaviour intensified. As self-efficacy has a significant impact on goal setting (Brown et al. 2008), people with higher self-efficacy are more motivated to look for jobs (Vinokur & Schul 2002) and have more chances of getting employed (Brown et al. 2006; Crossley & Stanton 2005; Eden & Aviram 1993; Guan et al. 2013; Saks 2006; Saks & Ashforth 1999; Tay, Ang & Van Dyne 2006; Wanberg, Kanfer & Rotundo 1999). Self-efficacy elevates one's perceptions of one's own abilities, which results in a more effective use of those abilities. Saks, Zikic and Koen (2015) and Moynihan et al. (2003) have reported that people with higher self-efficacy get more interviews and job offers compared to those who rate low on self-efficacy. People with low self-efficacy are more likely to accept their first job offer compared to those with high self-efficacy (Saks 2006); hence, they settle for low pay rates and stop exploring further options which could bring better career prospects.

4.3.2 Goal – Job Search Clarity

According to Bandura (1986), a goal determines the expectation for a future outcome or participation in a certain activity. SCCT CSM postulates that action is determined by the goal directly and self-efficacy is mediated by the goal. The assessment of goal has varied across studies in that some ask participants about the behaviours they intend to engage in whereas others have used a scale to record the clarity of the goal participants have (Fort, Jacquet & Leroy 2011). Job search clarity has been used extensively in the literature on jobs search and is defined as a goal variable by Lent and Brown (2013). Hence, the current study aims to examine goal in terms of job search clarity. Job search clarity can be defined as "clear idea of type of career, work or job desired by an individual" (Wanberg, Hough & Song 2002, p.1104). It is an important predictor of job search success and is included in many job search models (Côté, Saks & Zikic 2006; Guerrero & Rothstein 2012; Wanberg, Zhang & Diehn 2010). Job seekers who do not have clear idea about what kind of job they want to do, or which career path interests them, face difficulty in finding a job. On the other hand, job seekers with a clear idea of their job search purpose target their activities more precisely towards their goal. Côté, Saks and Zikic (2006) found that individuals with higher job search clarity looked for jobs with more intensity, which is a predictor of job search success. Many studies have reported job search clarity as a positive predictor of job search intensity (Guerrero & Rothstein 2012; Zikic & Saks 2009) that predicts the number of interviews and number of job offers. A person with higher job search clarity finds a job that fits their career goals and hence, the level of job-organisation fit is high (Wanberg, Hough & Song 2002).

4.3.3 Action – Job Search Intensity

According to SCCT CSM, action leads to outcomes and is influenced by goal, self-efficacy and outcome expectations. Action in the context of job search is measured as job search behaviour (Saks & Ashforth 2000; Van Hoye et al. 2015; Zikic & Saks 2009). Fort, Jacquet and Leroy (2011) state that job search behaviour can be measured from two perspectives: intensity and effort. Job search intensity refers to how actively one searches for a job using job search methods. It is measured as the frequency of use of each job search method by the job seeker in a particular period of time (Blau 1994). Job search effort is the amount of effort that an individual devotes to their job search (Blau 1993). Research has shown no significant relationship between job search effort and job search outcome (Brown et al. 2006; Saks &

Ashforth 1999, 2002); hence, only job search intensity will be used as a measure of action in this research. Some studies argue that job search intensity is influenced by self-efficacy and self-esteem (Sverko et al. 2008; Vinokur & Schul 2002), which result in positive job search outcomes (Brown et al. 2006; Sverko et al. 2008). On the other hand, higher job search self-efficacy is also reported to reduce job search intensity among young job seekers, as they perceive their goal is within reach, and hence, reduce the effort to achieve it (Coen et al. 2015). Job search intensity is reported to positively predict job search success (Saks & Ashforth 1999; Wanberg, Kanfer & Rotundo 1999) and number of interviews (Saks & Ashforth 2000), which results in job offers. Higher job search intensity is also observed to lead to faster employment (Côté, Saks & Zikic 2006; Wanberg, Hough & Song 2002).

To measure job search intensity, the literature was reviewed to identify job search methods. Job search methods are the ways used to look at, approach, get knowledge about and target available job opportunities. Print media were once most commonly used to advertise and look for jobs, but with the growth of technology the ways of finding jobs have evolved. Now people commonly use online resources both to advertise and to find openings (Vilorio 2011). Social media have also played an important role in the process of job search. Social networking websites like LinkedIn have paved the way for both employers and employees by connecting them in the virtual space before meeting personally.

Job search techniques are generally divided into two categories: formal and informal. Formal techniques include sending resumes, filling in job applications, attending career fairs, etc. Informal techniques include getting information about job opportunities and getting connected to potential employers through friends or relatives. Some studies report informal job search methods to be most effective in finding employment (Green 2012; Holzer 1988), but these results cannot be generalised, as other studies conclude contrary findings (Araujo, Neves & Banisch 2014; Saks 2006). As the use of informal job search methods is affected by the social capital of the job seeker (Try 2005), the use and success of job search methods largely depend on the personal and demographic variables of the job seeker. An overview of the extensive literature review conducted in the context of job search methods is presented below.

Table 4.2 Review of Literature – Job Search Methods

No.	Researcher and Year of Publication	Country of Study	Job Search Methods
1.	Kuzubas and Szabo (2014)	Indonesia	Respond to job advertisements (ads) Contact friends and relatives Contact company Through school/university fairs Register with private job fairs Register with government job fairs Look for capital Look for place of business Contacted by company/employer
2.	(Araujo, Neves & Banisch 2014)	Portugal	Insert or answer ads in newspapers or journals Study ads in newspapers or journals Ask friends, relatives, etc. Public employment office Private employment agency Apply to employers directly Looked for land, premises or equipment Looked for permits, licences, financial resources Took a test, interview or examination
3.	(Posel, Casale & Vermaak 2014)	South Africa	Respond to job ads Place advertisement(s) Search on internet Contact relatives or friends Ask previous employer Register at employment agency Contact possible employers Look or apply for to start business Sought financial assistance to start business
4.	Bachmann and Baumgarten (2013)	European Union	Insert or answer ads Study job ads Ask friends, relatives and trade unions, etc., Public employment office Private employment agency Direct applications to employers Take test, interview or examination
5.	Mariappan (2013)	India	Newspaper ads Relatives Friends Former migrants Private employment agency Government employment office Direct approach to employer College campus interview
6.	Carroll (2013)	Australia	Advertisement (Internet, print media) Networking (family, friends, work contacts) Direct employer contact University-based methods (careers services, careers fairs, lecturers)
7.	GMAC (2012)	India	Job ads in-print/online Online job search sites Classmates/alumni Friends/family

			Head-hunters/search firms Apply directly to companies School career services School job boards Job fairs Social media Career coach Network at professional meetings Internship/work project
8.	Green (2012)	Australia	Newspaper advertisement Friends or relatives Public employment agency Direct employer contact Advertised/tendered for work
9.	Schaffer and Taylor (2012)	South Eastern US (African American)	Job ads Fill job application Search through internet Talk to friends or relatives Contact previous employers or business acquaintances Employment agency, search firm or state employment service Contact potential employers Call a prospective employer Register as applicant Prepare/revised resume Read a book about getting a job Interview with prospective employer Use current within company resources
10.	Tubergen (2011)	Netherlands	Answer ads Through friends and family Employment agency Direct application
11.	McKeown and Lindorff (2011)	Australia	Newspapers Online job search Recruitment agency Sending CV to employers University career centre
12.	Hoye and Saks (2008)	Belgium and Romania	Look at job ads Submit applications Online job sites Network Employment agencies Contact employers
13.	Saks (2006)	Canada	Newspaper advertisement Internet Friend or relative who works or has worked at an organization Friend or relative who has not worked at an organization Current or former employee Previous employer Employment agency Contact an organization University placement Campus visit by a recruiter Television advertisement

			Radio advertisement
14.	Frijters, Shields and Price (2005)	United Kingdom	Newspaper/internet job ads Social network (friends, relatives, colleagues or trade unions) Employment agency Direct employer Job centre/careers office
15.	Try (2005)	Norway	Answer employers' ads Internet job database Relatives/acquaintances Public employment service (PES) Private employment services/ temp agencies PES job database at Internet Contact potential employer Career office at school Employers visit at school
16.	Kuhn and Skuterud (2004)	USA	Place or answer ads Send resumes/filled out applications Friends or relatives Public employment agency Private employment agency Contact employer School employment centre Union/professional registers
17.	Mau and Kopischke (2001)	USA	Look through wanted ads Send out resumes Ask friends/family members/professors Contact head-hunters, employment agencies, professional recruiters Job placement office Job boards in unemployment office Recruiting fairs Place own want ads Attend interview Volunteer work in field/internship Subscribe to trade journal
18.	Addison and Portugal (2001)	Portugal	Answer ads Contact friends and relatives State employment agencies Direct applications to employer Self-employment Interview with employer
19.	Kuhn and Skuterud (2000)	USA	Place or answer ads Send resumes/fill applications Contact friends or relatives Public employment agency Private employment agency Contact employer School employment centre Union/professional registers

From this literature, the following methods of seeking employment are identified that are applicable in today's technology-driven market:

1. Respond to job ads in newspapers and online
2. Register with online job portals, such as seek.com.au
3. Contact friends, relatives, university fellows or previous employer to ask about potential job leads
4. Contact and register with employment agencies/recruiters
5. Contact a prospective employer
6. Contact the university's employment office
7. Attend a career fair
8. Attend employer visits to school
9. Use social media (e.g., LinkedIn, Facebook) to network and look for jobs
10. Prepare to start a business like looking for space, arranging capital.

4.3.4 Outcome

According to SCCT CSM, outcome is influenced directly by actions and indirectly by self-efficacy, goals and outcome expectations. Most previous studies conducted in the context of job search measure outcome as job search success (a dichotomous variable) or number of interview and/or job offers received (Brown et al. 2006; Georgiou et al. 2012; Guan et al. 2013; Moynihan et al. 2003; Saks, Zikic & Koen 2015). These measures of outcome do not give any information regarding employment quality and individual satisfaction with the job. Employment quality and satisfaction of job seekers are key indicators of effectiveness of the process towards the outcome. Hence, the current study will examine outcome as a combination of employment speed, employment quality, satisfaction with the job and intention to quit, along with the number of interview calls received, the number of job offers received and the time taken to find the job after graduation. These measures are adopted in line with Wanberg, Hough and Song (2002) and Saks and Ashforth (2002). Intention to quit, employment speed and employment quality were used by Wanberg, Hough and Song (2002) to measure employment success. Saks and Ashforth (2002) used satisfaction with the job and intention to quit as the outcome measure. Employment speed refers to the length of time taken to find a job (from the start of job search). It can be measured in numbers of days, weeks or months. Employment quality refers to how much the job is relevant to the field of

study. Satisfaction with job measures how much an individual is satisfied with the job they have attained and intention to quit determines if an individual, for any reason, wants to leave the job.

4.3.5 Learning Experiences

According to the SCCT-CSM model, learning experiences lead an individual's self-efficacy and outcome expectations. In the context of job search, the learning experiences come from career development learning, which leads to an individual's enhanced job search self-efficacy. As Watts (2006, p.2) says, career development learning enables an individual to "manager their careers, i.e. lifelong progression in learning and work". This refers to the education gained that facilitates an individual in securing an occupation of their choice by becoming more self-aware, recognizing their interest, evaluating own potential, identifying available opportunities in the job market, making informed decisions about careers, and presenting effectively in front of prospective employers (Pool & Sewell 2007; Stoica 2010). McIlveen et al. (2011) posit that career development learning not only benefits an individual but also the employer organisation and society. If students are engaged in career development experiences, they develop skills and attributes that are useful not only in their work-life but all aspects of life (Kumar 2009). A graduate can observe immediate benefits of career development learning by feeling more confident and efficacious during job search activities (McIlveen et al. 2011).

Various employability models, including Law and Watts (1977) DOTS model, Hillage and Pollard (1998) employability framework, Knight and Yorke (2002) USEM account of employability, and Pool and Sewell (2007) CareerEDGE-Key to employability, have identified career development learning as an important predictor of job search success, which signifies its importance in the job search process. The factors that comprise career development learning include self-awareness, career planning, knowledge of the job market, networking, job search skills, recruitment process preparation, personal presentation and interviewing skills, career decision making and employment transition skills (Jollands 2015; Law & Watts 1977; Pool, Qualter & Sewell 2014; Stoica 2010; Sumanasiri, Ab Yajid & Khatibi 2015).

4.3.6 Contextual and Personality Affordances

Personal and contextual affordances refer to the factors within and around an individual that help them in their job search. Contextual factors include support and barriers around an individual such as support from family and friends, financial condition and the unemployment rate. Personality factors include personal capital (including self-esteem, proactive personality) that facilitates an individual's job search in leading to a desirable outcome. Social and personal support factors are reported to be very important for job seekers to sustain them through mentally stressful times of unemployment (Chen & Lim 2012). The literature review (Table 4.1) has identified personality and contextual factors influencing job search behaviour that could be broadly classified as social capital (e.g., companionship, verbal persuasion), motivational (e.g., job search motivation, employment commitment) and psychological factors (e.g., anxiety, hope). Some of these factors affect the job search behaviour in the long run. For example, anxiety, depression or emotional stability affect behaviour when the job search process is continued over a long duration. Other factors are associated with the job search process occurring as a result of turnover or layoff, such as employment commitment or pay-rises. The current study will focus on the factors that are relevant to the job search behaviour of graduates, including self-esteem, self-confidence, social support and emotional intelligence.

4.3.6.1 Self-Esteem

Self-esteem is the "evaluation which an individual makes and customarily maintains with regard to the self" (Coopersmith 1967, pp.4-5). As part of self-evaluation, self-esteem gives the confidence to perform tasks and get desired outputs. People with higher self-esteem can perform difficult tasks that have high priority in their view. Self-esteem is both directly and indirectly positively related to job search behaviour and job search outcome. Georgiou et al. (2012) concluded that self-esteem was the strongest predictor of psychological wellbeing of a job seeker. This shows the indirect influence of self-esteem on job search behaviour, as psychological wellbeing relates to satisfaction with the job search process and a person can perform the process for a longer time with an effective outcome. Higher self-esteem leads to higher job search intensity (Sverko et al. 2008), which eventually leads to positive job search outcomes (Brown et al. 2006; Sverko et al. 2008).

4.3.6.2 Self-Confidence

Self-confidence is the feeling of trust in one's own skills, qualities and abilities to perform a specific task. Self-confidence is positively associated with job search behaviour. It is a key component in the well-known key to employability CareerEDGE model proposed by Pool and Sewell (2007). An individual with higher confidence in their education, knowledge, skills, use of social and psychological factors and job search methods is more capable of performing effective job search behaviour. Higher levels of self-confidence improve self-efficacy (Van Hoye et al. 2015), which is a positive predictor of job search outcome. Research has concluded that people with higher self-confidence perform better in job search activities (Van Hoye et al. 2015), which leads to faster employment (Wanberg, Hough & Song 2002).

4.3.6.3 Emotional Intelligence

Emotional intelligence can be defined as one's ability to emotionally relate to self or others to deal with social and environmental pressures. It consists of appraisal, expression and regulation of emotions in self and others, and utilization of emotion in solving problems (Salovey & Mayer 1990). Emotional intelligence is considered important not only during the job search process but also for being a successful employee. In the context of job search, emotional intelligence is perceived to positively impact the behaviour and it has been a part of employability models, including the USEM model and CareerEDGE model. Research has shown that higher emotional intelligence leads to higher perceived employability (Fabio & Kenny 2015), less difficulty in making career decisions (Fabio & Palazzeschi 2009) and positive outcomes of the job search process (Liptak 2005). Emotional or social intelligence is also reported to be a desired skill for work in the future by 2020 (Davies, Fidler & Gorbis 2011) .

4.3.6.4 Social Support

Social support refers to the support provided by a social circle (family, friends and colleagues) to a job seeker in terms of resources, information, empathy and encouragement. Social support (in the form of support messages and necessary resources) strengthens a job seeker's morale to continue with the stressful process of job search (Sverko et al. 2008). Much of the recent literature shows positive association of social support with self-efficacy (Lin & Flores 2011; Russell, Holmstrom & Clare 2015; Van Hoye et al. 2015) and self-esteem (McArdle et al. 2007), resulting in rigorous job search (Lin & Flores 2011). People with social support tend to

perform better in their job search and have higher chances of becoming employed (Wanberg, Watt & Rumsey 1996). Social support also improves the chances of using social networks to look for jobs, which is reported to be the most effective job search method (Schaffer & Taylor 2012).

4.3.7 Ability

Ability, or cognitive and interpersonal talent, was presented in the SCCT Performance Model as a contributor towards self-efficacy and outcome expectations (Lent, Brown & Hackett 1994). It can be assessed by achievement, aptitude or past performance (Lent & Brown 1996) and can be described as an individual's past performance related to the task at hand or other factors that contribute to the achievement of given tasks. According to SCCT, graduates get a job because they have developed (i) the required knowledge and skills to get a job through their education and (ii) skills required to look for a job effectively via their previous work experience (internships and work placements) and career development learning. According to Lent and Brown (2013, p.563), this factor can be included in SCCT-CSM to understand "the quality of performance (i.e. how well job seekers perform their adaptive behaviours rather than which behaviours they attempt)". Given the importance of employability skills in the employability literature, employability skills are added to the proposed model as an ability factor to assess its impact on the job search outcome.

4.3.7.1 Employability Skills

Employability skills are the set of skills required to acquire, maintain and progress in a job (Wickramasinghe & Perera 2010). Also known as key skills, soft skills, generic skills or transferable skills, employability skills are generic in nature and apply across all types and all levels of jobs (Jackson 2014; Lauder 2013; Pool & Sewell 2007). Sarfraz et al. (2018, p.66), after an extensive literature review, defined employability skills thus:

> *Employability skills are personal skills and attributes demonstrated by an individual that distinguish one job seeker from another in their field of specialisation and help them to secure gainful employment, sustain them in that job and progress in their career to achieve their maximum potential and contribute towards their personal goals and that of their organisation*.

In the 21st century, employability skills are far more important than technical skills and employers tend to hire people with a wide range of employability skills (Fowler et al. 2013; Singh & Singh 2008). Employers believe that they can instil and polish the knowledge and technical skills of an employee, but it is very difficult to develop and teach soft skills: they say "recruit for attitude and train for skill" (Rao 2014, p.45). Sutton (2002, p.20) reported that employers use soft skills as "the No. 1 differentiator for job applications in all types of industries", as hard skills can help to get an interview but soft skills are required to get and keep a job (Robles 2012).

Despite the importance of employability skills, students tend to believe that they can enter the labour market without these skills and only work hard to improve their grades at university (Khan 2014; Syed, Abiodullah & Yousaf 2014). Employability skills deficits have been reported by studies conducted in different parts of the world, including Australia (Greenwood, O'Leary & Williams 2015), India (Rao 2014), the USA (Lawrence 2002), the UK (Dickinson 2000; Smith & Edwards 2012), Malaysia (Singh & Singh 2008), Uzbekistan (Ajwad et al. 2014) and Pakistan (Mirza, Jaffri & Hashmi 2014; Raza & Naqvi 2011). Employers facing the problem of hiring graduates with the right skills rate this as high as 73% (Ajwad et al. 2014). A study revealed that employability, rather than employment, is the major problem in India (Rao 2014). Graduate unemployment is forecast to keep on increasing if students do not start working on improving their soft skills (Omar et al. 2012).

An extensive literature review was conducted on employability skills considering skills rated as essential by employers, skills required by employees to secure jobs and the gaps between the demand and supply of these skills. An overview is presented in Table 4.3.

Table 4.3 Review of Literature – Employability Skills Required for Employability

No.	Author and Year of Publication	Country, Industry and Respondents	Reported Employability Skills	
1.	Messum et al. (2016)	Health industry graduates from Australia	Verbal communication Written communication Ability to work independently Teamwork Networking	Being flexible and open minded Priority setting Organisational skills Time management Integrity and ethical conduct

2.	Salleh, Md Yusof and Memon (2016)	Architect employers in Malaysia	Interpersonal Problem solving Creative Leadership Independent	Teamwork Flexible Work under pressure Responsible Positive attitude
3.	Qomariyah et al. (2016)	Public health graduates and employers from Indonesia	Communication Capacity for analysis and synthesis Problem solving Critical and self-critical abilities Creativity Leadership Initiative and entrepreneurial	Teamwork Learning to learn Appreciation of diversity and multiculturalism Project design and management Basic knowledge of public health Knowledge application
4.	Rahmat, Ayub and Buntat (2016)	Electrical and electronics industry experts in Malaysia	Communication skills Critical thinking and Problem solving Teamwork skills	Technology skills Organizational skills Continuously learning skills Personal qualities
5.	Vashisht, Pandey and Pathak (2016)	Auxiliary information from books, journals and literature reviews	Communication Problem Solving Initiative and enterprise Teamwork	Using Technology Planning and organizing Self-Management Learning
6.	Mansour and Dean (2016)	Human Resource Development employers and educators from Morocco, Europe and USA	Interpersonal skills Presentation skills Managing customers Problem solving Creativity Leadership Change management Initiative and enterprise Self-management	Ability to function as part of a team Digital competency Strategic planning Planning and organizing Knowing how to learn Communication in foreign language Cultural awareness and expression
7.	Lim et al. (2016)	Accounting employers in Malaysia	Oral and written communication skills Interpersonal skills Problem solving skills Analytical skills Critical thinking skills	Ability to work in team Computer/IT skills Ability to work under pressure Time management skills Language skills
8.	Yang, Cheung and Fang (2015)	Hotel management graduates in China	Identifying essential components of problem Identifying problems Solving problems Work independently	Setting priorities Time management Keeping up-to-date on developments in the field Gaining new knowledge from experiences

			Initiating change to enhance productivity Providing innovative paths for the company for future development Adapting to new situations	Taking reasonable job-related tasks Performing at optimal level Recognizing the effects of decisions made Reconceptualising your role in changing corporate realities
9.	Ramadi, Ramadi and Nasr (2015)	Engineering employers from Middle East and North Africa (MENA) region	Presentation Written communication Customer service Analysis Identify and solve problems Design engineering systems Design experiments Evaluate performance of others Give constructive feedback Leadership Set personal targets Team member Work with people from other fields Take directions from superiors Use communication technology Use modern computer software Manage time	Management abilities Desire to learn Acquire new skills and knowledge Bilingual Awareness of global issues Integrity Accept constructive feedback Design with safety constraints Economics knowledge Engineering ethics Engineering science knowledge Financial knowledge Marketing knowledge Mathematical knowledge Professionalism Understand concepts from other fields Understand environmental responsibilities Understand impact of solutions on society Use engineering tools and techniques
10.	Messum, Wilkes and Jackson (2015)	Health management professionals in Australia	Written and verbal communication Interpersonal skills Teamwork Flexible and open minded Collaboration skills	Time management Planning skills Life-long learning Integrity and ethical conduct Self-awareness
11.	Pradhan (2015)	Library Information Sciences graduates in India	Communication skills Customer service Interpersonal skills IT skills	Research skills Good academic record Professional skills
12.	Furnell and Scott (2015)	Bioscience graduates from UK	Oral communication	Ability to work without supervision

			Written communication Problem solving Decision making Critical thinking/analysis Creative and innovative thinking	Working as a team member IT Skills Information retrieval/data analysis Planning/organisation Time management
13.	Ho (2015)	Employers in Taiwan	Language and communication Leadership and decision making Creativity and innovation Group and team worker Information and technology International perspective Loyalty and ethics	Discipline and good manner Persistent and hardworking Ambitious Job specific knowledge Job specific skills Job specific experience
14.	Mirza, Jaffri and Hashmi (2014)	Employers from industrial sector in Pakistan	Communication Verbal communication Reading Customer service Decision making Interpret business problems and develop solutions Initiating Self-motivated Entrepreneurship Teamwork Use modern tools, equipment and technologies	Self-discipline Planning and organizing Devoted Effective Efficiency Hard work Honest Persistent Accuracy Apply knowledge of the subject Interpretational Productive Technical skills
15.	Ajwad et al. (2014)	Employers from different sectors in Uzbekistan	Oral communication Presentation skills Written skills Customer relations Analytical thinking Problem solving skills Creativity Self-motivation Flexibility Teamwork Accepting	Willingness to learn Self-discipline English language Russian language Uzbek language Honest, sincerity Integrity Reliability Literacy Numeracy Project management Financial or budgeting

			Following Computer skills	
16.	Chavan and Surve (2014)	HR managers/experts	Communication Analytical skills Problem solving Work independently Teamwork	Planning and organising Self-management Time management Integrity and honesty Self-confidence
17.	Saad and Majid (2014)	Engineering and ICT employers in Malaysia	Present ideas confidently and effectively Problem identification, apply problem solving, formulations and solutions Function effectively as an individual as well as in a group	Use techniques, skills and modern engineering/ICT tools Acquire and apply knowledge of engineering/ICT fundamentals Ability to continue learning to acquire new knowledge, skills, and technologies
18.	Balcar, Janíčková and Filipová (2014)	Job advertisments in Czech Republic	Communication and presentation Sale and negotiation skills Customer orientation Creativity Leadership Strategic thinking Analytical and logical thinking Proactive approach and problem solving Independence	Flexibility Stress resiliency Organizing, planning Cooperation and teamwork Life-long learning and self-development Loyalty Work motivation Responsibility, reliability and diligence Efficient and achievement oriented
19.	Seth and Seth (2013)	Employers from India	Communication Interpersonal Leadership	Conflict management Teamwork Time management
20.	Griffin and Annulis (2013)	Educators and students from under-graduate manufacturing-related degree in USA	Verbal communications Written communication Interpersonal skills Customer service	Critical thinking Problem solving Supervisory and management Change readiness Teamwork Project management
21.	Jackson (2013b)	Business students in Australia	Communication Problem solving Thinking critically Analyse data using technology Developing initiative and enterprise	Working with others Self-management Social responsibility and accountability Self-awareness Professionalism
22.	Selvadurai, Choy and Maros (2012)	Social science employers in Malaysia	Communication and presentation	Retrieve and handle information

			Planning and problem solving Individual traits and attributes	Social development and interaction
23.	Srivastava and Khare (2012)	Human resource managers from Pakistan	Communication Leadership Entrepreneurship Loyalty Conceptual understanding	Hands-on experience Positive thinking and attitude Career planning Respect for seniors Voluntarism
24.	Srivastava and Khare (2012)	Human resource managers from India	Communication Reading, writing and arithmetic Critical thinking Problem solving Leadership Influencing skills Flexibility and adaptability Teamwork and social interaction Multitasking	Time management Quest for knowledge Willingness to learn Commitment and dedication Diligent and hard working Honesty Values and ethics Appearance and personality Aptitude Physical fitness and stamina Positive thinking and attitude Responsiveness
25.	Srivastava and Khare (2012)	Human resource managers from Bangladesh	Interpersonal Adaptability ICT Time management Language Behavioural skills Sincerity Commitment Diligence	Accounting Attitude Business acumen Dignity of Labour Kaizen method Negotiations Safety Secretarial skills Understanding
26.	Poon (2012)	Human resource managers of Real Estate firms in UK	Oral communication Report writing Effective written communication Verbal presentation Listening Effective reading Interpersonal skills Lateral thinking skills Analytical skills Decision making Critical thinking Ability to define and solve problems Innovation Creativity Leadership Work independently Teamwork Adaptability and flexibility Information technology Industry-based software/tools	Ability to deal with stress Time management Organisational skills Self-motivation and self-discipline Self-confidence Ability and willingness to update professional knowledge Willingness and ability to accept responsibility Tenacity and determination Professional attitude Personal and social awareness Commercial awareness Practical experience Environmental awareness Negotiation Management[8] Effective graphical communication Research and analysis Numeracy Enthusiasm Statistic

27.	Omar et al. (2012)	Job advertisements present on an online job portal www.jobstreet.com.my	Communication / Interpersonal Teamwork ICT & Technical	Foreign Language(s) Personal Quality
28.	Nickson et al. (2012)	Fashion retailers from Manchester, UK	Customer dealing Teamwork Ability to use equipment Work ethic Product knowledge	Availability and rostering Outgoing personality Dress sense and style Knowledge of store operations/procedures
29.	Robles (2012)	Business executives in USA	Communication Flexibility Teamwork Integrity Courtesy	Positive attitude Responsibility Professionalism Work ethic Social skills
30.	Yuzainee, Zaharim and Omar (2011)	Engineering employers in Malaysia	Communication skills Problem solving and decision making skills Teamwork Lifelong Learning Professionalism Knowledge of science and engineering principles	Competency Knowledge of contemporary issues Competent in specific engineering discipline Engineering system approach
31.	Messum, Wilkes and Jackson (2011)	Job advertisements for health graduates in New South Wales, Australia	Communication skills Conceptual /analytical skills Leadership Computer skills Networking Experience	Knowledge of the healthcare system or a health field Organisational skills Financial management skills Tertiary qualifications
32.	Blom and Saeki (2011)	Engineering employers from India	Reading Verbal Communication Written Communication Customer Service Experiments/data analysis Problem solving System design to needs Creativity Self-motivated Entrepreneurship Understands and take directions	Teamwork Advanced computer Basic computer Use of modern tools Self-discipline Willingness to learn Communication in English Integrity Reliability Apply Mathematics/Science/Engineering knowledge Contemporary issues Technical Skills Flexibility
33.	Warraich and Ameen (2011)	Library and Information Science	Presentation	Time management Learning

		graduates and employers in Pakistan	Written communication Problem solving Teamwork IT skills Plan and organize	Achieving professional goals Friendly attitude Good academic record Good interview Research skills
34.	Lim et al. (2011)	Employers of various fields of graduates in Malaysia	Listening to others Customer service Initiative Self-motivation Teamwork Self-discipline Willingness to learn	Integrity Professional ethics Reliability Self-confidence Accepts responsibility for consequences of actions Positive attitude towards work
35.	Johari et al. (2011)	Engineering employers in Malaysia	Communication Problem identification, formulation and solution Analyse and interpret data Design and conduct experiments Leadership Work individually Entrepreneurial skill Teamwork Lifelong learning	Work ethics Social awareness Cultural, global and environmental responsibility Competent in theory and research engineering Technical competence Knowledge of contemporary issue Systems approach to design and evaluate operational performance Acquire and apply engineering knowledge Competent in engineering application
36.	Davies, Fidler and Gorbis (2011)	Various professionals from USA	Computation thinking Sense making Design mindset Novel and adaptive thinking	Virtual collaboration New media literacy Cognitive load management Cross-cultural competency Social intelligence Transdisciplinarity
37.	Mitchell, Skinner and White (2010)	Business educators from USA	General communication Oral communication Written communication Customer service Problem solving	Critical thinking Leadership Teamwork Time management Diversity General ethics Business etiquette
38.	Husain et al. (2010)	Industrial employers in Malaysia	Interpersonal Skills Thinking Skills Information Skills System and Technology Skills	Personal Quality Resources Skills Basic Skills

From Table 4.3, the ten most commonly reported employability skill sets were categorised. These skills were used in this study to address the ability factor of SCCT. A brief description of the chosen skills is shown below.

1. **Interpersonal and Collaborative** skills include the ability to communicate effectively and present ideas in an efficient manner. This includes reading, writing, listening, presentation and speaking skills.
2. **Cognitive and Problem-solving** skills are the ability to identify a problem, analyse situations and present the most effective solution. This involves analytical, critical thinking and decision-making skills.
3. **Creative and Innovative** skills are the ability to design and conduct experiments to bring innovation and novelty in work and solutions.
4. **Leadership** skills include the ability to lead, mentor and direct a group of people by providing constructive feedback and being a role model for followers. This also encompasses the ability to teach new skills to others.
5. **Initiative** skills describe the ability to be self-motivated, with a vision to take a first step towards the improvement of system and betterment of fellow workers.
6. **Relationship Management skills** are the ability to work in a team setting with adaptable and flexible attitude while being supportive and cooperative towards other team members.
7. **New Technology Adaptation** skills include the ability to use modern machines, operate computer software and manage, interpret and use information using IT equipment.
8. **Productive Self-Management** skills describe the ability to be productive at work by planning and organising, managing time, multitasking and working under pressure while maintaining self-discipline.
9. **Life-long Learning** skills describe the ability and desire to learn new skills, gain knowledge and advance in work life by taking courses, attending workshops and learning from peers and seniors.
10. **Global Citizenship** skills describe the presence of knowledge and skills that enable workers to communicate and work in a cross-cultural environment. This mainly

encompasses the ability to use (read, write, speak and understand) a foreign language, along with respecting differences.

4.3.8 Person Inputs and Background Affordances as Control Variables

Various person inputs and background affordances are selected in the study in line with the literature to observe the effect of these factors on graduates' job search. Person inputs are defined to include gender, Cumulative Grade Point Average (CGPA) and the number of years of work experience that a job seeker possesses. Background affordances include parents' highest level of qualifications. These factors are widely used in literature on employability (Coen et al. 2015; Guan et al. 2013; Lin & Flores 2011; Moynihan et al. 2003; Russell, Holmstrom & Clare 2015) and have proven to effect graduates' job search.

4.3.9 Rationale for Exclusion of Outcome Expectations from the Model

Counsell (1996) studied the career expectations of business undergraduate students in UK and found that graduates were generally optimistic about their career-related outcomes. The most anticipated outcome in this study was found to be wealth. On the other hand, a study conducted in Turkey on management students revealed that the most expected outcome was career advancement, particularly power and authority, a peaceful work environment, and good salaries (Aycan & Fikret-Pasa 2003). Similar results were found in a study on Canadian business students, concluding that they mostly anticipate advancement opportunities along with challenging work and good salary package (Ng & Burke 2006). A study of Chinese hospitality students conducted by Lu and Adler (2009) also concluded similarly that students expect wealth and power as their desired outcomes of the job. Hence, the research on graduate outcome expectations shows very little to no variation. Graduates generally have very optimistic and high expectations from their job search and their prime expectations include power, wealth and career advancement.

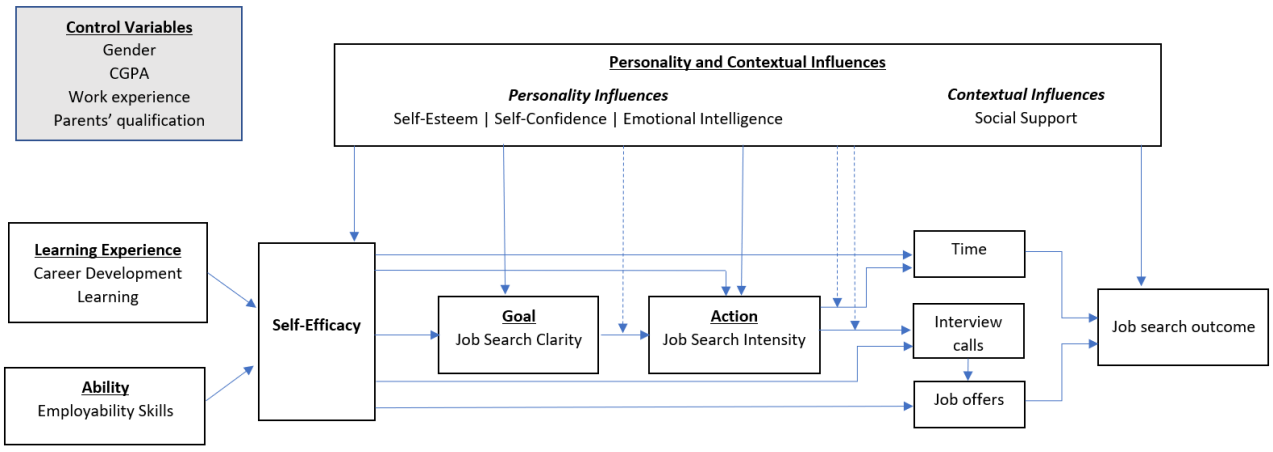
Brown et al. (2008) conducted a literature review for their meta-analysis study and concluded that research employing SCCT rarely considers outcome expectations. Brown et al. (2011) also failed to generate any significant support for the relationship between outcome expectations and other constructs of SCCT.

As the sample population of this study is recent graduates from Pakistani universities who have already found a job, the outcome expectations of this population are expected to have little to no variation. Also, as previous research has failed to provide any support for the relationship between outcome expectations and other variables, this construct will not be included in the current research.

4.4 Research Questions and Hypotheses Development

Based on the discussion above, the following model of graduate employability has been developed to test in this study.

Figure 4.1 Proposed Model for Graduate Employability in Pakistan
(Based on Social Cognitive Career Theory's Career Self-Management Model)



As presented in Chapter 1, the primary research question to be addressed in this study is *"To investigate the interaction of a graduate's various personal and social characteristics and their impact on job search outcome?".* Based on the conceptualisation in Figure 4.1, the following 11 specific research questions are formulated to help address the overarching aim of this study:

RQ1: Is self-efficacy positively influenced by the learning experience (career development learning) and ability (employability skills) constructs?

RQ2: Does self-efficacy positively impact job search clarity, job search intensity and the outcome construct (including number of interview calls received, number of job offers received, time taken to find the job and job search outcome)?

RQ3: Does job search clarity enhance the job search intensity? Does job search intensity positively impact the number of interview calls and time taken to find the job?

RQ4: Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence self-efficacy?

RQ5: Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence job search clarity?

RQ6: Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence job search intensity?

RQ7: Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence job search outcome?

RQ8: Does the number of interview calls positively influence the number of job offers received? Is a better job search outcome associated with a higher number of job offers and longer time taken to find the job?

RQ9: Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) mediate the relationship between job search clarity and job search intensity?

RQ10: Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) mediate the relationship between job search intensity and job search outcome?

RQ11: Does respondents' demographic profile (gender, education, experience, parents' highest qualification) impact their job search?

To answer these questions, the following set of hypotheses has been derived for testing the proposed model of graduate employability:

Effects of Self-Efficacy

H1a Career development learning leads to higher self-efficacy

H1b Employability skills lead to higher self-efficacy

Impacts of Self-Efficacy

H2a Higher self-efficacy leads to higher job search clarity

H2b Higher self-efficacy leads to higher job search intensity

H2c Higher self-efficacy leads to a higher number of interview calls

H2d Higher self-efficacy leads to a higher number of job offers

H2e Higher self-efficacy leads to less time to find a job

Causality of Job Search

H3a Higher job search clarity leads to higher job search intensity

H3b Higher job search intensity leads to a higher number of interview calls

H3c Higher job search intensity leads to lesser time to find the job

Influence of Self-Esteem

H4a Higher self-esteem relates to positive self-efficacy

H4b Higher self-esteem relates to higher job search clarity

H4c Higher self-esteem relates to higher job search intensity

H4d Higher self-esteem relates to positive job search outcome

Influence of Self-Confidence

H5a Higher self-confidence leads to higher self-efficacy

H5b Higher self-confidence leads to higher job search clarity

H5c Higher self-confidence leads to higher job search intensity

H5d Higher self-confidence leads to a positive job search outcome

Influence of Emotional Intelligence

H6a Higher emotional intelligence leads to higher self-efficacy

H6b Higher emotional intelligence leads to higher job search clarity

H6c Higher emotional intelligence leads to higher job search intensity

H6d Higher emotional intelligence leads to a positive job search outcome

Influence of Social Support

H7a Higher social support relates to positive self-efficacy

H7b Higher social support relates to positive job search clarity

H7c Higher social support relates to positive job search intensity

H7d Higher social support relates to a positive job search outcome

Causality of Outcome

H8a Higher number of interview calls leads to a higher number of job offers

H8b Higher number of job offers results in a better job search outcome

H8c Higher time taken to find a job leads to a better job search outcome

Hypothesised Mediating Relationships

H9a Self-esteem mediates the relationship between job search clarity and job search intensity

H9b Self-confidence mediates the relationship between job search clarity and job search intensity

H9c Emotional intelligence mediates the relationship between job search clarity and job search intensity

H9d Social support mediates the relationship between job search clarity and job search intensity

H9e Self-esteem mediates the relationship between job search intensity and number of interview calls

H9f Self-confidence mediates the relationship between job search intensity and number of interview calls

H9g Emotional intelligence mediates the relationship between job search intensity and number of interview calls

H9h Social support mediates the relationship between job search intensity and number of interview calls

H9i Self-esteem mediates the relationship between job search intensity and time taken to find the job

H9j Self-confidence mediates the relationship between job search intensity and time taken to find the job

H9k Emotional intelligence mediates the relationship between job search intensity and time taken to find the job

H9l Social support mediates the relationship between job search intensity and time taken to find the job

Table 4.4 presents the relevance of hypotheses with specific research questions.

Table 4.4 Hypotheses Relevant to Specific Research Questions

Specific Research Question	Addressed using hypotheses
RQ1	H1a, H1b
RQ2	H2a, H2b, H2c, H2d, H2e
RQ3	H3a, H3b, H3c
RQ4	H4a, H5a, H6a, H7a
RQ5	H4b, H5b, H6b, H7b
RQ6	H4c, H5c, H6c, H7c
RQ7	H4d, H5d, H6d, H7d

RQ8	H8a, H8b, H8c
RQ9	H9a, H9b, H9c, H9d
RQ10	H9e, H9f, H9g, H9h, H9i, H9j, H9k, H9l

4.5 Chapter Summary

This chapter focused on the development of the conceptual model for graduate employability in Pakistan. First it focused on previous research and presented an overview of literature listing factors contributing to graduate employability. Over 50 research articles were reviewed and significant results were summarised in Table 4.1. Based on the literature review and SCCT CSM discussed in Chapter 2, a model of graduate employability was proposed. The constructs for the proposed model were chosen based on the literature and their relevance to the context and population of this study.

In the proposed model, self-efficacy is conceptualised as job search self-efficacy, job search clarity is used as a goal construct and job search intensity is used as a construct for action. Outcome is divided into four main components: employment speed (time taken to find the job), number of interview offers, number of job offers received and job search outcome. Job search outcome is conceptualised as employment quality, intention to quit and satisfaction with the job. Career development learning is presented as a learning experience. Personality affordances include self-esteem, self-confidence and emotional intelligence, and contextual affordance is conceptualised as social support in the current context. The ability factor, taken from social cognitive career theory's performance model, is added to the proposed model and employability skills is used as a construct of ability. The outcome expectations construct is removed from the model because researchers have been unable to find any significant variation in the factor and its relevance to other factors.

Based on the proposed model, eleven specific research questions were identified to address the primary research question of the study. The chapter presented nine sets of hypotheses formulated to answer the 11 specific research questions. The next chapter will discuss the research methodology for testing the proposed model of graduate employability in the context of Pakistan.

Chapter 5 – Research Methodology

5.1 Introduction

Based on the context of the current study and the research gaps identified in Chapter 1, the purpose of this chapter is to explain the research methodology adopted to arrive at the study's conclusions. Section 5.2 discusses the research paradigm chosen for the study, followed by the research design in section 5.3. Section 5.4 explains the development of the survey instrument in detail. This is discussed with reference to the scales used in previous studies of a similar nature. The sampling method is explained in section 5.5. Section 5.6 outlines the data collection method, along with data analysis in section 5.7. Section 5.8 presents the procedure followed to obtain Human Research Ethics approval from Swinburne University's Human Research Ethics Committee.

5.2 Research Paradigm

Kuhn (1962) introduced the concept of the research paradigm and defined it as "the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed" (cited in Indarti 2016, p.4). Paradigm is a term derived from the history of science, described as "a cluster of beliefs" guiding the actions of the researchers regarding "what should be studied, how research should be done, and how results should be interpreted" in their particular area of study (Bryman 2008, p.696). It consists of the basic set of beliefs, ways of thinking and procedures acknowledged by the members of a scientific community.

It was important to identify a suitable paradigm for the current research because it sets the context for the research. A clear understanding of the paradigm clarifies the theoretical assumptions of the research, the tools and instruments to be used, the participants to be recruited and the methods to be employed to address the study objectives (Ponterotto 2005). To set the research paradigm, three basic questions need to be answered: what is reality in the context of this study (ontological questions); how we can know something or where can we find acceptable knowledge (epistemological questions); and how can we go about to finding the relevant knowledge (methodological questions) (Guba 1990; Saunders, Lewis & Thornhill 2009)?

Four paradigms (positivism, realism, interpretivism and pragmatic) are mainly used in management research where the selection of the paradigm for a particular study is based on answering the three major questions asked above. The positivist paradigm is chosen for the current study for the reasons below.

5.2.1 Positivism

Positivism is a philosophical view based on experience and empirical knowledge, and supported by scientific verification. It is rooted in the belief that a reality exists out there that is driven by natural laws (Guba 1990). It seeks to discover the laws that govern behaviours and hence, outlines the process of getting knowledge with the help of quantification (which is necessary for the description of parameters and their relationship with each other) (Dash 2005). It supports application of the methods of natural science for the study of social reality (Bryman 2008). This approach adheres closely to the hypothetic-deductive methods and focuses on verifying prior defined relationships between different parameters (hypotheses) to explain the prediction of and control on phenomena (Ponterotto 2005). Cause and effect laws that can be verified with the help of scientific methods govern the universe and hence, the positivistic paradigm makes use of this phenomenon. Positivism makes use of cause-and-effect relationships and deductive reasoning to define relationships that can be generalized to a wider population after testing. It seeks objectivity and believes that an external objective truth exists. It emphasises correlation and is generally quantitative in nature.

Guba (1990, p.20) summarised the positivist paradigm thus:

> *Ontology: Realist – reality exists "out there" and is driven by immutable natural laws and mechanisms. Knowledge of these entities, laws and mechanisms is conventionally summarized in the form of time- and context-free generalisations. Some of these latter generalisations take the form of cause-effect laws.*
>
> *Epistemology: Dualist/objectivist – it is both possible and essential for the inquirer to adopt a distant, noninteractive posture. Values and other biasing and confounding factors are thereby automatically excluded from influencing the outcomes.*

Methodology: Experimental/manipulative – questions and/or hypotheses are stated in advance in propositional form and subjected to empirical tests (falsification) under carefully controlled conditions.

The post-modernist critics of the positivist paradigm object that it reduces people to mechanistic systems where human dynamics are viewed as simplistic patterns not influenced by external forces (for example, cultural values), which precludes rational evaluation of the conclusion (Schrag 1992). In simpler terms, the positivist approach views people as behaving rationally, personal feelings do not influence the problem at hand, and conclusions are drawn from the research because researchers behave objectively (Babbie 2004). The post-positivism approach was developed as a result to cater for the damage or dissatisfaction caused by the positivism approach (Ponterotto 2005). Although realism also remains the central concept of this approach, it is posited that humans cannot completely capture the real world driven by real natural causes due to their imperfect senses and intellect (Guba 1990). The ontology, epistemology, axiology, rhetorical structure and methodology of the positivist/post-positivist approach is summarised in Table 5.1.

Table 5.1 Positivism/Post-Positivism Research Paradigm

Assumption	Definition	Positivism/Post-Positivism
Ontology	The nature of reality	One true reality, either apprehendable (positivism) or approximate (post-positivism)
Epistemology	The relationship between the researcher and research participant	Researcher and participant are independent of each other (dualism), detached and the researcher's role is objective
Axiology	The role of values in the research process	Researcher values have no place in research; they must be carefully controlled and kept in check to avoid biasing the study
Rhetorical Structure	The language and presentation of the research	Formal, third-person, objective and scientific; detached and unemotional prose
Methodology	The process and procedure of the research	Experimental and quasi-experimental; field research (post-positivism), chiefly using quantitative methods; deductive

Source: Ponterotto (2005, pp.130-132)

Lincoln and Guba (2000, p.165) describe the basic difference between positivist and post-positivist thus: the former focuses on "hypotheses verification", the latter on "hypotheses falsification". While positivists accept an objective, apprehendable reality, post-positivists focus on objective reality that is only imperfectly and probabilistically apprehendable. Despite

some differences between positivist and post-positivist approaches, both approaches are based on conventional benchmarks of quality (internal and external validity, reliability and objectivity) and have no researcher effect, as the researcher acts as an informer only, with no influence on decision makers, policymakers and change agents (Lincoln & Guba 2000). Both share a common foundational perspective, seek to explain the reasons of predication and control of phenomena, and emphasize cause-effect relationships with an objective role for the researcher in quantitative research (Ponterotto 2005). Hence, recently both approaches have been used in conjunction with each other and the term used interchangeably (Creswell 2009).

5.2.2 Rationale for Selecting the Positivist Paradigm for the Current Research

In line with the theoretical underpinning and fundamental reasoning behind the positivist paradigm, this paradigm is used for the current study, because the study aims to identify the causes that influence outcomes by reducing the ideas to variables and testing hypotheses (Creswell 2009) related to employability and job search outcomes. The study has defined a theory and collected data to either support or refute the theory. The paradigm is also appropriate because the current study uses a survey design to study attributes and the relation between different variables affecting employability and job search outcomes. Numeric measures of variables are developed to collect information on instruments completed by participants. The study will generalise the results to a wider population (by looking at the validity and reliability) so that the results will be potentially valuable to other groups. The role of the researcher was objective, neutral and distant, following as far as possible strict scientific methods and procedures (Ponterotto 2005). The data and analysis were not impacted by the researcher's views and choices (Krauss 2005).

5.3 Research Design

After identifying the research paradigm to be used, the next step involves the development of the research design. Research design can be defined as the blueprint used to achieve research objectives and answer research questions (Cooper & Schindler 2006). It is a general plan that explains how a researcher can go about achieving the research objectives (Saunders, Lewis & Thornhill 2009). Overall, it gives the structure of the research process as a time-based plan from defining research questions to analysing data. There are generally two types of

research methodologies: quantitative and qualitative (Bryman 2008). Quantitative research focuses on quantification in collection and analysis of data, uses a deductive approach to address the relationship between theory and research by testing pre-defined hypotheses, and views social reality as an external, objective reality. Qualitative research places more emphasis on words rather than on numbers in the collection and analysis of data, uses an inductive approach to find the relationship between theory and research, emphasizes theory generation, and views social reality as a continuously shifting emergent property of an individual's creation. Krauss (2005) states that the difference between qualitative and quantitative epistemologies is philosophical and theoretical rather than methodological and that it is important to understand the theoretical paradigm underlying the study.

The theoretical models and empirical studies form the underlying background for this study. A relevant theory, social cognitive career theory, is applied to the present context to understand the causative factors for graduate job search outcomes. The predicted relationships between different variables are to be tested in the study; hence, it can be classified as an explanatory study. A quantitative research design was used because this is best suited for identifying the factors influencing an outcome and examining the influence of predictors on outcomes (Creswell 2009). A quantitative research strategy can be described as the collection of numerical data to confirm pre-defined hypotheses and elucidate a relationship between different independent and dependent variables. The results of this study will be generalised to a wider population by confirming reliability and validity.

5.3.1 Survey Research

A survey is a tool used to collect quantitative data by asking questions from a wide range of people and is extensively used in social research (Dorsten & Hotchkiss 2005; Neuman 2011). The purpose of a survey is to obtain data from a sub-set of the population so that the findings and conclusions can be generalised for a larger and more diverse population (Creswell 2009). Cooper and Schindler (2006, p.245) observe:

> *It is a measurement process used to collect information during a highly structured interview – sometimes with a human interviewer and other times without. Questions are carefully chosen or crafted, sequenced, and precisely asked of each participant*.

Broadly speaking, surveys are mainly of two types: interviews and questionnaires (Cooper & Schindler 2006; Dorsten & Hotchkiss 2005). Interviews are conducted either in person or by telephone and an interviewer asks questions regarding a particular aspect under research. The interviews can be structured or unstructured. During a structured interview, the interviewer asks pre-defined questions (in the form of a questionnaire) seeking responses on the already-provided categories of answers (Dorsten & Hotchkiss 2005). An unstructured (or semi-structured) interview is conducted like a conversation and is used to understand the respondent's opinion beyond what can be expressed by answering a few questions (Dorsten & Hotchkiss 2005). The role of the interviewer is to keep the respondent on track and ask for details of interest by probing the respondent.

Questionnaires or self-administered surveys used to be formally conducted with paper and pencil (distributed by hand or mail), but with the advent of modern technology they are now most commonly carried out on computers (i.e., 'computer-based surveys') (Cooper & Schindler 2006). Computer-based surveys (used in the current study) are distributed over the internet or intranet where people are either recruited based on their activity (for example, when they open a particular link) or are sent invitations (via email or by sharing a link on particular websites like social media) to participate in the survey.

5.3.2 Rationale for Using Survey Research

A well-designed survey is capable of providing accurate estimates of attributes of a population, based on small samples (Dorsten & Hotchkiss 2005) and a carefully selected sample presents the complete heterogeneity of the population (Visser, Krosnick & Lavrakas 2000). The versatility of this approach to data collection is able to yield the required abstract information by asking well-chosen questions. It takes much less time and effort than does observation; conducting surveys via email, telephone or the internet expands the domain of research past geographical distances at a fraction of the time and cost compared to observation (Cooper & Schindler 2006). A self-administered survey is cheap to conduct compared to structured interviews especially when the sample population is geographically dispersed. While using the internet as a medium for data collection, it is easier and quicker to distribute the survey among a wide range of participants at the same time who can respond at their convenience (Bryman 2008).

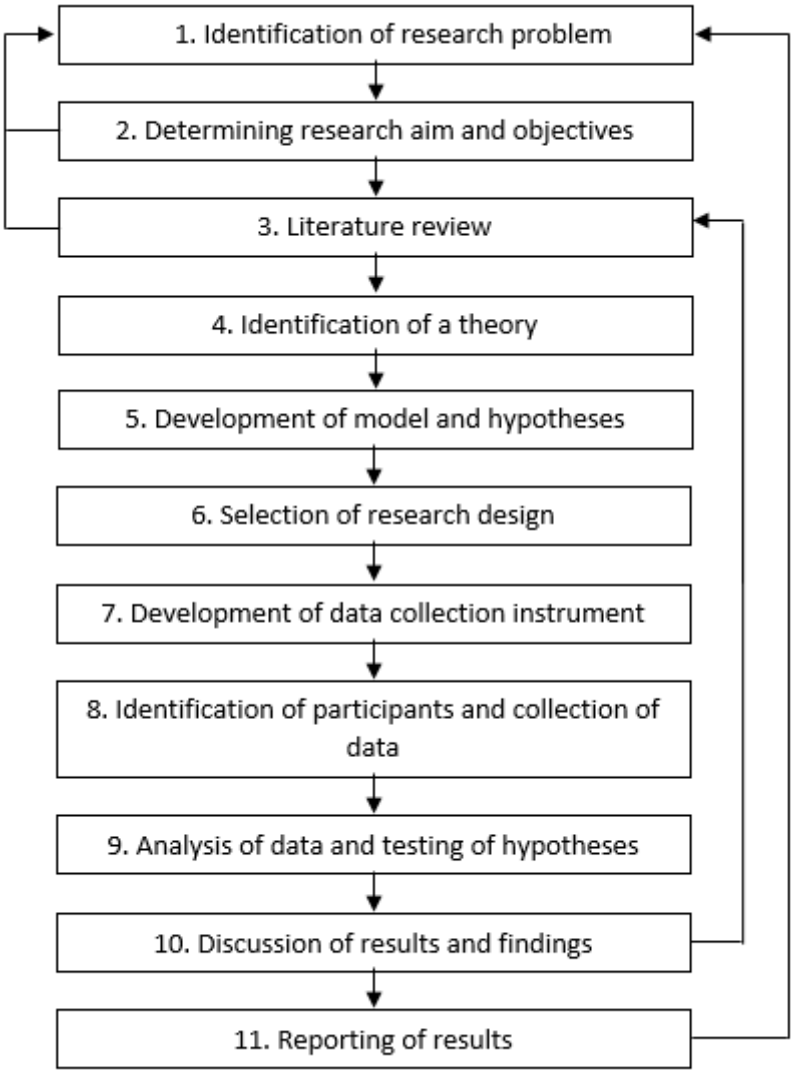
The present study aims to investigate the causative factors affecting job search outcomes in Pakistan. The study collects responses from respondents with wide demographics to coherently encompass the experience of graduates looking for jobs in different situations. The findings need to be generalised to graduate job search in other contexts and countries with similar economic and social structures to Pakistan's. Hence, the dynamics of this study makes a computer-assisted survey the best option for data collection.

5.3.3 Research Process for the Current Study

The study investigates the nature of employability and the way it affects graduate job search outcomes. Employability is defined as a complex and ambiguous construct in the literature that involves assorted variables and it can be defined by way of a number of perspectives. In line with the steps presented by researchers (Bryman 2008; Saunders, Lewis & Thornhill 2009), the study was conducted by following the research process in Figure 5.1.

The research problem and objectives of the research were developed (Chapter 1) in line with research gap identified from the literature review (Chapter 2 and 3). The identification of the research problem and objectives was a recursive process which was aided by the extensive literature review. SCCT was selected to study graduate employability in Pakistan, since the constructs of this theory were closely aligned to the factors that help job seekers after graduation in Pakistan. SCCT offered a foundation for the development of the proposed model for graduate employability and defining the hypotheses (Chapter 4). Quantitative research design was selected for this study (Chapter 5); it provided a framework for the identification of participants, sampling procedure and the data collection method. The collected data were analysed using PLS SEM technique (see Chapter 6). The hypotheses developed in Chapter 4are tested, the proposed model is verified, and the results are then presented (Chapter 6) and discussed (Chapter 7). The discussion of results is presented with the relevant literature. The results reported help to answer the research problem developed in step 1.

Figure 5.1 Research Process Followed for the Current Study



5.4 Development of the Survey Instrument

Surveys were used for data collection because the researcher was interested in collecting data by asking respondents from a large sample of the population the same set of questions over a relatively short period of time (Saunders, Lewis & Thornhill 2009). Surveys can provide reliable, accurate and valid data, while measuring multiple variables, with the help of multiple-choice questions and testing multiple hypotheses simultaneously (Neuman 2011).

The conceptual model developed for this study is based on the literature review that identified the key constructs contributing towards job search outcome. The identified constructs have already been studied in the context of employability and job search; hence,

the literature review was carried out to operationalise the constructs. Using the survey items of other researchers avoids "reinventing the wheel" and repeating the mistakes they have already identified (Dorsten & Hotchkiss 2005, p.186). The items for this study were obtained from previously validated scales, selected based on their validity and reliability statistics, and modified according to the study context, since the survey design for cultural research is generally adopted from existing instruments in the literature relevant to the research topic (Harkness, Van de Vijver & Mohler 2003). By using pre-existing measures, potential error in defining items can be minimised, hence, increasing item reliability and validity.

5.4.1 Operationalising the Constructs

The following section discusses the operationalisation of each of the constructs in the conceptual model: self-efficacy, goal, action, outcome, learning experiences, personal and contextual influences, background influences and person inputs.

5.4.1.1 Self-Efficacy

Bandura (1977) defines the concept of self-efficacy as based on three dimensions: magnitude, generality and strength. Initially, self-efficacy was used as a global construct for investigations but later researchers have tailored it according to specific behaviours (Schaffer & Taylor 2012). In the study context, self-efficacy is studied as job search self-efficacy (Russell, Holmstrom & Clare 2015; Van Hoye et al. 2015). The study used three items to measure job search self-efficacy, obtained from Moynihan et al. (2003), which used these items to study the relationship between job search self-efficacy, number of interviews and employment outcome among graduating students. They reported a Cronbach's alpha of 0.83, showing good internal consistency. The same scale was used by Georgiou et al. (2012) while studying the effect of individual characteristics on job search behaviour, effort, outcome and psychological wellbeing. They showed a Cronbach's alpha of 0.76 for items measured. Hence, these items were able to be used in the current context to study the effect of self-efficacy on job search outcome.

Table 5.2 Items Measure for Self-Efficacy

Construct	Variables	Item Code	Questionnaire items
Self-efficacy	Self-efficacy	SEF1	I feel certain about my ability to get the job I want
		SEF2	I have what it takes to get a good job
		SEF3	I am certain that my job search will be successful

5.4.1.2 Goal

For the current research, goal is assessed as a measure of job search clarity. Wanberg, Hough and Song (2002) developed a four-item measure for this to study the reemployment success of unemployed (laid-off) job seekers. As the items in this scale referred to the job search of laid-off workers, Zikic and Saks (2009) modified the scale to fit the job search situation of all job seekers. The modified scale consists of five items (Table 5.3) and was used by Zikic and Saks (2009) to study the role of career-relevant activities during job search. The Cronbach's alpha was 0.84; thus a good internal consistency was found among the measure items. This scale was used in the current study.

Table 5.3 Items Measure for Job Search Clarity

Construct	Variables	Item Code	Questionnaire items
Goal	Job search clarity	JSC1	Clear idea of the type of job that I want to find
		JSC2	Clear idea of the type of company I want to work for
		JSC3	Clear idea of where I want to work
		JSC4	Clear job search objectives
		JSC5	Need help to decide what type of work I would really enjoy

5.4.1.3 Action

Job search intensity is used to measure action in this study. Job search intensity has been used commonly by researchers as a measure of job search behaviour or effort (Coen et al. 2015; Zikic & Saks 2009). Blau (1994) used the concept as the number of times each job search method was employed by job seekers to look for the job in a given time period. The job search methods identified as a result of the literature review were used to measure job search intensity. Respondents were asked to indicate the number of times they used each job search method in a week while looking for a job (Table 5.4).

Table 5.4 Items Measure for Job Search Intensity

Construct	Variables	Item Code	Questionnaire items
Action	Job search intensity	JSI	For each item, indicate how many times you used each job search method in a week when you were looking for job. i. Responded to job ads in newspaper ii. Responded to online job ads iii. Visited online job portals like seek.com.au iv. Contacted friends or relatives to ask for possible job leads v. Contacted employment agency or recruiter to ask for possible job opening vi. Contacted university's employment office vii. Contacted a prospective employer yourself viii. Attended a job fair ix. Attended employer's visit to school x. Used social media (e.g., LinkedIn) to connect with employers and look for job

5.4.1.4 Outcome

Most studies in the context of job search measure outcome as employment status (a dichotomous variable) (Georgiou et al. 2012; Guan et al. 2013; McArdle et al. 2007; Sverko et al. 2008). As the current study is employing participants who are already employed, the outcome is measured as the job search method (that helped to secure the job), number of interview calls and job offers obtained, employment speed, employment quality, intention to quit and satisfaction with the job (Table 5.5).

The number of interview calls and job offers received are used by many researchers, including Crossley and Stanton (2005); Georgiou et al. (2012); Saks (2006) and Moynihan et al. (2003). Respondents were asked to report the number of interview calls and job offers they received before accepting the final job offer. Employment speed was used as an outcome variable, following Wanberg, Hough and Song (2002) and Ellis and Taylor (1983). Respondents were asked for the number of months they took after graduation to secure a job.

Employment quality is an outcome variable, used by Sverko et al. (2008), Wanberg, Kanfer and Rotundo (1999) and Wanberg, Hough and Song (2002). These studies were conducted on experienced job seekers and the measure of employment quality employed in these studies uses items that contrast between the previous and new job. As the participants of this study

are graduate job seekers, the already-present measure of employment quality cannot be used. Hence, a two item measure for employment quality was developed based on the literature. The items account for the utilisation of technical skills (acquired while at the university) when performing job tasks.

Intention to quit is an outcome variable used by Wanberg, Kanfer and Rotundo (1999) and Wanberg, Hough and Song (2002). A two-item scale adapted from Wanberg, Hough and Song (2002) was used in this study. Satisfaction with job is used by Sverko et al. (2008); Wanberg, Kanfer and Rotundo (1999) as a job search outcome variable, measured with two items. One item was taken from these studies; the other item was developed for this study with literature support.

Table 5.5 Items Measure for Outcome

Construct	Variables	Item Code	Questionnaire items
Outcome	Job search method	JSM	Which of the following job search methods helped you to secure a job offer? (Mark the one that applies) • Job ad in newspaper • Online job ad • Online job portal like seek.com.au • Through social circle (friends, family, relatives or acquaintances) • Employment agency or recruiter • University's employment office • By contacting prospective employer • Job fair • Employer's visit to school • Social media (e.g., LinkedIn)
	No. of interviews	IC	How many interview calls did you receive before accepting a job offer?
	No. of job offers	JO	How many job offers did you receive before accepting a job offer?
	Employment speed	Time	How many months did it take you after graduation before you accepted a job offer?
	Employment quality	EQ1	My job is related to my field of study.
		EQ2	I am utilizing the technical skills I gained at university in my job
	Intention to quit	IQ1	I often thing about quitting

		IQ2	I will probably look for a new job in the next 6 months
	Satisfaction with job	SJ1	I am satisfied with my current job
		SJ2	I can see a career path for myself in my current job

5.4.1.5 Learning Experiences

The literature review identified that learning experiences for job search come from career development learning. This is an important factor in the context of graduate job search and is used widely by researchers (Jollands 2015; Reddan & Rauchle 2012; Stoica 2010; Sumanasiri, Ab Yajid & Khatibi 2015). A nine-item measure is adapted from Reddan and Rauchle (2012). The measure is based on Law and Watts (1977) DOTS model, with items relevant to self-awareness, opportunity awareness, decision making and transition learning. The ability factor added to the model will be measured as respondents' possession of employability skills. As stated in Chapter 4, a list of employability skill sets is identified from the extensive literature review. Based on these skillsets, a scale is developed. Respondents were asked to rate the level of each skill they possess (Table 5.6).

Table 5.6 Items Measure for Learning Experiences

Construct	Variables	Item Code	Questionnaire items
Learning experiences	Career development learning	CDL1	Awareness of my knowledge, abilities and skills and how to deploy them
		CDL2	Application of my strengths, goals and motivation while searching for job
		CDL3	Awareness of general trends and opportunities for graduate employment in my discipline
		CDL4	Awareness of requirements of graduate recruiters from job seekers
		CDL5	Ability to relate my knowledge, skills and strengths with different employment opportunities
		CDL6	Awareness of effective job search strategies
		CDL7	Application of my understanding of recruitment and selection methods to application
		CDL8	Ability to find relevant vacancy information including ways of accessing unadvertised vacancies
		CDL9	Tailoring my self-presentation in resumes and interviews to meet the specific job requirement
Ability		COM1	Read and understand

	Employability skills	COM2	Write effectively for a wide range of audience
		COM3	Listen and understand
		COM4	Speak effectively to communicate your point of view
		COM5	Present effectively to a wide range of audience (presentation skills)
		PSOL1	Identify problems
		PSOL2	Analyse situation in relation to problem at hand
		PSOL3	Think critically
		PSOL4	Make an effective decision
		CRE1	Creative thinking
		CRE2	Bring innovation in work and solutions
		LEAD1	Lead a group of people
		LEAD2	Provide constructive feedback
		LEAD3	Teach new skills to others
		INIT	Take initiative
		TW1	Work in a team setting
		TW2	Support others in work
		TW3	Cooperative with peers for work
		ICT1	Use modern tools
		ICT2	Operate modern software (relevant to my field of study)
		ICT3	Manage, interpret and use information using IT equipment
		SMGT1	Plan and organise
		SMGT2	Manage time
		SMGT3	Multitask and deliver results on time
		SMGT4	Work under pressure
		LLL1	Desire to gain knowledge while at workplace from peers and seniors
		LLL2	Desire to upgrade subject relevant skills by taking course or workshops
		CCC1	Speak a second language (other than mother-tongue)
		CCC2	Work with people from different cultures

	CCC3	Respect differences and accept others

5.4.1.5 Personal Influences

The personal influences for a job seeker (Table 5.7) are believed to influence their job search process by either supporting or hindering their ability to perform their desired behaviour. For the current study, self-esteem, self-confidence and emotional intelligence are identified as personal influential factors. Researchers in the context of job search have used these factors widely. Rosenberg (1965) developed a 10-item scale for self-esteem that is most widely used to measure the concept because of its high reliability and validity scores. Various researchers have used this scale to measure self-esteem in the context of job search and found reliable results (Brown et al. 2006; Georgiou et al. 2012; Saks & Ashforth 1999, 2000). The Cronbach alpha for this scale was between 0.83 and 0.87 in these studies. The same 10-item scale was be used in the current study.

The self-confidence measure used in this study was developed by Cox, Martens and Russell (2003) while revising the factor structure of competitive state anxiety inventory-2. They reported the Cronbach alpha for this measure to be 0.91. The measure consists of five items and is also used by other researchers (Freeman & Rees 2010; Hatzigeorgiadis et al. 2009; Rees & Freeman 2007). The Cronbach's alpha in other studies was in the range of 0.74 to 0.90, which shows good internal consistency for the measure. Although the measure was developed for athletes, the items are not specific to any profession or scenario and can be used to measure self-confidence in any setting.

The measure of emotional intelligence developed by Salovey and Mayer (1990) is commonly used by researchers in psychological studies. It consists of 141 items, which makes it difficult to adapt for the current study. The item measure of emotional intelligence developed by Wong and Law (2002) consists of 16 items and will therefore be used.. The scale consists of four dimensions, self-emotion appraisal (SEA), others' emotion appraisal (OEA), use of emotion (UOE) and regulation of emotion (ROE), consistent with Salovey and Mayer (1990) . The Cronbach alpha of all four dimensions was found to be 0.89 for SEA, 0.88 for OEA, 0.76 for UOE and 0.85 for ROE. The same measure was used by Kafetsios and Zampetakis (2008) in studying the effect of positive and negative effect on personality. They reported the

Cronbach's alpha for SEA, OEA, UOE, and ROE to be 0.83, 0.77, 0.83 and 0.79, respectively. This shows the measure have good internal consistency.

Table 5.7 Items Measure for Personal Influences

Construct	Variables	Item Code	Questionnaire items
Personal influences	Self-esteem	SES1	On the whole, I am satisfied with myself
		SES2	At times I think I am no good at all*
		SES3	I feel that I have a number of good qualities
		SES4	I am able to do things as well as most other people
		SES5	I feel I do not have much to be proud of*
		SES6	I certainly feel useless at times*
		SES7	I feel that I'm a person of worth, at least on an equal plane with others
		SES8	I wish I could have more respect for myself*
		SES9	All in all, I am inclined to feel that I am a failure*
		SES10	I take a positive attitude toward myself
	Self-confidence	SC1	I feel self-confident
		SC2	I'm confident I can meet the challenge
		SC3	I'm confident about performing well
		SC4	I'm confident because I mentally picture myself reaching my goal
		SC5	I'm confident of coming through under pressure
	Emotional intelligence	EI1	Good sense of why I have certain feelings most of the time
		EI2	Good understanding of my own emotions
		EI3	Understanding of what I feel
		EI4	Knowledge of whether or not I am happy
		EI5	Knowledge of my friends' emotions from their behaviour
		EI6	Good observation of others' emotions
		EI7	Sensitive to others' feelings and emotions
		EI8	Good understanding of the emotions of people around me
		EI9	Setting goals for myself and then trying my best to achieve them
		EI10	Assuring myself that I am a competent person
		EI11	Self-motivating person
		EI12	Always encouraging myself to try my best
		EI13	Ability to control my temper and handle difficulties rationally
		EI14	Capability of controlling my own emotions
		EI15	Ability to always calm down quickly when I am very angry

	EI16	Good control of my own emotions

* - denotes reverse coded items

5.4.1.6 Contextual Influences

The contextual influence for the study (Table 5.8) will only consider social support. Bernal, Maldonado-Molina and Río (2003) originally developed a scale for social support consisting of four dimensions; only the satisfaction with social support dimension will be used in this study. They reported the Cronbach's alpha of this dimension to be 0.89, which shows good internal consistency. While exploring the role of psychosocial, biographical and socio-economic variables as predictors of job search behaviour, Presti (2014) also uses only the satisfaction dimension of social support, reporting the Cronbach's alpha to be 0.93, showing excellent internal consistency.

Table 5.8 Items Measure for Contextual Influences

Construct	Variables	Item Code	Questionnaire items
Contextual influences	Social support	SS1	The social support I received during job search process was sufficient
		SS2	I am satisfied by the support I received from my family and friends while I was looking for job

5.4.1.7 Person Input and Background Contextual Affordances

The person input in the current study is defined as gender, education and experience (Table 5.9). The research on job search measures education as either the highest level of education attained (Addison & Portugal 2001; Schaffer & Taylor 2012; Zikic & Saks 2009) or the Cumulative Grade Point Average (CGPA) (Moynihan et al. 2003; Saks & Ashforth 1999; Try 2005). As the respondents of this study are all graduates with the same level of education, education is measured only as the grade point average. The work experience is measured as the number of years of experience, consistent with the previous research (Lin & Flores 2011; Moynihan et al. 2003; Posel, Casale & Vermaak 2014). The background influences comprise the highest level of education possessed by the respondents' parents (mother and father both).

Table 5.9 Items Measure for Person Input and Background Contextual Affordances

Construct	Variables	Item Code	Questionnaire items
Person input	Gender	Gen	Please specify your gender
	Education	CGPA	Cumulative CPA at the time of graduation
	Experience	Exp	Years of experience at the time of graduation
Background contextual influences	Parents' education	FEdu	Father's highest qualification
		MEdu	Mother's highest qualification

5.4.2 Measurement Scale

Measurement in research is based on assigning numbers to empirical events, objects or behaviours in conformity with pre-defined rules (Cooper & Schindler 2006). The measurements scales are generally of four types: nominal, ordinal, interval and ratio. The nominal scale measures variables on two or more categories that are mutually exclusive and collectively exhaustive. Examples of these kinds of questions include yes/no, male/female, present/absent. Ordinal scales are used for questions where classification, ranking or order is to be measured. In the scale option, each option is greater than or smaller than the previous one, but there is no objective distance between two points. It only helps to measure the order and not the positional distance. Examples include preference scales. Interval scales are used for rating questions and have equidistant points, i.e., the distance between any two consecutive points on the scale is the same. Ratio scales have the characteristics of all three scales already defined and have an absolute zero value or origin. They are used for the measurement of physical dimensions like age, length or distance. Ratio scales are not very commonly used in business research.

Most of the questions in this research are measured on a five-point Likert scale. Developed by Rensis Likert, Likert scales are most commonly used for measurement in business research (Cooper & Schindler 2006) and are generally used to measure the intensity of agreement or disagreement regarding the subject under research (Bryman 2008). Previous studies have used Likert scales to measure the variables under study in this research (Côté, Saks & Zikic 2006; Messum, Wilkes & Jackson 2015). The five-point scale was used because it prevents the respondents from selecting an unbiased point which can affect the quality of the data collected (Adeleke, Bahaudin & Kamaruddeen 2015). Hence, in line with previous studies

measuring the items presented in this Chapter's Tables (5.2 to 5.9) and the rationale provided by researchers, a five-point Likert scale was selected for data collection.

The final survey instrument used for data collection from the target population is presented in Appendix A. The first two questions of the survey were screening questions assuring only that the intended respondents complete the questionnaire.

5.5 Sampling

When collecting data for a quantitative study, it is impossible and impractical to collect data from each and every individual element in the population. Sekaran (2003) defines sampling as a process of selecting the sufficient number of the right individuals, objects and events from the population to provide the correct information for the issue under study. According to Cooper and Schindler (2006), the basic idea behind sampling is to select few elements from the population and draw conclusions about the whole population based on those elements' characteristics. In a quantitative study, it is important to design a sample that represents the whole population with the same characteristics and properties because the results need to be generalised for the wider population (McMurray, Pace & Scott 2004). After identifying the population, two major issues need to be addressed in sampling: determining the sampling technique and sampling size.

5.5.1 Sampling Technique

There are generally two types of sampling techniques: probability sampling and non-probability sampling (Sekaran 2003). In probability sampling, subjects are selected randomly and hence, all subjects in the population have the same probability of being selected as a sample subject (Bryman 2008; Cooper & Schindler 2006). In non-probability sampling, individuals do not have the same chance of being selected as a sample subject because the sample selection is based on some pattern (Bryman 2008; Cooper & Schindler 2006). Probability and non-probability sampling techniques also have further different types of sampling designs that can be selected based on the purpose of the study.

For the current study, ***simple random sampling*** was selected. This is the most basic form of probability sampling, where each individual in the population has the same probability or likelihood of being selected in the sample (Bryman 2008; Cooper & Schindler 2006; Guthrie

2010). It may not be possible to get a complete randomly selected sample because the population under study is very large. The data collection method of using social media excludes individuals who do not use social media, hence, limiting it from being a completely random sample.

5.5.2 Sample Size

The second important issue is determining the correct sample size. To generalise the finding of the sample to the population, it is important to have a sample that is valid and reliable (Sekaran 2003), i.e., sample statistics should be reliable and close estimates of the statistics of the whole population. If a larger (than required) sample is selected, resources (such as time and money) may be wasted. On the other hand, if the selected sample is too small, results achieved may not be precise and may be less useful (Bethlehem 2009). Hence, calculating the correct sample size is crucial in carrying out the study effectively. The selection of sample size is dependent on many factors, including the purpose of the study, the size of the population and the research technique used (Bryman 2008; Guthrie 2010). Sample size is often based on the number of variables under study. In multivariate research, the sample size should be preferably 10 times (or more) the number of variables under study (Heck & Thomas 2000; Sekaran 2003). In the current study, there are around 20 variables; hence, the sample size should be 200 or more. For conducting structural equation modelling, researchers generally prefer a sample size of 250 or more (Schumacker & Lomax 2010). Hence, based on these considerations, a ***minimum sample size*** of 250 was selected.

5.6 Data Collection

5.6.1 Survey Participants

This research aims to study the graduate job search experience in the light of social cognitive career theory, with a particular focus on graduates in Pakistan. The data collection instrument developed for this study consists of questions relating to respondents' job search experience and the role their universities played in developing their various attributes. In line with the aim of this study, its population consists of all graduates from universities in Pakistan who completed their university education in the past two years and were employed at the time of data collection. The two-year time frame was chosen to eliminate the chances of response bias. Response bias happens when the participant gives false or incomplete information

(Cooper & Schindler 2006). In the current study, the chances of response bias were high if participants were unable to recall their job search experience due to time delay between the experience and data collection. Hence, to eliminate the possibility of false or inaccurate information, only those participants were asked to complete the survey who had relatively fresh job search experience.

5.6.2 Data Collection

As already mentioned in section 5.3, surveys were used to collect data for the current study. Surveys for data collection can be conducted via mail questionnaire, personal interview, telephone interview or online questionnaire (Dorsten & Hotchkiss 2005). Online surveys were used for this study because they allow geographically dispersed contact with otherwise inaccessible participants, along with being faster and low-cost (Cooper & Schindler 2006). The potential participants of the study were contacted via social media platforms (Facebook and LinkedIn). The study population had a university degree and were proficient in the use of online tools, and hence, no risks were anticipated in using online survey for data collection.

The survey was set up using Opinio, an online survey platform used to design, publish and manage surveys. Opinio is standard online survey platform licensed and used at Swinburne University of Technology. The invitation (see Appendix C) for potential participants to complete the survey was posted on public social media forums where the traffic of potential respondents was high (e.g., university alumni pages, other pages, and profiles where market entrants share their experiences of job search). The invitation consisted of a direct link which redirected participants to the survey. Potential participants were requested to complete the survey by clicking on the link. Before the start of the survey, participants were asked to answer questions regarding their year of graduation and the major field of study. A respondent ID was automatically allocated to participants when they started answering the survey questions. As the survey was lengthy, participants were given the option of completing over several sittings and were issued with a personalised link when they opted to return and complete at a later date. The survey link was opened for a set time period during which the responses were collected. After the set time, the link was disabled and no further respondents were allowed to access the link. A total of 533 usable samples were collected at the end of the data collection period. The data were downloaded from Opinio in a SPSS-compatible file and Excel sheet for analysis.

5.7 Data Analysis

Quantitative data collected in raw form provide little to no information to the researcher. Data analysis is the process of reducing the available data to manageable size, exploring, developing summaries, identifying patterns, examining relationships and applying statistical techniques to draw conclusions from them (Cooper & Schindler 2006; Saunders, Lewis & Thornhill 2009). While selecting a statistical technique for data analysis, it is important to keep in view the type of data collected and the theory used to explore the research problem (Lowry & Gaskin 2014). The data analysis was carried out using two software packages, SPSS v.23 and SmartPLS3. SPSS (Statistical Package for Social Sciences) was used in the first part of data analysis that involved data screening and cleansing, descriptive statistics and testing reliability of the measurement models. Data were first cleansed for missing values and of 1436 attempted surveys; 533 usable samples with less than 10% of missing data were obtained. Missing value analysis was conducted and data imputation was carried out to obtain a complete data set. Then the data were ready for further analysis.

After finalising the data files on SPSS, SmartPLS3 was used to carry out Partial Least Squares Structural Equation Modelling (PLS-SEM). The analysis using PLS-SEM was conducted in two steps: assessment of measurement model and the assessment of structural model. The measurement model assessment assesses the reliability and validity of the constructs (i.e., the relationship between the construct and the items measuring it). The method of assessment of measurement model is dependent on whether the construct is formative or reflective. After the confirmation of measurement model, the assessment of structural model was carried out. The assessment of the structural model evaluates the relationship between various constructs and hence, tests the hypotheses. The process of data analysis is detailed in Chapter 6.

5.8 Ethical Considerations

Research involving human components needs to be conducted in line with research ethics standards. Explaining ethics in research, Saunders, Lewis and Thornhill (2009, pp.183-184) observe:

> *Ethics refers to the appropriateness of your behaviour in relation to the rights of those who become subject of your work or are affected by it…* ***Research ethics*** *therefore relates to the questions about how we formulate and clarify our research topic, design our research and gain access, collect data, process and store our data, analyse and write up our research findings in a moral and responsible way*.

Permission to conduct this study was obtained from the Swinburne Human Research Ethics Committee (SUHREC) to comply with the ethical and legal concerns of human research. A set of guidelines has been established by SUHREC to guide researchers regarding the ethical concerns of human research. These guidelines need to be followed appropriately before the commencement of data collection. Approval to collect data was obtained after submitting a detailed application to SUHREC. The application addressed the following:

- Detailed overview of the project including description and justification
- Data collection procedure of the study including profile of the participants and their recruitment process
- Any training requirements for the researchers involved in the study
- Intended use of collected data
- Data collection and storage procedure
- Benefits to the participants associated with the study
- Any risks to the participants during the course of study and risk mitigation plan
- Disclosure information, informed consent and compensation provided
- Publication intentions.

Data collection was commenced after obtaining clearance from SUHREC (see Appendix D). Informed consent was implied, because participants voluntarily clicked on the link to commence the survey. All SUHREC ethical guidelines were appropriately adhered to in order to preserve the study's integrity, to protect participants and researchers, to assure participants' anonymity and confidentiality and to maintain data security. Regular periodic reporting to SUHREC was undertaken throughout the duration of the study. The highest ethical behaviour standards have been exercised in this study as specified by SUHREC.

5.9 Chapter Summary

This chapter focused on the research methodology employed in the study to collect data. The initial parts of the chapter described the research paradigm appropriate for the study and its rationale for selection. Section 5.3 explained the use of survey research and the justification for using surveys here. The process adopted for the research, which is based on steps described by researchers, was presented in section 5.3.3.

The next part of the chapter focused on the development of the survey instrument, which includes operationalisation of constructs and selection of the measurement scale. The description of the sampling process, which includes sampling technique and sample size selection, was discussed in section 5.5. The selection of survey participants and data collection process was discussed, followed by a brief explanation of data analysis. The chapter concluded by highlighting the ethical considerations in section 5.8 in line with the SUHREC.

The next chapter provides the detailed data analysis procedure and results of the data analysis.

Chapter 6 – Results

6.1 Introduction

The previous chapter outlined in detail the research methodology employed in this study. This chapter explains in detail the data analysis procedure and the results obtained from data analysis. Section 6.2 presents the overview of data preparation, including data screening and cleansing. The descriptive statistics are provided in section 6.3, followed by the validation of the questionnaire in section 6.4. Section 6.5 explains the procedure of data analysis employed, using partial least squares structural equation modelling (PLS-SEM). This section focuses on two phases of analysis: assessment of the measurement model, followed by assessment of the structural model. This is followed by the results of the analysis in section 6.6, which includes the results of hypotheses testing and the verified model for graduate employability in Pakistan. The results of the questions asked from the respondents regarding successful job search method and the time required to find the job are discussed in section 6.6.

6.2 Overview of the Survey/ Data Screening, Cleansing and Preparation

The following section will discuss the various steps adopted for preparing the data for data analysis. These steps include data screening, handling missing values and outliers, and looking for the normality of data.

6.2.1 Sample selection and data collection

For the current research, the respondent sample was defined as recent graduates of Pakistani universities. Recent graduates were defined as individuals who completed their bachelor degrees in the past two years at the time of data collection and were already employed in an organisation in Pakistan. As Pakistan has more than 160 universities, the top 16 universities (i.e., about 10%) were selected for data collection. The list of the top 16 universities was obtained from the ranking published by the Higher Education Commission of Pakistan and their graduates were contacted for data collection.

The data were collected using virtual social media. Various social media platforms, including Facebook, Twitter and LinkedIn, were utilised to get in contact with the potential respondents. The advertisements were posted on the universities' official pages or accounts, which requested graduates to participate in the study. The sampling technique and data collection procedure have already been elaborated in Chapter 5.

6.2.2 Handling Missing Values

In human-based research, it is common to come across datasets with missing values, despite the best efforts to prevent this (Kline 2011). Missing data are considered one of the most prevalent issues in data analysis (Samani 2016). In quantitative research, missing data can lead to biased estimates, increased standard errors and weak generalisations of findings (Dong & Peng 2013). Hence, it is preferable to have a complete data set before starting analysis. Some statistical procedures, including structure equation modelling, require complete datasets for implementation (Kaplan 2009). As participation in the study was voluntary, a large number of participants submitted incomplete or partially completed surveys. Samples with more than 25% of the values missing were deleted (Byrne 2001) and a dataset of 533 usable samples was obtained. The data were checked for missing at random data, which yielded results showing no specific pattern in the missing values. Hence, the dataset had values missing at random (MAR).

Researchers have generally defined three ways to deal with missing data: list-wise deletion, pairwise deletion and data imputation (Kline 2011; Schumacker & Lomax 2010). ***List-wise deletion*** involves removing the cases with any missing data from the analysis process. This method is not recommended because it leads to loss of information. The dataset obtained for this study consisted of many missing values because the number of observations for a single case was high and the respondents were not bound to answer all questions. Hence, list-wise deletion was not adopted. ***Pairwise deletion*** eliminates cases if the data are missing for variables involved in a particular analysis. This leads to various sample sizes for different statistical estimates and this method is not recommended for use in SEM (Kline 2011). ***Data imputation*** techniques like multiple-imputation, expectation-maximisation and maximum likelihood replace or impute values for missing data with an estimate or a predicted value

calculated based on the available data on other variables (Dong & Peng 2013). The data imputation technique was used to deal with missing values in this study.

Missing Value Analysis with expectation-maximization (EM) was used to impute missing values in the dataset. EM was used for imputation because it is a two-step iterative process where first the missing values are imputed using regression, followed by the Maximum Likelihood (ML) estimation of the imputed data, repeating the process until the achievement of a stable solution (Kline 2011). The Little MCAR (Missing Completely at Random) test yielded Chi-Square (χ^2) = 73335.231, *df* = 72849, Sig. = 0.102, showing the MCAR test is non-significant. Hence, the values are missing at random, justifying the validity of the EM imputation method.

6.2.3 Screening of Outliers

Outliers are the observed data points that have extreme or atypical values and are substantially different from other observations (Hair et al. 2010). The data were screened for the presence of outliers. Outliers can occur due to observation errors, data entry errors or actual extreme values from self-reported data (Schumacker & Lomax 2010). The data collected were based on Likert-type scales or multiple-choice options. Hence, the outliers due to self-reported data were avoided. The data were collected using Opinio, which automatically generates a SPSS data file; thus, there were no data entry errors either.

6.2.4 Normality of Distribution

Inferential statistics is based on the assumption that the data are normally distributed along all possible data points (Schumacker & Lomax 2010). Most of the data analysis techniques are based on the assumption that the data are normally distributed and if this condition is not met, the hypotheses testing is considered to be flawed (Field 2009). The current study employs PLS-SEM as the data analysis technique; this technique does not require the condition of data normality to be satisfied before analysis (Hair et al. 2017; Hair et al. 2014; Samani 2016). Gao, Mokhtarian and Johnston (2008) report that, even if the condition of normality is satisfied by applying transformation techniques to the scores, it is not favourable for the model as a whole. Hence, the originally obtained data values were used to apply PLS-SEM and the normality of data was not considered in this study.

6.3 Descriptive Analysis / Respondents' Demographic Profile

Descriptive statistics are used in research to understand general profile of respondents by converting complex data into a manageable numeric or graphical (figures, graphs or tables) form (Samani 2016). The discussion on the demographic profile of the 533 respondents follows below. Table 6.1 shows the information about the ***Year of Graduation*** of respondents. As stated in the research methodology chapter, this research aims to collect data from respondents who graduated within two years of data collection. Most respondents of this study graduated in 2015 and 2016. Of 533 respondents, 53.8% graduated in 2016 and 37.1% graduated in 2015. Only 9% respondents graduated before 2015.

Table 6.1 Demographic Information – Year of graduation

Year of Graduation	Frequency	Percentage
2016	287	53.8
2015	198	37.1
Other	48	9.0
Total	533	100.0

For ***Major Field of Study*** 472 respondents out of 533 (88.6%) have a degree in engineering; 1.5% of respondents had a degree in management sciences, 0.9% in social sciences and 7.9% in Information Technology. Table 6.2 shows the distribution of respondents' major field of study.

Table 6.2 Demographic Information – Major Field of Study

Major Field of Study	Frequency	Percentage
Engineering	472	88.6
Management Sciences	8	1.5
Social Sciences	5	.9
Information Technology	42	7.9
Other	6	1.1
Total	533	100.0

Table 6.3 shows the ***Gender*** of respondents. Most of the respondents of this study, 92.7%, were male; only 7.3% were female.

Table 6.3 Demographic Information – Gender

Gender	Frequency	Percentage
Female	39	7.3
Male	494	92.7
Total	533	100.0

For ***Father's highest education*** the highest education qualification attained by respondents' parents was asked to investigate its effect on job search outcome. Table 6.4 shows the education level of respondents' fathers. Of the fathers, 41.7% had a bachelor's degree, 21.8% reported a Master's degree, 3.8% possess a doctorate and 0.8% post-doctorate; 11.8% reported grade 12 as their fathers' highest qualification and 20.1% studied to a level lower than grade 12.

Table 6.4 Demographic Information – Fathers' Highest Qualification

Father's Highest Qualification	Frequency	Percentage
Less than Grade 12	107	20.1
Grade 12	63	11.8
Bachelors	222	41.7
Masters	116	21.8
PhD	20	3.8
Post doc	4	0.8
Total	533	100.0

For ***Mother's highest education*** 33% of respondents reported their mothers did not complete grade 12; 25.3% had grade 12 as their highest qualification, 29.1% possess a bachelor's degree and 11.6% have a master's degree; 0.6% respondents reported their mother had a PhD degree and only 0.4% reported a post-doctorate degree. Table 6.5 shows these statistics.

Table 6.5 Demographic Information – Mothers' Highest Qualification

Mother's Highest Qualification	Frequency	Percentage
Less than Grade 12	176	33
Grade 12	135	25.3
Bachelors	155	29.1
Masters	62	11.6
PhD	3	0.6
Post doc	2	0.4
Total	533	100.0

For ***Province of Residence*** shown in Table 6.6, 66.4% of respondents belonged to the province of Punjab, followed by 19.9% from Sindh; 7.7% were from Federal Capital Territory, 3.8% from Khyber Pakhtunkhwa, 0.9% from Azad Jammu and Kashmir, 0.8% from Baluchistan, 0.4% from Federally Administered Tribal Areas and 0.2% from Gilgit-Baltistan.

Table 6.6 Demographic Information – Province of Residence

Province of Residence	Frequency	Percentage
AJ&K	5	0.9
Baluchistan	4	0.8
FATA	2	0.4
Federal Capital Territory -Islamabad	41	7.7
Gilgit-Baltistan	1	0.2
Punjab	354	66.4
KPK	20	3.8
Sindh	106	19.9
Total	533	100.0

The ***Cumulative GPA*** obtained by respondents is shown in Table 6.7: 46% scored a CGPA between 3.01 and 3.50, 29.4% scored between 2.51 and 3.00, and 17.4% scored above 3.5; only 7.2% attained a CGPA of less than 2.5.

Table 6.7 Demographic Information – Cumulative GPA

Cumulative GPA	Frequency	Percentage
<2.5	29	5.4
2.51-3.00	163	30.6
3.01-3.50	244	45.8
3.51-4.00	97	18.2
Total	533	100.0

In ***Years of Experience*** at the time of graduation only 1.7% of respondents had more than three years' working experience; 12.3% had experience between 1 and 3 years, 45.5% had less than 1 year's working experience and 40.4 had no working experience at all. These statistics are shown in Table 6.8.

Table 6.8 Demographic Information – Years of experience

Years of Experience	Frequency	Percentage
None	193	36.2
<1 year	270	50.7
1 to 3 years	62	11.6
>3 years	8	1.5
Total	533	100.0

6.4 Validation of the Questionnaire

A questionnaire was developed for the current study based on the review of the literature, as discussed in section 5.4. Before data collection, it is important to check the validity of the questionnaire to ascertain the scale developed is measuring what it intends to measure (Cooper & Schindler 2006; Sekaran 2003). Validity is the degree to which the observed data represent the real meaning of the concept under study (Babbie & Mouton 2001). This can be explained as the concern of the researcher regarding the findings of the questionnaire actually representing what the researcher wants to measure (Saunders, Lewis & Thornhill 2009). To test the validity of the measuring instrument, researchers have used various types of validity tests and writers use varying terms to refer to them (Sekaran 2003), but a widely accepted classification of these tests consists of three categories: content validity, criterion validity and construct validity (Cooper & Schindler 2006; Sekaran 2003). Following the guidelines provided by Samani (2016) to carry out PLS-SEM, only content validity and construct validity will be considered for the current study.

6.4.1 Content Validity

Content validity refers to the extent to which the measurement instrument covers the extent and depth of the investigation topic (Samani 2016; Saunders, Lewis & Thornhill 2009). It is the degree to which the content of the measurement instrument represents the universe of all relevant items to wholly cover the concept under examination (Cooper & Schindler 2006; Sekaran 2003). As explained by Sekaran (2003, p.206), it "is a function of how well the dimensions and elements of a concept have been delineated". To evaluate the content validity of the measurement instrument, the researcher should first identify all the elements

that adequately represent the concept. This can be determined with the help of judgement by carefully defining the concept and assessing each item in the measurement instrument (Cooper & Schindler 2006; Saunders, Lewis & Thornhill 2009).

For the current study, the causative factors for graduate employability were identified after an extensive literature review. After analysing the factors studied by researchers in various contexts of graduate employability, 12 factors were identified for inclusion that related to the context of this study. The scales used to measure the selected factors were adapted from studies conducted in a similar context of graduate employability or job search. The scale selection was based on the statistical results of those studies. Some revisions of the selected scales were conducted to rephrase the items according to the current context, to simplify the ambiguous or too-long items and to ensure the wording did not include any jargon and was easily understandable for Pakistani graduates. Further, the instrument was reviewed by eight Pakistani graduates to ensure that the sample population of the study would be able to easily understand and respond to the questionnaire.

6.4.2 Construct Validity

Construct validity is used for the constructs that are measured by using multiple indicators. It assesses the degree to which the items of the construct are represented and logically concerned (Samani 2016). Problems in construct validity can arise if the researcher has not adequately defined the measuring items for the constructs (Creswell 2009). The evaluation of construct validity is based on both theory and the measuring instrument (Cooper & Schindler 2006). Neuman (2011, p.213) describes construct validity as the type of validity "that uses multiple indicators and has two subtypes: how well the indicators of one construct converge or how well the indicators of different constructs diverge". Newman's description of construct validity, along with other authors (Cooper & Schindler 2006; Samani 2016), has established that construct validity can be measured by measuring an instrument's convergent validity and divergent validity. A detailed description of convergent validity and divergent validity is presented in Section 6.5.1.1 and results presented in Section 6.5.3.1.

6.5 Data Analysis – Partial Least Square Structural Equation Modelling (PLS-SEM)

The purpose of using a statistical technique for data analysis is to assess whether the patterns showed by data collected are caused by chance or due to the proposed theory that is under analysis (Lowry & Gaskin 2014). The first step in data analysis is to confirm the suitability of data to conduct analysis. Sections 6.2 and 6.4 explained the procedure adopted for data preparation, followed by establishing questionnaire's validity. The next step in analysis was to analyse the relationship between various factors and test hypotheses using structural equation modelling. The structural equation modelling (SEM) technique is a complex statistical technique widely used in management research to explore the causal relationships between latent variables (Hair, Ringle & Sarstedt 2011; Samani 2016). There are mainly two variants of SEM in use in management research: co-variance based structural equation modelling (CB-SEM) and partial least squares structural equation modelling (PLS-SEM). CB-SEM is generally used in studies where the objective is confirmation, whereas PLS-SEM is more suitable for predictive and exploratory studies (Hair, Ringle & Sarstedt 2011; Hair et al. 2012; Tobias 1995). PLS-SEM is highly effective when the study tries to predict the set of dependent variables from a large set of independent variables (Abdi 2003). The objective of the current study is to explore the causative factors for graduate job search outcome while studying a large number of predicting variables; hence, partial least squares structural equation modelling (PLS-SEM) was used for analysis. Another reason for the selection of PLS-SEM was the theory used to explore the research problem, i.e., Social Career Cognitive Theory. Lowry and Gaskin (2014) confirm that the theoretical models of Social Cognitive theory (e.g., Social Career Cognitive Theory) are too complex to be studied using traditional statistical techniques and it is only possible to explore the parts of the full model using those techniques. PLS-SEM provides a robust and flexible causal model testing approach, making this technique appropriate for the current study.

PLS-SEM has fewer restrictions on measurement scale and data. It has the ability to work with a wider range of sample sizes, can deal with complex models consisting of a large range of factors, does not consider the normality and collinearity of data, can consider formatively measured constructs and addresses a broader range of problems (Hair et al. 2014; Hair et al. 2012). It can be applied to constructs that are measured using as low as one item. It provides

a more robust estimation of the structural model by maximizing the explained variance of the dependent latent variables. It estimates the loadings of the indicator variables for the exogenous constructs based on their prediction of the endogenous constructs, not their shared variance among indicator variables on the same construct. Thus the loadings in PLS-SEM are in a way their contribution to the path coefficients (Hair et al. 2017; Hair, Ringle & Sarstedt 2011; Tobias 1995).

The structural equation model consists of two sub-models: the inner model and the outer model. The assessment procedure of PLS-SEM is carried out in two steps: assessment of the outer or measurement model and assessment of the inner or structural model (Hair et al. 2017). The measurement model assesses the relationship between indicator items and the latent variables or constructs, whereas the structural model tests the hypothesized relationships among constructs (Samani 2016; Wong 2013). The steps undertaken in this study for the assessment of measurement model and structural model are adopted from Hair et al. (2017) and outlined below in Table 6.9.

Table 6.9 Steps Involved in PLS-SEM

Stage 1: Assessment of Measurement (Outer) Model	
For Reflective Constructs:	• Internal Consistency (Cronbach's alpha, Composite reliability) • Convergent Validity (AVE) • Discriminant Validity
For Formative Constructs	• Content Validity • Collinearity among indicators • Significance and relevance of outer weights
Stage 2: Assessment of Structural (Inner) Model	
• Structural path model coefficient and hypotheses testing • Coefficient of determination R^2 • Effect size f^2 • Predictive relevance Q^2	

Adopted from Hair et al. (2017)

Wong (2013) presents some guidelines for using PLS-SEM as an analysis tool. Those guidelines are incorporated in this study and are presented in Table 6.10.

Table 6.10 Guidelines for Application of PLS-SEM

Topics	Suggestions
Measurement scale	Avoid using a categorical scale in endogenous constructs
Value for outer weight	Use a uniform value of 1 as starting weight for the approximation of the latent variable score
Maximum number of iterations	300
Bootstrapping	Number of bootstrap "samples" should be 5000 and number of bootstrap "cases" should be the same as the number of valid observations
Inner model evaluation	Do not use goodness-of-fit (GoF) Index
Outer model evaluation (reflective)	Report indicator loadings. Do not use Cronbach's alpha for internal consistency reliability.
Outer model evaluation (formative)	Report indicator weights. To test the outer model's significance, report t-values, p-values and standard errors

Adopted from Wong (2013)

The following sections explain the procedure for the assessment of the measurement model and the structural model.

6.5.1 Outer Model Assessment/Assessment of the Measurement Model

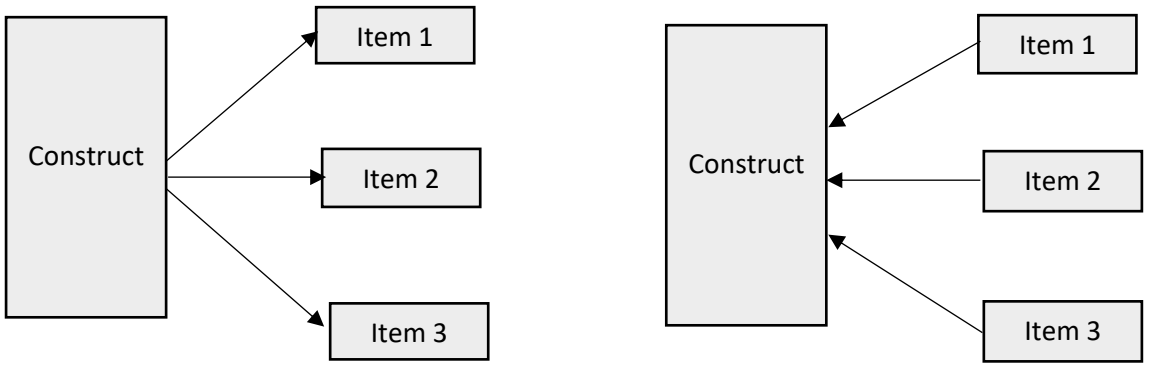
The first step in PLS-SEM is the assessment of the measurement model to make sure the measurement items are measuring the construct of interest. This is synonymous with Confirmatory Factor Analysis in CB-SEM. Before assessing the measurement model, it is important to identify the reflective and formative constructs, as the two constructs have different theoretical concepts and hence, steps involved in assessing these two types of constructs are different (Hair et al. 2017; Hair, Ringle & Sarstedt 2011; Hair et al. 2014).

For ***reflective constructs,*** items represent the latent variable or the construct, whereas for the formative constructs individual items compose the latent variable or the construct (Garson 2016). Reflective constructs are represented by arrows pointing from the construct to the individual items (Hair et al. 2014). Reflective constructs are based on the underlying assumption that the construct itself is the reality that is representative of the measuring items; all items are caused by the same construct and hence, they are highly correlated and interchangeable (Hair et al. 2014). Also, if any of the items are removed, it does not drastically

change the meaning of the construct, given the condition that it has sufficient reliability after deletion of the item (Garson 2016; Hair et al. 2017).

Formative constructs are represented by arrows pointing from the individual items towards the construct, as the theory suggests that the indicators cause the latent variable (Hair et al. 2014; Samani 2016). Each individual item represents a certain aspect of the construct, hence, assuming the items are reality. The individual items of the formative construct are not interchangeable, each item signifying a different dimension of the construct, and hence, they do not correlate greatly (Wong 2013). It is not permissible to delete any of the items, since deleting an item is synonymous with deleting a certain aspect of the construct and hence, changing the overall meaning (Garson 2016; Hair et al. 2017; Hair, Ringle & Sarstedt 2011). Figure 6.1 shows the visual representation of the formative and reflective constructs.

Figure 6.1 Reflective vs Formative Construct



Reflective Construct **Formative Construct**

Söllner et al. (2010) present the following four steps to identify that either the construct is reflective or formative, and summarizes the discussion above:

1. Investigate the direction of causality between the indicator and latent variable
2. Determine whether the indicators are interchangeable or if dropping an indicator will cause a conceptual problem
3. Investigate whether the indicators correlate with each other or not
4. Investigate the antecedents and consequences of the single indicators.

6.5.1.1 Assessment of Reflective Construct

The following section explains the procedure for assessing the reflective constructs. Reflective construct assessment is carried out based on the construct's internal consistency reliability and validity (Hair et al. 2014). Reflective construct reliability and validity are measured by using Consistent PLS Algorithm.

Reliability shows the degree to which the measuring instrument is consistent, stable, compatible and free of random and unstable error (Adeleke, Bahaudin & Kamaruddeen 2015). A measure is reliable if it produces consistent results irrespective of the measurement settings and conditions (Cooper & Schindler 2006). To determine the internal consistency reliability of a construct, traditionally the value of Cronbach's alpha is analysed, and this estimates reliability based on inter-correlations of the observed indicator variables (Field 2009; Hair et al. 2017). Cronbach's alpha is calculated based on the assumption that all items are equally reliable, whereas PLS-SEM prioritizes the items based on their individual reliability. Also, Cronbach's alpha is sensitive to the number of items in the scale and underestimates the internal consistency reliability (Hair et al. 2017). Due to these limitations, a more appropriate measure of reliability is used in PLS-SEM, i.e., composite reliability (C.R) (Hair et al. 2014; Wong 2013). Composite reliability acknowledges the uniqueness of indicator loadings in a population and accommodates the reliabilities of various indicators while avoiding the underestimation caused by Cronbach's alpha (Hair et al. 2014). The value of C.R varies between 0 and 1, with higher values indicating higher reliability. The value of 0.6 for composite reliability is acceptable for exploratory studies (Hair et al. 2017; Hair, Ringle & Sarstedt 2011). While reporting the results, the values of both Cronbach's alpha and composite reliability should be reported as lower and upper bounds, respectively. The true internal consistency reliability value lies somewhere between these values (Hair et al. 2017). The item's absolute standardized loadings should also be considered along with the value of reliability (Hair, Ringle & Sarstedt 2011). The general rule of thumb is to retain the items with minimum of 0.5 loading (Hair et al. 2017), but the deletion of items with loadings between 0.4 to 0.7 should only be considered if it aids the value of composite reliability and validity to reach the minimum threshold values (Hair, Ringle & Sarstedt 2011).

Construct Validity, assessed by measuring the convergent and discriminant validity of the reflective constructs, determines the degree to which the measure is represented, logically concerned and measuring the intended concept (Hair et al. 2014; Samani 2016).

Convergent validity is the measure to assess the degree to which the construct items converge while sharing the higher proportion of variance (Sarstedt et al. 2014). It examines the extent to which the items positively correlate to the other items of the same construct (Hair et al. 2017). As the items of the reflective construct are drafted in a way to measure the same construct using various approaches, the items are expected to converge and share a high degree of variance. Convergent validity takes two scales that are supposed to measure the same construct and explains their relation to each other (Cooper & Schindler 2006). The value of Average Variance Expected (AVE) is used as the measure of convergent validity (Hair et al. 2017; Hair, Ringle & Sarstedt 2011). Initially, researchers agreed on the minimum value of 0.5 for AVE (Hair, Ringle & Sarstedt 2011) but Fornell and Larcker (1981) suggested a lower threshold of 0.4 for AVE, given the value for composite reliability is above 0.6. Many researchers, including Calisir, Basak and Calisir (2016), Gökçearslan et al. (2016), Huang et al. (2013) and Jamaludin et al. (2016) have used this convention in their studies to conduct PLS-SEM in exploratory studies.

Discriminant Validity indicates the distinctiveness of one construct from the other constructs (Hair et al. 2017). It is the degree to which the items on one scale do not correlate with the scores from other scales measuring different constructs (Cooper & Schindler 2006). For a construct to have discriminant validity, the variance item shared with the construct which it is supposed to be measuring should be higher than the variance shared with any other construct under study (Garson 2016). Cross-loadings are traditionally used to determine the discriminant validity of the measure. The cross-loadings matrix indicates the loadings of an item on all the constructs in the study. For a measure to have discriminant validity, the loading of an item should be highest on the construct it is supposed to measure (Hair, Ringle & Sarstedt 2011). The Fornell-Larcker criterion is another measure to determine the discriminant validity. The idea of this criterion is underpinned in the rationale that each construct shares the highest variance with its measurement items when compared to the variance shared with other constructs (Hair et al. 2017). It is indicated by the square root of

the AVE of each construct, which should be higher than the correlation of the given construct with any other construct in the study (Hair, Ringle & Sarstedt 2011).

6.5.1.2 Assessment of Formative Constructs

This section will elaborate the process used to assess the formative constructs. Formative construct assessment is different from the assessment of reflective constructs, as measuring items of formative constructs are not expected to correlate, and hence, the concepts of internal reliability and validity are not relevant (Hair et al. 2017; Hair, Ringle & Sarstedt 2011). Formative constructs are assessed around the construct's content validity, convergent validity, collinearity and significance and relevance of the indicators (Hair et al. 2017; Hair, Ringle & Sarstedt 2011; Sarstedt et al. 2014). SmartPLS' Bootstrapping algorithm is used for the assessment of formative constructs. "Bootstrapping is a resampling technique that draws a large number of subsamples from the original data (with replacement) and estimates models for each subsample" (Hair et al. 2014, p.112).

Content validity is to be established while defining formative constructs to ensure that a comprehensive set of items substantially covers all aspects of the construct (Hair et al. 2017). The content validity of the measurement instrument is explained in Section 6.4.1. The next step is to assess the convergent validity of the construct items, the level of correlation present among the items of the construct (Hair et al. 2017).

As the items of the formative construct are distinct identities and are not supposed to converge, they should not show **convergent validity**. To evaluate the convergent validity of the formative constructs, **multi-collinearity** is assessed (Hair, Ringle & Sarstedt 2013), i.e., the test of correlation between various variables. The level of multi-collinearity is assessed to confirm that two distinct items are not measuring the same dimension. The measure used for this assessment is the variance inflation factor (commonly known as VIF). Hair, Ringle and Sarstedt (2011) indicate a threshold value for VIF to be 5, i.e., the VIF value of each construct should be less than 5 to rule out the possibility of multi-collinearity.

Outer weights' significance and relevance are determined to assess the contribution of the items to the construct by testing the significance of the items' coefficients, weights and loadings. The outer weights are obtained as a result of multiple regression carried out

between items as independent variables and the construct itself as a dependent variable (Hair et al. 2017). They are standardized and explain the relative contribution of each item to the construct. The items are considered to have relevance if their outer weights are significant; hence, the item deletion or retention is based on the significance level of the items. Sometimes non-significant items are also retained if their deletion is not supported by the theoretical underpinning (Hair, Ringle & Sarstedt 2011). The critical t-value is also considered while assessing the outer weights' significance and relevance. The t-value of the two-tailed test should be the minimum criteria of 1.65 for 10% significance level, 1.96 for 5% significance level and 2.58 for 1% significance level (Hair, Ringle & Sarstedt 2011).

6.5.2 Inner Model Assessment/Assessment of the Structural Model

After the assessment of the outer model and finalising the measurement model, the next step in PLS-SEM is to assess the structural model or the assessment of the inner model. This section will explain the procedure of assessing the structural model. The structural model assessment examines the model's predictive capabilities and the relationship between various constructs (Hair et al. 2017). The key steps involved in the assessment of the structural model before evaluating hypothesized relationships involves significance of path coefficients, the level of coefficient of determination R^2, the f^2 effect size, the predictive relevance Q^2 and q^2 effect size (Hair et al. 2017; Hair et al. 2014). The concept of model fit is not relevant in PLS-SEM, as the objective of this technique is to maximize the explained variance instead of minimizing the difference between covariance matrices (Hair et al. 2017). The assessment of the structural model is carried out using the Bootstrapping Algorithm in SmartPLS. The following section will explain the procedure of structural model assessment.

6.5.2.1 Significance of the Structural Model's Path Coefficients

The structural model's standardized path coefficients demonstrate the inner model's quality (Hair et al. 2012). The path coefficients generally indicate the strength of hypothesized relationships between various constructs (Hair et al. 2017). The standardized values of path coefficients generally fall in the range of -1 and +1, where the value closer to +1 indicates a strong positive relationship, the value closer to -1 indicates a strong negative relationship, and the values closer to 0 on both positive and negative spectrums shows a very weak relationship (Hair et al. 2014). Apart from the path coefficients, the empirical t-value and p-

value at a particular significance level are also returned by bootstrapping routine. The significance level can be varied based on the nature and objective of the study. Hair et al. (2017) recommends a significance level (two-tailed) of 10% for exploratory research studies, which is thus adopted in this study. The critical value of two-tailed test at 10% significance level is 1.96. The p-value explains the significance of the path relationship, in turn testing the developed hypotheses.

6.5.2.2 Coefficient of Determination R^2

The coefficient of determination (R^2 values) is the most commonly used evaluation criterion for the structural model, as it is the measure of a model's predictive accuracy (Hair et al. 2017; Hair, Ringle & Sarstedt 2011; Hair et al. 2014). R^2 is measured as the squared correlation between an endogenous construct's actual and predictive values and explains the extent to which variance in the endogenous construct is represented by all the exogenous constructs that are linked to it (Hair et al. 2017; Huang et al. 2013). In other words, it represents the combined effect that all exogenous constructs have on the endogenous construct (Hair et al. 2014). It represents the model's predictive power and the value of R^2 varies between 0 and 1, with values closer to 1 representing a higher level of predictive accuracy. It is difficult to provide a rule of thumb for R^2 values since the values are dependent on the complexity of the model, the research discipline and the nature of the study (Hair et al. 2017); hence, the categories of poor, modest, moderate and good fit were not applied in this study. Consumer behaviour researchers consider the R^2 value of 0.20 to be high, whereas in marketing research a value of 0.75 is considered acceptable (Hair et al. 2017). Hair et al. (2017) posit that selecting a model solely on the basis of R^2 value is not a good approach; hence, other approaches were also used.

6.5.2.3 Effect size f^2

In addition to evaluating R^2, the variation in R^2 value when a particular exogenous construct is removed from the model is determined by Cohen's f^2, also known as effect size f^2 (Hair et al. 2014). The effect size f^2 is measured by using the following formula:

$$f^2 = \frac{R^2_{included} - R^2_{excluded}}{1 - R^2_{included}}$$

To calculate effect size f^2, the PLS path model is estimated twice, once as a whole and then after removing a particular exogenous construct. The effect size is determined in relation to the cut-off values described by researchers (Cohen 1988): 0.02 for a small effect, 0.15 for a medium effect and 0.35 for a large effect.

6.5.2.4 Predictive Relevance Q^2 Criterion

The predictive relevance is the next step in the assessment of the structural model. This criterion is developed by Stone (1974) and Geisser (1974) and is also known as Stone-Geisser's Q^2 value. It is an indication of the model's out-of-sample predictive power and is obtained by running a blindfolding procedure in SmartPLS. The blindfolding technique omits part of the data matrix and then predicts the omitted part by using the estimates of model parameters (Hair et al. 2014). The Q^2 value is higher if the difference between the predicted and original matrix is smaller and hence, the predictive accuracy is better (Hair et al. 2017). This technique can only be applied for reflective constructs and does not work for formative constructs.

6.5.2.5 Effect size q^2

As mentioned in the previous section, the Q^2 criterion presents the efficiency of the path model in predicting the originally observed values. The q^2 effect size is a measure that assesses the relative impact of predictive relevance (Hair et al. 2017). The calculation of effect size q^2 is similar to the calculation on effect size $f^{2:}$

$$q^2 = \frac{Q^2_{\text{included}} - Q^2_{\text{excluded}}}{1 - Q^2_{\text{included}}}$$

To calculate effect size q^2, the blindfolding procedure is conducted twice, once with all exogenous variables to obtain Q^2_{included} and then after deleting with a particular exogenous variable to get the value for Q^2_{excluded}. The threshold values of 0.02, 0.15 and 0.35 are used to define the small, medium or large effect, respectively, of a particular exogenous variable on the endogenous variable (Hair et al. 2017).

6.5.2.6 Goodness-of-fit

Tenenhaus, Amato and Vinzi (2004) propose a global goodness-of-fit measure for PLS-SEM analysis, termed the GoF index. This measure uses the average R^2 value of the model and is calculated by the geometric mean of the average communality. Researchers, including Hair et al. (2012), have argued against this measure because the GoF index considers average

values in its calculation instead of true values. It is also challenging to define universal threshold values for the GoF index because its value is derived based on R^2 of the model and the R^2 values are dependent on the context of the research (Hair, Ringle & Sarstedt 2011). Another argument against the use of the GoF index is grounded in the fact that this value is based in reflective outer model communalities, and hence, it is inappropriate to use it in models with formative constructs and single item constructs (Hair et al. 2012). Hence, it was not employed in the current study.

6.5.3 Mediation Analysis

Mediation happens when a third variable, i.e., a mediating variable, intervenes between the independent and dependent variable and mediates the relationship between independent and dependent variables (Creswell 2009). Mediation is the establishment of an indirect relationship between exogenous and endogenous variables via mediating variables (Samani 2016), where the mediating variable absorbs some of the effect from exogenous to endogenous variable (Hair et al. 2014). It can be simplified, since, apart from the exogenous and endogenous variables having a direct relationship (direct effect), there is an indirect relationship (indirect effect) via another variable, called the mediating variable and the test of mediation determines the extent to which the direct effect is modified if the indirect effect is introduced in the model (Samani 2016).

Zhao, Lynch and Chen (2010) analyse the research conducted on mediation analysis and summarise the outcomes of mediation analysis broadly categorised into two major groups comprising five sub-groups. The first two sub-groups of mediation outcome consist of direct-only non-mediation and no-effect non-mediation. The other three sub-groups comprise complementary mediation, competitive mediation and indirect-only mediation. Table 6.11 summarises the outcomes of mediation.

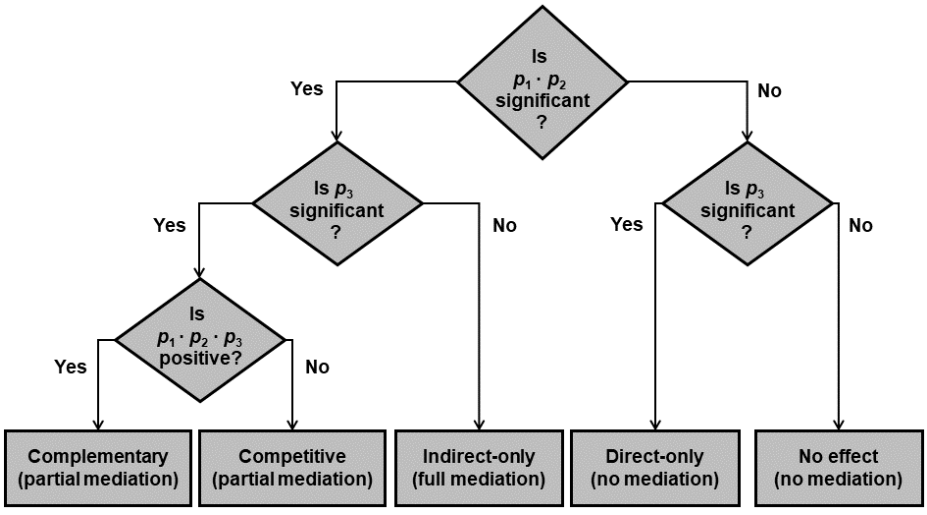
Table 6.11 Types of Mediation Output

Non-Mediation	
Direct only non-mediation	Direct effect is significant only, not the indirect effect
No-effect non-mediation	Neither direct nor indirect effect is significant
Mediation	
Complementary mediation	Direct and indirect effects are both significant and point in the same direction
Competitive mediation	Direct and indirect effects are both significant but point in the opposite direction
Indirect-only mediation	Indirect effect is significant only, not the direct effect

Adopted from Hair et al. (2017)

The process explained by Hair et al. (2017) was used in the current study to test the mediating relationships. First, the direct effect is calculated without mediating variable in the path model by running the Bootstrapping algorithm. In the next step, the path model is analysed again after including the mediating variable in the model. Based on the significance of the relationships before and after including the mediating variable, and looking at the sign of path coefficients, the type of mediation is determined. Figure 6.2 summarises the process.

Figure 6.2 Mediation Analysis Procedure



Adopted from Hair et al. (2017)

6.5.4 Moderation Analysis

Moderation analysis is conducted when the relationship between exogenous and endogenous constructs is dependent on a third variable known as the moderating variable (Hair et al. 2014). With the variation in the third moderating variable, the strength and/or

direction of the relationship between exogenous and endogenous variables changes (Hair et al. 2017). The moderating variables are determined before data collection and hence, the required data are collected from the respondents. The moderating variables can be hypothesised to either affect a particular relationship in the model or can have an impact on the whole model. The type of effect the moderating variable has determines the analysis procedure to be used (Hair et al. 2017). If the moderating variable is influencing only a particular relationship, the interaction effect is used for analysis. In the current study, the moderating variables are expected to affect all relationships in the model and interest lies in comparing the models, and hence, **multigroup analysis** was employed.

To carry out multigroup analysis, the data were divided into groups based on the moderating variables. For example, one group consisted of data collected from male respondents, whereas the other group consisted of responses from female respondents. The multigroup analysis (MGA) algorithm in SmartPLS3 was used to conduct this analysis. The MGA algorithm determines if the path coefficients of a particular relationship are significantly different or not for different groups (Hair et al. 2017). The p-value of the difference is checked for its significance level to determine if the moderating variable has a significant impact or not on the relationship.

6.6 Results of Data Analysis Using PLS-SEM

The following section presents the data analysis results obtained after conducting PLS-SEM.

6.6.1 Results of Outer Model Assessment

The outer model assessment was conducted in two steps due to the second-degree nature of the two constructs. All the first-degree constructs were reflective, whereas the second-order constructs were formative in nature. The first-order reflective constructs include self-efficacy, career development learning, emotional intelligence, self-esteem, self-confidence, social support, job search clarity, employability skills' ten indicators (communication skills, problem solving skills, creativity skills, leadership skills, initiative skills, team working skills, information communication and technology skills, self-management skills, lifelong learning skills and cross cultural competence) and job search outcomes' three indicators (employment quality, intention to quit and satisfaction with the job). Employability skills and job search outcome were defined as second-degree formative constructs.

6.6.1.1 Assessment of First-Order Reflective Constructs

The assessment of reflective constructs was conducted using the Consistent PLS algorithm in SmartPLS3. The first step in the assessment of the outer model was the examination of item loadings. The minimum loading of all items is expected to meet the minimum threshold of 0.5 (Hair et al. 2010). Nine items did not meet the minimum criteria of item loadings and hence, were deleted, one at a time, from the model, while keeping in view the theoretical underpinning. The items deleted were EI6, EI13, EI15, SES2, SES5, SES6, SES8, SES9 and JSC5. After the deletion of these items, the minimum threshold value of 0.5 was met.

The next step was to analyse the internal consistency of the constructs by looking at the values of Cronbach's alpha and composite reliability. The requirements of internal consistency have already been explained in section 6.5.1.1. The data obtained showed the required condition for internal consistency was satisfied. The value of composite reliability ranged between 0.884 and 0.919, which meets the minimum requirements. The values of Cronbach's alpha were recorded between 0.681 for self-efficacy and 0.919 for job search clarity.

The average variance expected (AVE) was analysed to determine the convergent validity of the constructs. The minimum threshold to be obtained was 0.4 if the value of composite reliability was above 0.6. Two constructs returned the value of AVE below 0.4: emotional intelligence had an AVE of 0.386 and self-esteem showed an AVE value of 0.376. The values were not far below the threshold but steps were taken to meet the minimum requirements. The items were deleted from both the constructs, one at a time, to increase the value of AVE. Emotional intelligence had 13 items; hence, three items, EI16, EI14 and EI4, were deleted to reach the AVE of 0.406. Self-esteem had five items, two of which (SES1 and SES3) were deleted and the value of AVE was improved from 0.376 to 0.410.

Discriminant validity was accessed using cross-loadings of the construct. The items should have the highest loading on the construct it is measuring. The cross-loadings matrix was analysed for the individual loadings of the items on all constructs. One item, EI8, was found to have a higher loading on other constructs; hence, it was removed from the model. The results of the tests conducted for the evaluation of the outer model are presented in the tables below. The loadings of items on their respective constructs, Cronbach's alpha, composite reliability and AVE are presented in Table 6.12.

Table 6.12 Outer loadings, Cronbach's Alpha, Composite reliability and AVE

Construct	Item	PLS Loading	Cronbach's Alpha	Composite Reliability	AVE
Self-Efficacy	SEF1	0.642	0.681	0.684	0.42
	SEF2	0.702			
	SEF3	0.597			
Career Development Learning	CDL1	0.785	0.918	0.918	0.554
	CDL2	0.776			
	CDL3	0.713			
	CDL4	0.695			
	CDL5	0.725			
	CDL6	0.733			
	CDL7	0.738			
	CDL8	0.69			
	CDL9	0.831			
Communication	COM1	0.679	0.813	0.812	0.466
	COM2	0.585			
	COM3	0.749			
	COM4	0.702			
	COM5	0.686			
Problem Solving	PSOL1	0.626	0.796	0.796	0.495
	PSOL2	0.737			
	PSOL3	0.686			
	PSOL4	0.758			
Creativity	CRE1	0.755	0.774	0.776	0.635
	CRE2	0.836			
Leadership	LEAD1	0.72	0.738	0.739	0.486
	LEAD2	0.715			
	LEAD3	0.655			
Teamwork	TW1	0.802	0.816	0.815	0.596
	TW2	0.782			
	TW3	0.731			
Information, Communication and Technology	ICT1	0.89	0.846	0.846	0.649
	ICT2	0.756			
	ICT3	0.763			
Self-Management	SMGT1	0.761	0.816	0.817	0.528
	SMGT2	0.682			
	SMGT3	0.763			
	SMGT4	0.695			
Lifelong Learning	LLL1	0.801	0.744	0.745	0.595
	LLL2	0.74			
Cross-Cultural Competence	CCC1	0.707	0.761	0.761	0.516
	CCC2	0.712			
	CCC3	0.736			
Emotional Intelligence	EI1	0.523	0.865	0.858	0.411
	EI2	0.531			
	EI3	0.528			
	EI5	0.521			
	EI7	0.502			

	EI9	0.886			
	EI10	0.709			
	EI11	0.704			
	EI12	0.746			
Self-Confidence	SC1	0.754	0.832	0.83	0.495
	SC2	0.698			
	SC3	0.668			
	SC4	0.759			
	SC5	0.628			
Self-Esteem	SES4	0.555	0.676	0.672	0.41
	SES7	0.596			
	SES10	0.752			
Social Support	SS1	0.809	0.689	0.697	0.538
	SS2	0.65			
Job Search Clarity	JSC1	0.848	0.919	0.919	0.739
	JSC2	0.797			
	JSC3	0.854			
	JSC4	0.934			
Employment Quality	EQ1	0.823	0.787	0.787	0.649
	EQ2	0.788			
Intention to Quit	IQ1	0.695	0.697	0.699	0.538
	IQ2	0.77			
Satisfaction with Job	SJ1	0.856	0.841	0.841	0.726
	SJ2	0.848			

Table 6.12 presents the individual item loadings on their corresponding constructs. Most constructs had item loadings of above 0.6 except self-efficacy and communication. The lowest item loading was observed on emotional intelligence (EI7 -0.502), but it also met the cut-off criterion of 0.5. After the deletion of items to meet the criteria of convergent validity and discriminant validity, some of the constructs showed a variation in their values of AVE, Cronbach's alpha and composite reliability. Emotional intelligence had a Cronbach's alpha of 0.896, which was reduced to 0.865, composite reliability from 0.887 to 0.858 and AVE moved from 0.386 to 0.411. As the items from self-esteem were deleted to improve convergent validity, AVE was improved from 0.376 to 0.410, whereas Cronbach's alpha and composite reliability were reduced from 0.753 and 0.747 to 0.676 and 0.672, respectively. Now the values of Cronbach's alpha vary from 0.676 for self-esteem to 0.919 for job search clarity. The composite reliability ranges between 0.672 for self-esteem and .919 for job search clarity and AVE from 0.410 for self-esteem to 0.739 for job search clarity. All these tests have satisfied the minimum threshold criteria, hence, determining the constructs' internal consistency and convergent validity.

The discriminant validity of the construct was determined by the cross-loadings presented in Table 6.13. The item loadings on their corresponding constructs are presented in bold. Careful examination of the results presented in the Table concluded that the items had the highest loadings on the constructs they are representing. Hence, the condition of discriminant validity was met.

Table 6.13 Item Loadings and Cross loadings

	S.Eff	CDL	Com	P.Sol	Creat	L.ship	T.wk	ICT	S.Mgt	LLL	CCC	E.Int	S.Con	S.Est	S.Sup	JSC	E.Q	I.Q	Sat
SEF1	**0.642**	0.411	0.368	0.348	0.242	0.336	0.345	0.313	0.297	0.352	0.326	0.381	0.531	0.407	-0.157	0.352	-0.13	0.075	-0.108
SEF2	**0.702**	0.453	0.496	0.468	0.367	0.434	0.4	0.336	0.43	0.363	0.364	0.434	0.559	0.428	-0.206	0.333	-0.145	0.059	-0.131
SEF3	**0.597**	0.363	0.247	0.264	0.202	0.31	0.322	0.225	0.305	0.304	0.259	0.381	0.454	0.381	-0.141	0.347	-0.218	0.144	-0.194
CDL1	0.575	**0.785**	0.453	0.48	0.399	0.461	0.449	0.48	0.518	0.487	0.327	0.552	0.521	0.503	-0.186	0.487	-0.192	0.137	-0.177
CDL2	0.574	**0.776**	0.508	0.479	0.503	0.589	0.493	0.424	0.497	0.463	0.362	0.571	0.506	0.533	-0.195	0.456	-0.203	0.051	-0.234
CDL3	0.415	**0.713**	0.426	0.441	0.404	0.472	0.407	0.377	0.439	0.393	0.372	0.47	0.389	0.418	-0.186	0.491	-0.161	0.061	-0.204
CDL4	0.409	**0.695**	0.405	0.392	0.355	0.433	0.402	0.374	0.392	0.354	0.396	0.448	0.365	0.364	-0.178	0.462	-0.169	0.102	-0.227
CDL5	0.467	**0.725**	0.513	0.455	0.485	0.541	0.489	0.411	0.476	0.402	0.42	0.475	0.444	0.421	-0.208	0.457	-0.203	0.068	-0.215
CDL6	0.458	**0.733**	0.402	0.379	0.364	0.43	0.406	0.368	0.463	0.334	0.301	0.456	0.415	0.387	-0.136	0.465	-0.12	0.013	-0.186
CDL7	0.455	**0.738**	0.475	0.392	0.411	0.463	0.435	0.352	0.471	0.4	0.372	0.445	0.45	0.386	-0.173	0.446	-0.177	0.046	-0.228
CDL8	0.351	**0.69**	0.346	0.389	0.455	0.406	0.33	0.338	0.406	0.385	0.228	0.433	0.343	0.327	-0.146	0.458	-0.158	0.027	-0.18
CDL9	0.515	**0.831**	0.552	0.458	0.457	0.542	0.449	0.411	0.518	0.444	0.331	0.556	0.541	0.482	-0.206	0.514	-0.239	0.14	-0.27
COM1	0.425	0.375	**0.679**	0.482	0.368	0.495	0.531	0.422	0.498	0.38	0.505	0.48	0.434	0.522	-0.128	0.275	-0.063	0.091	-0.029
COM2	0.341	0.425	**0.585**	0.376	0.471	0.438	0.382	0.357	0.409	0.331	0.375	0.329	0.329	0.392	-0.146	0.303	-0.102	-0.075	-0.131
COM3	0.422	0.408	**0.749**	0.567	0.474	0.567	0.539	0.473	0.572	0.421	0.522	0.479	0.466	0.487	-0.144	0.294	-0.099	0.048	-0.038
COM4	0.407	0.432	**0.702**	0.498	0.484	0.613	0.478	0.356	0.524	0.381	0.424	0.426	0.453	0.481	-0.255	0.249	-0.145	0.12	-0.166
COM5	0.38	0.455	**0.686**	0.499	0.469	0.597	0.436	0.423	0.506	0.347	0.412	0.416	0.409	0.45	-0.217	0.262	-0.095	0.11	-0.158
PSOL1	0.403	0.353	0.451	**0.626**	0.451	0.491	0.418	0.365	0.467	0.417	0.379	0.367	0.38	0.417	-0.195	0.356	-0.125	0.003	-0.132
PSOL2	0.399	0.423	0.557	**0.737**	0.521	0.599	0.517	0.449	0.555	0.421	0.466	0.472	0.45	0.431	-0.175	0.364	-0.095	0.093	-0.093
PSOL3	0.329	0.369	0.461	**0.686**	0.569	0.498	0.508	0.474	0.512	0.449	0.439	0.427	0.402	0.379	-0.146	0.271	-0.12	0.046	-0.092
PSOL4	0.451	0.474	0.535	**0.758**	0.577	0.664	0.548	0.379	0.643	0.515	0.411	0.533	0.529	0.57	-0.186	0.355	-0.14	0.109	-0.165
CRE1	0.315	0.423	0.539	0.587	**0.755**	0.547	0.413	0.448	0.469	0.41	0.324	0.434	0.41	0.462	-0.178	0.281	-0.103	-0.046	-0.129
CRE2	0.358	0.487	0.519	0.615	**0.836**	0.669	0.454	0.482	0.524	0.489	0.394	0.465	0.444	0.501	-0.131	0.374	-0.092	0.046	-0.132
LEAD1	0.463	0.504	0.609	0.575	0.568	**0.72**	0.587	0.415	0.619	0.462	0.492	0.517	0.525	0.564	-0.159	0.345	-0.163	0.101	-0.148
LEAD2	0.354	0.439	0.576	0.597	0.555	**0.715**	0.578	0.473	0.555	0.527	0.601	0.501	0.418	0.513	-0.183	0.309	-0.164	0.066	-0.137
LEAD3	0.35	0.412	0.478	0.509	0.475	**0.655**	0.587	0.463	0.527	0.517	0.466	0.466	0.374	0.502	-0.222	0.231	-0.236	0.126	-0.209

TW1	0.437	0.513	0.612	0.542	0.412	0.708	**0.802**	0.465	0.671	0.525	0.572	0.505	0.48	0.569	-0.202	0.309	-0.103	0.052	-0.123
TW2	0.419	0.43	0.509	0.584	0.434	0.633	**0.782**	0.486	0.605	0.542	0.587	0.562	0.408	0.501	-0.103	0.336	-0.131	0.08	-0.051
TW3	0.417	0.39	0.489	0.519	0.418	0.594	**0.731**	0.42	0.532	0.52	0.541	0.506	0.417	0.487	-0.082	0.281	-0.077	0.071	-0.039
ICT1	0.413	0.469	0.517	0.529	0.499	0.594	0.55	**0.89**	0.533	0.528	0.469	0.439	0.401	0.436	-0.162	0.309	-0.158	0.143	-0.13
ICT2	0.357	0.387	0.437	0.439	0.443	0.483	0.445	**0.756**	0.473	0.392	0.33	0.39	0.354	0.367	-0.135	0.3	-0.159	0.118	-0.122
ICT3	0.32	0.419	0.487	0.458	0.469	0.473	0.428	**0.763**	0.466	0.402	0.414	0.364	0.324	0.368	-0.152	0.313	-0.128	0.058	-0.123
SMGT1	0.353	0.397	0.538	0.573	0.505	0.64	0.617	0.503	**0.761**	0.511	0.502	0.566	0.428	0.486	-0.189	0.342	-0.113	0.094	-0.083
SMGT2	0.375	0.508	0.46	0.484	0.431	0.548	0.568	0.42	**0.682**	0.459	0.385	0.547	0.46	0.534	-0.127	0.335	-0.123	0.102	-0.135
SMGT3	0.459	0.526	0.577	0.573	0.431	0.625	0.581	0.472	**0.763**	0.532	0.475	0.567	0.536	0.499	-0.168	0.366	-0.221	0.091	-0.129
SMGT4	0.367	0.391	0.57	0.631	0.446	0.547	0.505	0.37	**0.695**	0.468	0.442	0.508	0.51	0.468	-0.192	0.282	-0.214	0.059	-0.131
LLL1	0.43	0.429	0.461	0.514	0.411	0.585	0.567	0.413	0.567	**0.801**	0.582	0.547	0.475	0.51	-0.181	0.368	-0.201	0.116	-0.085
LLL2	0.378	0.416	0.379	0.474	0.465	0.522	0.487	0.439	0.478	**0.739**	0.515	0.487	0.419	0.426	-0.102	0.376	-0.213	0.096	-0.122
CCC1	0.383	0.359	0.512	0.398	0.339	0.526	0.506	0.373	0.457	0.462	**0.707**	0.469	0.417	0.485	-0.077	0.312	-0.171	-0.004	-0.08
CCC2	0.354	0.321	0.454	0.441	0.31	0.513	0.527	0.345	0.417	0.525	**0.712**	0.468	0.377	0.42	-0.165	0.286	-0.216	0.056	-0.108
CCC3	0.323	0.319	0.454	0.458	0.326	0.569	0.548	0.37	0.466	0.548	**0.736**	0.514	0.401	0.473	-0.225	0.264	-0.146	0.056	-0.069
EI1	0.335	0.442	0.411	0.452	0.445	0.478	0.467	0.344	0.473	0.379	0.403	**0.523**	0.433	0.517	-0.107	0.311	-0.152	0.076	-0.125
EI2	0.307	0.451	0.429	0.419	0.375	0.491	0.495	0.289	0.517	0.37	0.455	**0.531**	0.457	0.503	-0.127	0.305	-0.217	0.115	-0.156
EI3	0.294	0.424	0.407	0.437	0.376	0.489	0.464	0.278	0.528	0.374	0.426	**0.528**	0.459	0.48	-0.177	0.311	-0.243	0.055	-0.15
EI5	0.306	0.337	0.427	0.443	0.325	0.512	0.465	0.322	0.45	0.417	0.485	**0.521**	0.353	0.428	-0.035	0.338	-0.091	0.078	0.015
EI7	0.335	0.324	0.378	0.412	0.285	0.474	0.435	0.362	0.454	0.475	0.429	**0.502**	0.327	0.458	-0.142	0.28	-0.113	0.054	-0.108
EI9	0.506	0.547	0.412	0.391	0.42	0.451	0.445	0.308	0.531	0.491	0.387	**0.886**	0.518	0.538	-0.063	0.533	-0.168	0.109	-0.156
EI10	0.472	0.445	0.414	0.458	0.367	0.438	0.454	0.403	0.508	0.45	0.425	**0.709**	0.503	0.586	-0.135	0.371	-0.181	0.171	-0.151
EI11	0.432	0.403	0.384	0.387	0.329	0.407	0.369	0.308	0.471	0.447	0.436	**0.704**	0.514	0.549	-0.093	0.397	-0.183	0.074	-0.118
EI12	0.492	0.435	0.432	0.414	0.376	0.476	0.431	0.302	0.481	0.491	0.531	**0.746**	0.582	0.562	-0.121	0.406	-0.176	0.024	-0.097
SC1	0.586	0.531	0.587	0.458	0.47	0.573	0.441	0.379	0.484	0.435	0.427	0.574	**0.754**	0.638	-0.193	0.36	-0.217	0.16	-0.227
SC2	0.545	0.385	0.416	0.469	0.415	0.446	0.425	0.366	0.481	0.443	0.426	0.52	**0.698**	0.539	-0.136	0.374	-0.169	0.122	-0.153
SC3	0.536	0.384	0.373	0.419	0.357	0.428	0.4	0.363	0.459	0.419	0.415	0.522	**0.668**	0.546	-0.141	0.364	-0.193	0.116	-0.098
SC4	0.6	0.407	0.365	0.418	0.345	0.379	0.352	0.253	0.432	0.404	0.342	0.485	**0.759**	0.567	-0.147	0.424	-0.142	0.079	-0.125
SC5	0.532	0.387	0.422	0.457	0.291	0.392	0.369	0.211	0.492	0.337	0.342	0.435	**0.628**	0.449	-0.209	0.292	-0.172	0.081	-0.15

SES4	0.352	0.358	0.462	0.472	0.392	0.506	0.498	0.331	0.504	0.403	0.424	0.49	0.455	**0.555**	-0.143	0.266	-0.084	0.051	-0.059
SES7	0.363	0.336	0.427	0.401	0.408	0.441	0.387	0.273	0.389	0.336	0.401	0.433	0.445	**0.596**	-0.091	0.275	-0.119	0.085	-0.077
SES10	0.475	0.407	0.44	0.383	0.376	0.512	0.426	0.335	0.436	0.431	0.414	0.595	0.59	**0.752**	-0.116	0.319	-0.129	0.06	-0.174
SS1	-.184	-.157	-.163	-.164	-.178	-.169	-0.1	-.119	-.124	-.106	-.152	-.093	-.146	-.108	**0.809**	-.063	0.42	-0.126	0.436
SS2	-.203	-.205	-.231	-.208	-.098	-.233	-.156	-0.16	-.232	-.175	-.172	-0.16	-.205	-.163	**0.65**	-.125	0.315	-0.066	0.306
JSC1	0.437	0.538	0.312	0.415	0.337	0.354	0.326	0.322	0.39	0.435	0.357	0.499	0.433	0.37	-0.17	**0.848**	-0.159	0.069	-0.146
JSC2	0.454	0.493	0.328	0.394	0.338	0.348	0.323	0.308	0.37	0.373	0.349	0.475	0.416	0.339	-0.093	**0.797**	-0.119	0.066	-0.143
JSC3	0.456	0.534	0.379	0.401	0.354	0.349	0.348	0.326	0.377	0.402	0.348	0.492	0.449	0.379	-0.078	**0.854**	-0.144	0.094	-0.173
JSC4	0.473	0.605	0.367	0.432	0.391	0.412	0.378	0.352	0.431	0.444	0.324	0.51	0.481	0.447	-0.084	**0.934**	-0.186	0.036	-0.138
EQ1	-.168	-.163	-.113	-.133	-.054	-.216	-.145	-.143	-.171	-.216	-.214	-.194	-.175	-.145	0.41	-.085	**0.823**	-0.251	0.588
EQ2	-.236	-0.23	-.124	-.141	-.144	-.214	-.071	-.154	-.201	-.215	-.184	-.227	-.234	-.136	0.405	-.205	**0.788**	-0.187	0.556
IQ1	0.092	0.083	0.085	0.067	0.022	0.135	0.068	0.114	0.093	0.145	0.042	0.122	0.116	0.092	-0.106	0.057	-0.166	**0.695**	-0.412
IQ2	0.112	0.062	0.051	0.07	-.016	0.071	0.06	0.084	0.083	0.062	0.032	0.073	0.118	0.058	-0.093	0.054	-0.231	**0.77**	-0.462
SJ1	-.206	-.224	-.125	-.148	-0.13	-.194	-.072	-.142	-.118	-.125	-.103	-.134	-.192	-.145	0.452	-.145	0.605	-0.523	**0.856**
SJ2	-.168	-.267	-.131	-.144	-.149	-.206	-.087	-.122	-.161	-.102	-0.1	-.177	-.174	-.145	0.42	-.152	0.606	-0.493	**0.848**

S.Eff – Self-efficacy
CDL – Career development learning
Com – Communication
P.Sol – Problem solving
Creat - Creativity
L.ship – Leadership
T.wk – Team work

ICT – Information, communication and technology
S.Mgt – Self-management
LLL – Lifelong learning
CCC – Cross cultural competence
E.Int – Emotional intelligence
S.Con – Self-confidence
S.Est – Self-esteem

S.Sup – Social support
JSC – Job search clarity
E.Q – Employment quality
I.Q – Intention to quit
Sat – Satisfaction with job

6.6.1.2 Assessment of Second-Order Formative Constructs

The second step in the assessment of the outer model was to assess the second-order formative constructs. For this assessment, a new data file was created by running the PLS algorithm and copying the data from latent variables into a new data file. By carrying out this step, all the first-order constructs act as indicator items for second-order constructs and the second-order analysis can be carried out in the same manner as first-order.

To carry out the analysis of formative constructs, the VIF, outer weights, outer loadings and their significance are assessed. The VIF values are obtained as a result of running the Consistent PLS algorithm. The VIF value is a representation of multi-collinearity and discriminant validity. The value of VIF should be below 5 for the items to be discriminant and non-collinear. Table 6.14 presents the VIF values for all formative constructs. The values presented are all well below the threshold value of 5, hence, confirming the constructs hold discriminant validity and non-collinearity.

Table 6.14 VIF values for Multi-Collinearity Assessment

Construct	Indicator	VIF
Employability Skills	Communication	2.14
	Problem Solving	2.268
	Creativity	1.925
	Leadership	2.671
	Initiative	1.818
	Teamwork	2.416
	ICT	1.632
	Self-Management	2.414
	LLL	1.774
	CCC	1.872
Job Search Outcome	Employment Quality	1.514
	Intention to Quit	1.276
	Satisfaction with job	1.838

The next step in the assessment of formative variables is the assessment on outer loadings, outer weights and significance level. To carry out these tests, Consistent Bootstrapping was performed in SmartPLS3. The number of bootstrapping samples was set to 2000. The results of bootstrapping returned the outer weights and outer loadings along with their t-statistics

and p-values (significance values) (Tables 6.15 and 6.16). The two tailed test at 10% significance level was conducted; hence, the minimum t-value expected is 1.65.

Table 6.15 Outer weights, T-statistics and p-values

Construct	Indicator	Outer Weight	t-value	p-value
Employability Skills	Communication	0.147	15.385	**
	Problem Solving	0.141	14.481	**
	Creativity	0.105	9.736	**
	Leadership	0.135	15.222	**
	Initiative	0.153	10.205	**
	Teamwork	0.139	15.642	**
	ICT	0.117	10.499	**
	Self-Management	0.136	15.239	**
	LLL	0.127	10.118	**
	CCC	0.12	10.296	**
Outcome	Employment Quality	0.519	13.935	**
	Intention to Quit	-0.183	2.872	**
	Satisfaction with job	0.514	16.171	**

** $p < 0.01$

Table 6.15 presents the outer weights, corresponding t-values and p-values of the formative constructs. All the items returned an outer weight at a significance value of 0.01. The t-values of the weights also met the threshold criteria of 1.65, as the minimum t-value observed is 2.872 for intention to quit. Table 6.16 outlines the outer loadings, corresponding t-values and p-values. The minimum t-value is returned by intention to quit, i.e., 2.683, whereas all the loadings are significant at 0.01 level. Intention to quit returned a negative loading and weight, which is consistent with the theory. The job search outcome is expected to be high if the intention to quit is low, and this supports the negative sign observed with intention to quit's loading and weight.

Table 6.16 Outer loadings, T-statistics and p-values

Construct	Indicator	Outer Loading	t-value	p-value
Employability Skills	Communication	0.799	15.192	**
	Problem Solving	0.767	14.879	**
	Creativity	0.57	8.228	**
	Leadership	0.733	14.333	**
	Initiative	0.833	12.952	**
	Teamwork	0.758	15.044	**
	ICT	0.638	9.722	**
	Self-Management	0.738	14.689	**
	LLL	0.692	9.964	**

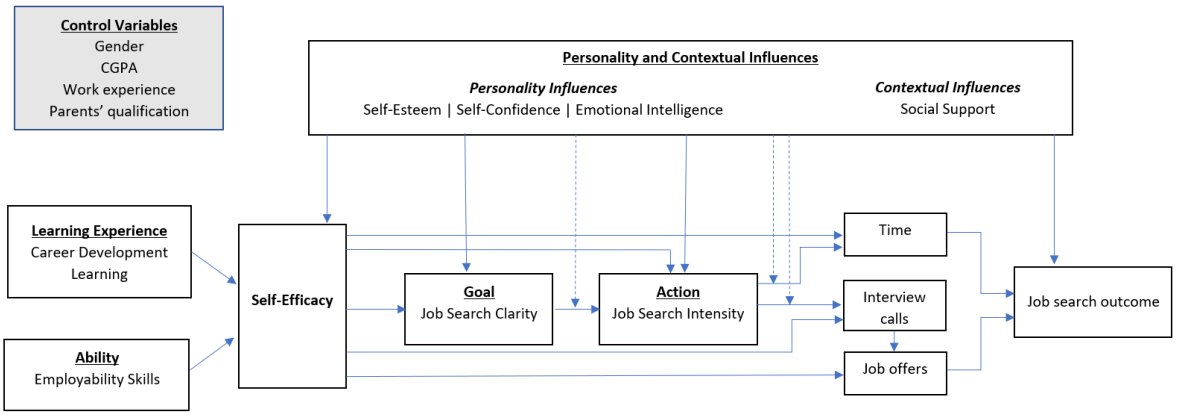
	CCC	0.654	10.416	**
Outcome	Employment Quality	0.809	15.796	**
	Intention to Quit	-0.286	2.683	**
	Satisfaction with job	0.802	17.364	**

** p < 0.01

6.6.2 Results of Structural Model Assessment

After the evaluation of the measurement model presented in previous section, this section will focus on the assessment of the structural model. The first step in that assessment is to examine the path coefficients and their significance, which leads to hypotheses testing. These results are presented in section 6.6.2.1. The next four sections, sections 6.6.2.2 to 6.6.2.5, present the results of further tests conducted to look at the model's fit and predictive power. The initial hypothesised model developed after literature review discussed in chapter 4 is reiterated in Figure 6.3 below.

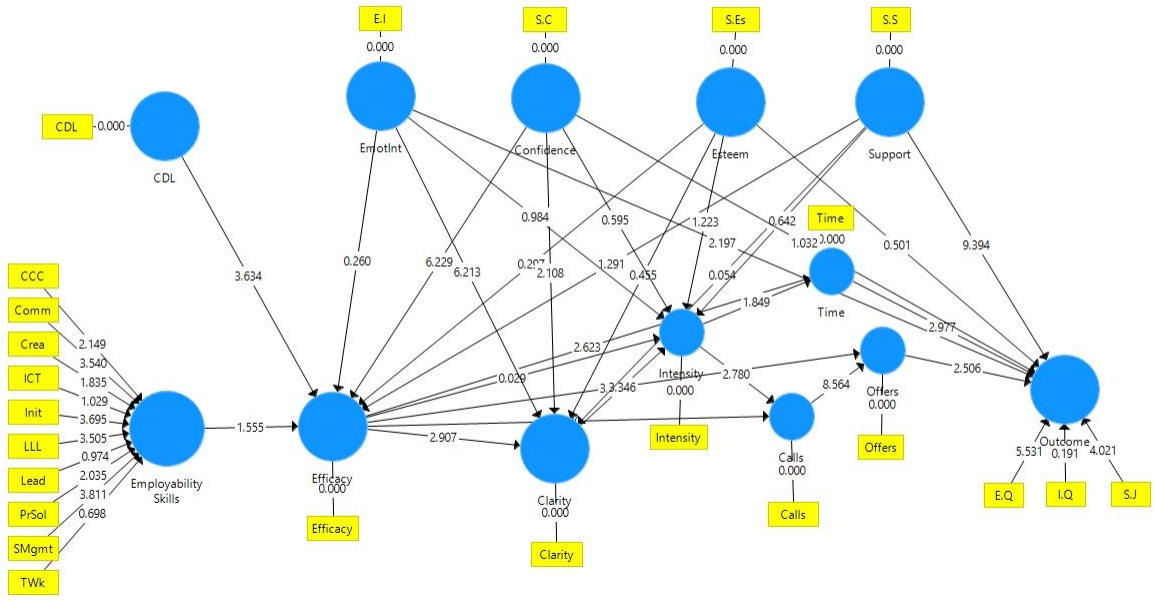
Figure 6.3 Proposed Model for Graduate Employability in Pakistan



6.6.2.1 Assessment of Structural Model's Path Coefficients and Hypotheses Testing

Once the measurement model assessment was complete, the next step was the assessment of the structural model. The assessment was carried out using the Bootstrapping algorithm in SmartPLS3 with 2000 samples. The first step in the assessment of measurement model (as explained in Section 6.5.2) is to evaluate the standardized path coefficients. Fifteen paths were found to be significant. The path model assessment results are presented in Figure 6.4.

Figure 6.4 Hypothesised Path Model Results



The standardised path coefficients, t-statistics and significance level of the hypothesized relationships in the model are presented in Table 6.17. Of the 15 significant paths, four were significant at the p < 0.001 level, seven were significant at the p < 0.01 level and four were significant at the p < 0.05 level.

Table 6.17 Standardised path coefficients, t-statistics and significance level

Hypothesized Relationships			Path coefficient	t-Statistics
Career Development Learning	->	Self-Efficacy	0.196	3.317**
Calls	->	Offers	0.365	8.401***
Job Search Clarity	->	Job Search Intensity	-0.116	3.277**
Self-Confidence	->	Job Search Clarity	0.136	2.152*
Self-Confidence	->	Self-Efficacy	0.392	6.482***
Self-Confidence	->	Job Search Intensity	0.038	0.581
Self-Confidence	->	Job Search Outcome	-0.054	1.031
Self-Efficacy	->	Calls	-0.137	3.152**
Self-Efficacy	->	Job Search Clarity	0.175	2.919**
Self-Efficacy	->	Job Search Intensity	0.002	0.029
Self-Efficacy	->	Offers	-0.132	3.112**
Self-Efficacy	->	Time	0.161	2.506*
Emotional Intelligence	->	Job Search Clarity	0.362	6.396***
Emotional Intelligence	->	Self-Efficacy	0.015	0.263
Emotional Intelligence	->	Job Search Intensity	-0.063	0.984
Emotional Intelligence	->	Job Search Outcome	-0.13	2.205*
Employability Skills	->	Self-Efficacy	0.115	1.548
Self-Esteem	->	Job Search Clarity	-0.022	0.45

Self-Esteem	->	Self-Efficacy	0.023	0.292
Self-Esteem	->	Job Search Intensity	-0.063	1.237
Self-Esteem	->	Job Search Outcome	0.02	0.51
Job Search Intensity	->	Calls	0.125	2.793**
Job Search Intensity	->	Time	0.085	1.815*
Offers	->	Job Search Outcome	0.104	2.501*
Social Support	->	Job Search Clarity	0.003	0.055
Social Support	->	Self-Efficacy	-0.047	1.268
Social Support	->	Job Search Intensity	-0.03	0.655
Social Support	->	Job Search Outcome	0.38	9.561***
Time	->	Job Search Outcome	-0.144	3.025**

*** p < 0.001; ** p < 0.01; * p < 0.05

The current study is exploratory in nature – that is, examining the causative factors for job search outcomes in Pakistan. In line with the literature, a few more paths were added to the initial model (Figure 6.3) to identify if any other substantial relationships were present among the factors under study. The additional relationships can be divided into two sets. The first set was from Career Development Learning to Emotional Intelligence, Self-Confidence and Self-Esteem. The second set was from Employability Skills to Career Development Learning, Emotional Intelligence, Self-Confidence and Self-Esteem. The rationale for adding these paths is presented in Chapter 7. The results of the modified model are presented in Table 6.18.

Table 6.18 Standardised path coefficients, t-statistics and significance level for modified model with additional paths

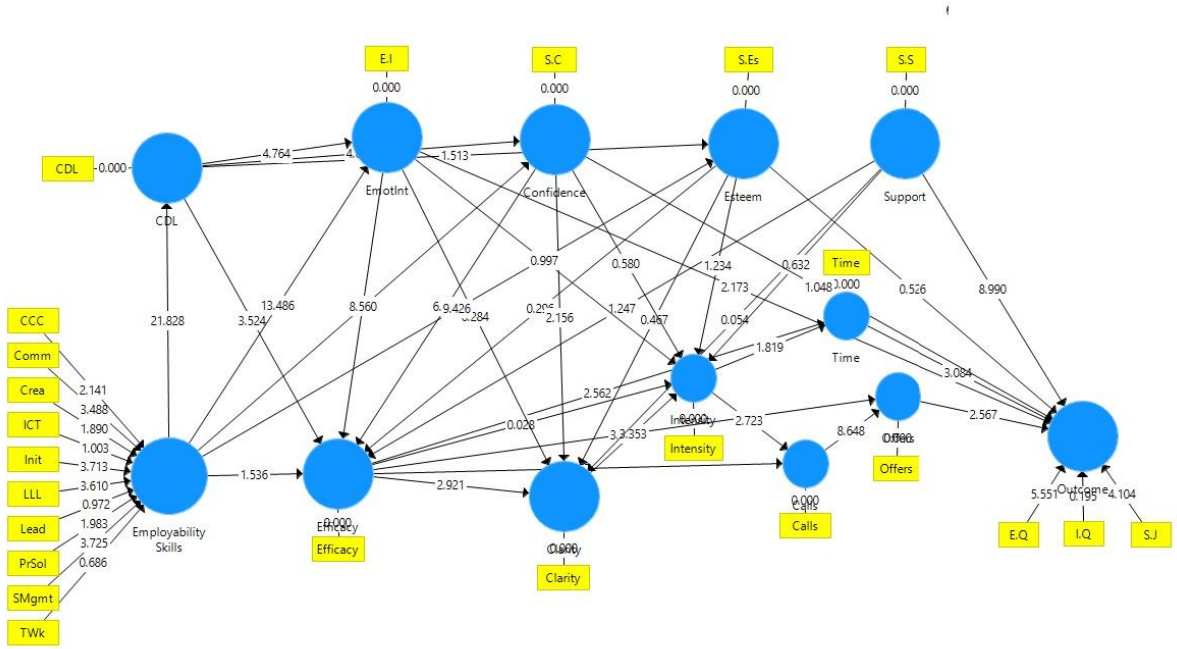
Hypothesized Relationships			Path coefficient	t-Statistics
Career Development Learning	->	Self-Confidence	0.18	4.12***
Career Development Learning	->	Self-Efficacy	0.195	3.629***
Career Development Learning	->	Emotional Intelligence	0.211	4.809***
Career Development Learning	->	Self-Esteem	0.085	1.503
Calls	->	Offers	0.365	8.491***
Job Search Clarity	->	Job Search Intensity	-0.168	3.255***
Self-Confidence	->	Job Search Clarity	0.136	2.123*
Self-Confidence	->	Self-Efficacy	0.395	6.418***
Self-Confidence	->	Job Search Intensity	0.037	0.571
Self-Confidence	->	Job Search Outcome	-0.054	1.008
Self-Efficacy	->	Calls	-0.138	3.121**
Self-Efficacy	->	Job Search Clarity	0.177	2.892**
Self-Efficacy	->	Job Search Intensity	0.002	0.029
Self-Efficacy	->	Offers	-0.131	3.055**
Self-Efficacy	->	Time	0.162	2.591**
Emotional Intelligence	->	Job Search Clarity	0.361	6.281***

Emotional Intelligence	->	Self-Efficacy	0.013	0.254
Emotional Intelligence	->	Job Search Intensity	-0.061	0.968
Emotional Intelligence	->	Job Search Outcome	-0.127	2.188*
Employability Skills	->	Career Development Learning	0.648	22.016***
Employability Skills	->	Self-Confidence	0.528	8.497***
Employability Skills	->	Self-Efficacy	0.122	1.565
Employability Skills	->	Emotional Intelligence	0.588	13.22***
Employability Skills	->	Self-Esteem	0.572	9.285***
Self-Esteem	->	Job Search Clarity	-0.021	0.458
Self-Esteem	->	Self-Efficacy	0.017	0.286
Self-Esteem	->	Job Search Intensity	-0.064	1.256
Self-Esteem	->	Job Search Outcome	0.018	0.498
Job Search Intensity	->	Calls	0.125	2.736**
Job Search Intensity	->	Time	0.083	1.815*
Offers	->	Job Search Outcome	0.104	2.502*
Social Support	->	Job Search Clarity	0.003	0.053
Social Support	->	Self-Efficacy	-0.046	1.276
Social Support	->	Job Search Intensity	-0.031	0.635
Social Support	->	Job Search Outcome	0.378	9.497***
Time	->	Job Search Outcome	-0.144	3.013**

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

The comparison of results presented in Tables 6.17 and 6.18 establishes that the significance level of the paths in the initial model did not change by the addition of new paths. Of the seven new paths added, six were found to be significant. Only the relationship between Career Development Learning and Self-Esteem was found to be non-significant. In the modified model, 22 significant relationships were identified. Twelve paths were significant at $p < 0.001$, six were significant at $p < 0.01$ and four were significant at $p < 0.05$ level. The model is presented in Figure 6.5.

Figure 6.5 Path Model Results after Adding New Paths



6.6.2.2 Assessment of Coefficient of Determination R^2

To evaluate the model's predictive power, the R^2 value was evaluated for all the constructs in the model. The values of R^2 were obtained from the PLS Algorithm in SMartPLS3. Table 6.19 presents the results of the calculation. The measured constructs returned R^2 values ranging from 3.4% to 54.9%. Emotional intelligence was a strong fit with a value of 54.9%. Career development learning, job search clarity, self-confidence, self-efficacy, self-esteem and job search outcome returned values that can be regarded as moderate fit. Interview calls, job search intensity, job offers and time showed a poor fit. These findings provide a fair indication of the model evaluation, but it cannot be considered the ultimate test for model selection for the reasons discussed in Section 6.5.2.2; hence, other tests were also employed.

Table 6.19 Coefficient of determination R^2 for Model's constructs

Construct	R Square	Fit
Career Development Learning	41.70%	Moderate
Interview Calls	3.80%	Poor
Job Search Clarity	31.50%	Moderate
Self-Confidence	43.10%	Moderate
Self-Efficacy	42.30%	Moderate
Emotional Intelligence	54.90%	Strong
Self-Esteem	39.30%	Moderate
Job Search Intensity	4.90%	Poor
Job Offers	16.50%	Poor

Job Search Outcome	25.20%	Modest
Time	3.40%	Poor

6.6.2.3 Assessment of Effect Size f^2

After the evaluation of coefficient of determination, the effect size f^2 was determined, which informs the variation in the R^2 value of a construct when a particular construct is removed from the model. The effect size f^2 was determined by estimating the path model twice by using the PLS Algorithm. First the path is estimated with all path relationships and then by removing each path, one at a time. The discussion for evaluation of effect size f^2 was presented in Section 6.5.2.3. The results of this analysis are presented in Table 6.20.

Table 6.20 Effect Size f^2

Predictor	Endogenous Variable	f^2	Effect
Self-Confidence	Job Search Clarity	0.013	Small
Self-Efficacy		0.027	Small
Emotional Intelligence		0.098	Small
Self-Esteem		0.003	Small
Social Support		0.002	Small
Career Development Learning	Self-Confidence	0.036	Small
Employability Skills		0.276	Medium
Career Development Learning	Self-Efficacy	0.035	Small
Self-Confidence		0.137	Medium
Emotional Intelligence		0	Small
Employability Skills		0.007	Small
Self-Esteem		0	Small
Social Support		0.003	Small
Career Development Learning	Emotional Intelligence	0.061	Small
Employability Skills		0.439	Large
Career Development Learning	Self-Esteem	0.008	Small
Employability Skills		0.306	Large
Job Search Clarity	Job Search Intensity	0.021	Small
Self-Confidence		0.001	Small
Self-Efficacy		0	Small
Emotional Intelligence		0.002	Small
Self-Esteem		0.002	Small
Social Support		0.001	Small
Interview Calls	Job Offers	0.157	Medium
Self-Efficacy		0.02	Small
Self-Confidence	Job Search Outcome	0.002	Small
Emotional Intelligence		0.011	Small

Self-Esteem		0.001	Small
Job Offers		0.014	Small
Social Support		0.183	Medium
Time		0.027	Small
Self-Efficacy	Interview Calls	0.019	Small
Job Search Intensity		0.016	Small
Self-Efficacy	Time	0.026	Small
Job Search Intensity		0.007	Small

The effect size f^2 values presented in Table 6.19 shows the effect of predictor constructs on the endogenous construct. All the predictors on job search clarity, job search intensity, interview calls and the time to find a job were found to have a small effect. Social support presented a medium effect on job search outcome. Interview calls had a medium effect on the number of job offers, and employability skills had a medium effect on self-confidence, which in turn showed a medium effect on self-efficacy. The large effect was shown by only two relationships in this study: employability skill on emotional intelligence and self-esteem.

6.6.2.4 Assessment of Predictive Relevance Q^2

Another test of the model's predictive accuracy is estimating the predictive relevance Q^2. The blindfolding algorithm in SmartPLS3 was used for estimating Q^2. For a model to have predictive relevance, the value of Q^2 should be larger than 0. The value of 0 or any value below 0 indicates that the model does not have predicative relevance. Table 6.20 shows the Q^2 value for all constructs in the study. All the values in Table 6.21 are above 0, which indicates that all constructs in this study have predictive relevance.

Table 6.21 Predictive Relevance Q^2

Constructs	Q^2 (=1-SSE/SSO)
Career Development Learning	0.4
Interview Calls	0.032
Job Search Clarity	0.293
Self-Confidence	0.412
Self-Efficacy	0.396
Emotional Intelligence	0.529
Self-Esteem	0.371
Job Search Intensity	0.035
Job Offers	0.155
Job Search Outcome	0.122
Time	0.02

6.6.2.5 Assessment of Effect Size q^2

The last test was to assess the effect size q^2, i.e., the effect of various predictor constructs on the endogenous construct's Q^2 value. The q^2 value was calculated by estimating the model twice using the blindfolding procedure: first with all the predictor variables and then by removing each predictor variable, one at a time. The calculation was based on the formula discussed in Section 6.5.2.5. The threshold values of 0.02, 0.15 and 0.35 were used to define the weak, moderate and strong effects, respectively. The results of these calculations are presented in Table 6.22.

Table 6.22 Effect Size q^2

Predictor	Endogenous Variable	q^2	Effect
Self-Confidence	Job Search Clarity	0.005658	Small
Self-Efficacy		0.024045	Weak
Emotional Intelligence		0.090523	Weak
Self-Esteem		-0.00707	Small
Social Support		-0.00566	Small
Career Development Learning	Self-Confidence	0.035714	Weak
Employability Skills		0.251701	Moderate
Career Development Learning	Self-Efficacy	0.031457	Weak
Self-Confidence		0.129139	Weak
Emotional Intelligence		-0.00662	Small
Employability Skills		0.001656	Small
Self-Esteem		-0.01159	Small
Social Support		0.001656	Small
Career Development Learning	Emotional Intelligence	0.053079	Weak
Employability Skills		0.403397	Strong
Career Development Learning	Self-Esteem	0.009539	Small
Employability Skills		0.281399	Moderate
Job Search Clarity	Job Search Intensity	0.019689	Weak
Self-Confidence		0	Small
Self-Efficacy		-0.00518	Small
Emotional Intelligence		0.001036	Small
Self-Esteem		0	Small
Social Support		-0.00311	Small
Interview Calls	Job Offers	0.147929	Moderate
Self-Efficacy		0.016568	Small
Self-Efficacy	Interview Calls	0.015496	Small
Job Search Intensity		0.014463	Small

Self-Efficacy	Time	0.022449	Weak
Job Search Intensity		0	Small

6.6.3 Test of Mediation

The proposed model for graduate employability in Pakistan is based on Social Cognitive Career Theory and consists of a set of variables acting as mediator between job search clarity – job search intensity and job search intensity – outcome. The outcome variables in this relationship are measured as interview calls and time taken to find the job. The mediator variables include emotional intelligence, self-confidence, self-esteem and social support. As discussed in section 6.5.3, first the direct relationships were analysed for significance. The direct relationships are known as direct effect. The direct effect between job search clarity and job search intensity, job search intensity and interview calls, and job search intensity and time were found to be significant. The results of direct effect are presented in Table 6.23.

Table 6.23 Direct Effect

Relationship			Path coefficient	t-Statistics
Job Search Clarity	->	Job Search Intensity	-0.168	3.255***
Job Search Intensity	->	Calls	0.125	2.736**
Job Search Intensity	->	Time	0.083	1.815*

Hence, these relationships will fit into one of the mediation categories discussed in Table 6.11. After confirming the direct effect as being significant, the next step was to analyse the indirect effect. The specific indirect effect was taken into consideration since there was more than one mediator in the path model. Specific indirect effect explains the effect of each individual mediator on the endogenous variable separately, whereas total indirect effect is the sum of specific indirect effects and does not explain the individual role of mediators (Hair et al. 2017). The p-value of the specific indirect effect was examined to analyse the effect of mediators on the relationship. The results of specific indirect effects are presented in Table 6.24.

Table 6.24 Result of Mediation – Direct and Specific Indirect Effects

Hypothesized Relationships	Path coefficient	t-Statistics	p-value
Direct Effect			
Job Search Clarity -> Job Search Intensity	-0.168	3.255	0.000
Specific Indirect Effects			
Job Search Clarity -> Self-Esteem -> Job Search Intensity	-0.023	1.106	0.269
Job Search Clarity -> Self- Confidence -> Job Search Intensity	0.017	0.56	0.575
Job Search Clarity -> Emotional Intelligence -> Job Search Intensity	-0.033	0.959	0.338
Job Search Clarity -> Social Support -> Job Search Intensity	0.003	0.554	0.58
Direct Effect			
Job Search Intensity -> Interview Calls	0.125	2.736	0.006
Specific Indirect Effects			
Job Search Intensity -> Self-Esteem -> Interview Calls	0	0.077	0.939
Job Search Intensity -> Self-Confidence -> Interview Calls	-0.001	0.175	0.861
Job Search Intensity -> Emotional Intelligence -> Interview Calls	0.008	0.756	0.45
Job Search Intensity -> Social Support -> Interview Calls	0	0.018	0.986
Direct Effect			
Job Search Intensity -> Time	0.083	1.815	0.049
Specific Indirect Effects			
Job Search Intensity -> Self-Esteem -> Time	0.001	0.094	0.925
Job Search Intensity -> Self-Confidence -> Time	-0.008	1.053	0.293
Job Search Intensity -> Emotional Intelligence -> Time	0.001	0.098	0.922
Job Search Intensity -> Social Support -> Time	0	0.064	0.949

The results of mediation tests presented in Table 6.24 show that, although the direct relationships are significant, none of the indirect effects are found to be significant. Hence, based on the categories of mediation presented in Table 6.11, all the indirect relationships in the proposed model presented **direct-only non-mediation**.

6.6.4 Results of Hypotheses Testing and Final Model

The results of hypothesis testing discussed in sections 6.6.2.1 and 6.6.3 are consolidated in the Table 6.25.

Table 6.25 Consolidated Results of Hypotheses Testing

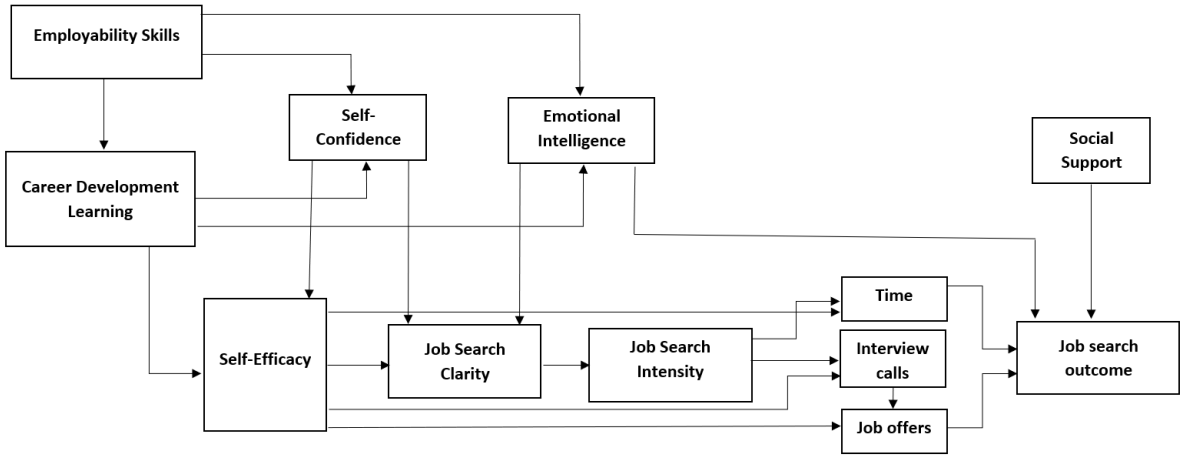
Initially Hypothesized Relationships		Result
Effects of Self-Efficacy		
H1a	Career development learning leads to higher self-efficacy	Supported
H1b	Employability skills lead to higher self-efficacy	Not supported
Impacts of Self-Efficacy		
H2a	Higher self-efficacy leads to higher job search clarity	Supported
H2b	Higher self-efficacy leads to higher job search intensity	Not supported
H2c	Higher self-efficacy leads to a higher number of interview calls	Supported
H2d	Higher self-efficacy leads to a higher number of job offers	Supported
H2e	Higher self-efficacy leads to less time to find a job	Supported
Causality of Job Search		
H3a	Higher job search clarity leads to higher job search intensity	Supported
H3b	Higher job search intensity leads to a higher number of interview calls	Supported
H3c	Higher job search intensity leads to lesser time to find the job	Supported
Influence of Self-Esteem		
H4a	Higher self-esteem relates to positive self-efficacy	Not supported
H4b	Higher self-esteem relates to higher job search clarity	Not supported
H4c	Higher self-esteem relates to higher job search intensity	Not supported
H4d	Higher self-esteem relates to a positive job search outcome	Not supported
Influence of Self-Confidence		
H5a	Higher self-confidence leads to higher self-efficacy	Supported
H5b	Higher self-confidence leads to higher job search clarity	Supported
H5c	Higher self-confidence leads to higher job search intensity	Not supported
H5d	Higher self-confidence leads to a positive job search outcome	Not supported
Influence of Emotional Intelligence		
H6a	Higher emotional intelligence leads to higher self-efficacy	Not supported
H6b	Higher emotional intelligence leads to higher job search clarity	Supported
H6c	Higher emotional intelligence leads to higher job search intensity	Not supported

H6d	Higher emotional intelligence leads to a positive job search outcome	Supported
	Influence of Social Support	
H7a	Higher social support relates to positive self-efficacy	Not supported
H7b	Higher social support relates to positive job search clarity	Not supported
H7c	Higher social support relates to positive job search intensity	Not supported
H7d	Higher social support relates to a positive job search outcome	Supported
	Causality of Outcome	
H8a	Higher number of interview calls lead to a higher number of job offers	Supported
H8b	Higher number of job offers result in a better job search outcome	Supported
H8c	Higher time taken to find a job leads to a better job search outcome	Supported
	Hypothesised Mediating Relationships	
H9a	Self-esteem mediates the relationship between job search clarity and job search intensity	Not supported
H9b	Self-confidence mediates the relationship between job search clarity and job search intensity	Not supported
H9c	Emotional Intelligence mediates the relationship between job search clarity and job search intensity	Not supported
H9d	Social support mediates the relationship between job search clarity and job search intensity	Not supported
H9e	Self-esteem mediates the relationship between job search intensity and number of interview calls	Not supported
H9f	Self-confidence mediates the relationship between job search intensity and number of interview calls	Not supported
H9g	Emotional Intelligence mediates the relationship between job search intensity and number of interview calls	Not supported
H9h	Social support mediates the relationship between job search intensity and number of interview calls	Not supported
H9i	Self-esteem mediates the relationship between job search intensity and time taken to find the job	Not supported
H9j	Self-confidence mediates the relationship between job search intensity and time taken to find the job	Not supported
H9k	Emotional Intelligence mediates the relationship between job search intensity and time taken to find the job	Not supported
H9l	Social support mediates the relationship between job search intensity and time taken to find the job	Not supported
	Additional Paths Added to the Model	
	Career development learning leads to higher emotional intelligence	Supported

	Career development learning leads to higher self-confidence	Supported
	Career development learning leads to higher self-esteem	Not supported
	Employability skills lead to higher career development learning	Supported
	Employability skills lead to higher emotional intelligence	Supported
	Employability skills lead to higher self-confidence	Supported
	Employability skills lead to higher self-esteem	Supported

The proposed model for graduate employability in Pakistan is revised after the analysis by keeping only proven significant relationships and is presented in Figure 6.6.

Figure 6.6 Revised Model for Graduate Employability in Pakistan



6.6.5 Test of Moderation

After the model for graduate employability in Pakistan was revised, the next step was to test the moderating effect of variables on the significant relationships presented in Figure 6.3. As discussed in section 6.5.4, the moderation analysis was performed by using multigroup analysis in SmartPLS3. The moderating variables included gender, number of years of experience, cumulative grade point average, highest level of education attained by father and highest level of education attained by mother. The results of multigroup analysis present the path coefficients, t-statistics and the p-value of each group separately. The MGA algorithm also returns the difference between the path coefficients and t-statistics of groups and the significance level of the difference. If the p-value of the difference is significant, it explains the significant difference between the groups. The sample size based on moderating variables is

presented in Table 6.26. The effect of moderators is discussed in detail in the following sections.

Table 6.26 Sample Size of Various Moderating Variables

Demographics	Frequency	Percentage
Gender		
Male	494	92.7
Female	39	7.3
Cumulative Grade Point Average		
<2.5	29	5.4
2.51 – 3.00	163	30.6
3.01 – 3.50	244	45.8
3.51 – 4.00	97	18.2
Number of Years of Experience		
None	193	36.2
Less than 1 year	270	50.7
Between 1 and 3 years	62	11.6
More than 3 years	8	1.5
Mother's Highest Qualification		
Less than 12 Grade	176	33
Grade 12	135	25.3
Bachelor's Degree	155	29.1
Master's Degree	62	11.6
PhD	3	0.6
Post-Doctorate	2	0.4
Father's Highest Qualification		
Less than 12 Grade	107	20.1
Grade 12	64	12
Bachelor's Degree	222	41.7
Master's Degree	116	21.8
PhD	20	3.8
Post-Doctorate	4	0.8

6.6.5.1 Moderating Effect of Gender

The moderating effect of gender was analysed to examine if males and females experienced any difference in their job search. Only one relationship was found to have significant difference. It was observed that, if both groups have the same level of self-efficacy, females

are more likely to get an interview call compared to males. The results of this analysis are presented in Table 6.27.

Table 6.27 Moderating Effect of Gender

	Path Coefficients (Female)	Path Coefficients (male)	Path Coefficients-diff (| Female - male |)	p-Value (Female vs male)
CDL -> Confidence	-0.1	0.194	0.237	0.188
CDL -> Efficacy	0.173	0.264	0.1	0.592
CDL -> Emotional Intelligence	-0.132	0.22	0.321	0.057
Calls -> Offers	0.452	0.365	0.096	0.559
Clarity -> Intensity	-0.052	-0.213	0.168	0.266
Confidence -> Clarity	0.118	0.133	0.044	0.86
Confidence -> Efficacy	0.635	0.454	0.182	0.29
Efficacy -> Calls	0.183	-0.153	0.355	0.033
Efficacy -> Clarity	0.205	0.167	0.073	0.747
Efficacy -> Offers	-0.136	-0.133	0.01	0.948
Efficacy -> Time	0.353	0.151	0.21	0.358
Emotional Intelligence -> Clarity	0.05	0.369	0.331	0.124
Emotional Intelligence -> Outcome	0.01	-0.136	0.209	0.252
Employability Skills -> CDL	0.526	0.658	0.152	0.206
Employability Skills -> Confidence	0.819	0.512	0.252	0.283
Employability Skills -> Emotional Intelligence	0.7	0.591	0.068	0.683
Intensity -> Calls	0.045	0.134	0.079	0.658
Intensity -> Time	0.17	0.08	0.074	0.673
Offers -> Outcome	0.054	0.116	0.06	0.715
Support -> Outcome	0.255	0.406	0.077	0.646
Time -> Outcome	0.129	-0.168	0.232	0.22

6.6.5.2 Moderating Effect of Cumulative Grade Point Average

The CGPA was measured using four categories; hence, the analysis was carried out to see if there was significant difference between any of the groups. Three relationships' significant differences were found to be impacted by the CGPA. The comparison of the model was carried out between respondents with CGPA above 3.00 and respondents with CGPA below 3.00: with the same level of self-efficacy, job seekers with CGPA above 3 were able to find a job more quickly (less time) than job seekers with CGPA below 3. The results of this analysis are presented in Table 6.28.

Table 6.28 Moderating Effect of CGPA
(Comparison between Respondents with CGPA above 3.00 and CGPA below 3.00)

	Path Coefficients Mean (GPA > 3)	Path Coefficients Mean (GPA < 3)	Path Coefficients-diff (| GPA > 3 - GPA < 3 |)	p-Value (GPA >3 vs GPA <3)
CDL -> Confidence	0.148	0.191	0.055	0.553
CDL -> Efficacy	0.257	0.275	0.019	0.846
CDL -> Emotional Intelligence	0.187	0.193	0.012	0.895
Calls -> Offers	0.351	0.391	0.04	0.651
Clarity -> Intensity	-0.205	-0.19	0.014	0.867
Confidence -> Clarity	0.102	0.167	0.059	0.651
Confidence -> Efficacy	0.455	0.479	0.024	0.801
Efficacy -> Calls	-0.108	-0.207	0.098	0.276
Efficacy -> Clarity	0.183	0.173	0.001	0.991
Efficacy -> Offers	-0.161	-0.072	0.089	0.301
Efficacy -> Time	0.247	0.036	0.229	0.047
Emotional Intelligence -> Clarity	0.354	0.353	0	0.998
Emotional Intelligence -> Outcome	-0.195	-0.074	0.12	0.217
Employability Skills -> CDL	0.645	0.677	0.024	0.691
Employability Skills -> Confidence	0.536	0.566	0.017	0.887
Employability Skills -> Emotional Intelligence	0.611	0.62	0.008	0.928
Intensity -> Calls	0.059	0.233	0.174	0.066
Intensity -> Time	0.091	0.085	0.008	0.933
Offers -> Outcome	0.125	0.133	0.001	0.993
Support -> Outcome	0.368	0.445	0.074	0.378
Time -> Outcome	-0.126	-0.162	0.043	0.672

The data were further analysed to examine if respondents with CGPA below 3.5 had significantly different experience from respondents with CGPA above 3.5. Two relationships were found to differ significantly in these groups: the relationship between interview calls and job offers and the relationship between emotional intelligence and job search outcome. With the same number of interview calls received, respondents with CGPA above 3.5 received more job offers than respondents with CGPA below 3.5. Again, with the same level of emotional intelligence, the better job search outcome was experienced by respondents with CGPA above 3.5 when compared to respondents with CGPA below 3.5. The statistics of this analysis are presented in Table 6.29.

Table 6.29 Moderating Effect of CGPA
(Comparison between Respondents with CGPA above 3.50 and CGPA below 3.50)

	Path Coefficients Mean (GPA <3.5)	Path Coefficients Mean (GPA >3.5)	Path Coefficients-diff (| GPA <3.5 - GPA >3.5 |)	p-Value (GPA <3.5 vs GPA >3.5)
CDL -> Confidence	0.173	0.149	0.002	0.985
CDL -> Efficacy	0.266	0.229	0.039	0.748
CDL -> Emotional Intelligence	0.216	0.104	0.069	0.552
Calls -> Offers	0.403	0.152	0.242	0.033
Clarity -> Intensity	-0.21	-0.178	0.033	0.761
Confidence -> Clarity	0.12	0.144	0.018	0.913
Confidence -> Efficacy	0.455	0.521	0.068	0.561
Efficacy -> Calls	-0.149	-0.074	0.074	0.496
Efficacy -> Clarity	0.171	0.189	0.02	0.895
Efficacy -> Offers	-0.132	-0.072	0.062	0.566
Efficacy -> Time	0.162	0.154	0.011	0.946
Emotional Intelligence -> Clarity	0.376	0.299	0.078	0.575
Emotional Intelligence -> Outcome	-0.103	-0.359	0.258	0.023
Employability Skills -> CDL	0.644	0.708	0.055	0.462
Employability Skills -> Confidence	0.531	0.569	0.009	0.956
Employability Skills -> Emotional Intelligence	0.615	0.53	0.139	0.222
Intensity -> Calls	0.141	0.052	0.086	0.462
Intensity -> Time	0.079	0.11	0.028	0.813
Offers -> Outcome	0.106	0.216	0.106	0.312
Support -> Outcome	0.395	0.397	0.003	0.976
Time -> Outcome	-0.18	0.045	0.222	0.062

6.5.2.3 Moderating Effect of Work Experience

The moderating effect of work experience was examined on the graduate employability model. The data were collected in four categories for work experience: no experience at all, less than 1 year's experience, between 1 and 3 years' experience and more than 3 years' experience. When the respondents with no work experience were compared with respondents with work experience, it was found that, with the same level of self-efficacy, job seekers with no job experience received fewer job offers than job seekers with experience. The results are presented in Table 6.30.

Table 6.30 Moderating Effect of Work Experience
(Comparison between respondents with no work experience and with work experience)

	Path Coefficients Mean (No Exp)	Path Coefficients Mean (Exp)	Path Coefficients-diff (| No Exp - Exp|)	p-Value (No Exp vs Exp)
CDL -> Confidence	0.136	0.172	0.029	0.767
CDL -> Efficacy	0.238	0.273	0.035	0.717
CDL -> Emotional Intelligence	0.3	0.133	0.179	0.051
Calls -> Offers	0.341	0.382	0.036	0.689
Clarity -> Intensity	-0.181	-0.215	0.032	0.707
Confidence -> Clarity	0.066	0.153	0.079	0.563
Confidence -> Efficacy	0.532	0.427	0.113	0.207
Efficacy -> Calls	-0.165	-0.121	0.045	0.611
Efficacy -> Clarity	0.261	0.133	0.114	0.361
Efficacy -> Offers	-0.014	-0.196	0.185	0.028
Efficacy -> Time	0.156	0.167	0.013	0.913
Emotional Intelligence -> Clarity	0.322	0.369	0.049	0.665
Emotional Intelligence -> Outcome	-0.121	-0.146	0.033	0.734
Employability Skills -> CDL	0.641	0.665	0.029	0.623
Employability Skills -> Confidence	0.605	0.52	0.089	0.478
Employability Skills -> Emotional Intelligence	0.558	0.631	0.08	0.369
Intensity -> Calls	0.158	0.107	0.052	0.583
Intensity -> Time	0.07	0.098	0.031	0.744
Offers -> Outcome	0.165	0.084	0.079	0.357
Support -> Outcome	0.457	0.349	0.105	0.203
Time -> Outcome	-0.181	-0.12	0.075	0.454

The analysis was carried out between respondents with less than 1 year's work experience and respondents with more than 1 year's work experience. Three paths were found with significant differences: from job search clarity to job search intensity; from job search intensity to interview calls; and from emotional intelligence to job search outcome. For the same job search clarity, respondents with more than 1 year's experience showed higher job search intensity when compared to respondents with less than 1 year's experience. If the respondents from both groups showed the same job search intensity, the respondents with more than 1 year's experience received more interview calls compared to respondents with less than 1 year's experience. The respondents with more than 1 year's work experience

experienced better job search outcomes, although both groups had the same emotional intelligence. Table 6.31 presents the results.

Table 6.31 Moderating Effect of Work Experience (Comparison between respondents with less than 1 year's work experience and respondents with more than 1 year's work experience)

	Path Coefficients Mean (Exp <1 yr)	Path Coefficients Mean (Exp >1 yr)	Path Coefficients-diff (| Exp <1 yr - Exp >1 yr |)	p-Value (Exp <1 yr vs Exp >1 yr)
CDL -> Confidence	0.174	0.026	0.103	0.442
CDL -> Efficacy	0.255	0.288	0.041	0.77
CDL -> Emotional Intelligence	0.206	0.182	0.001	0.992
Calls -> Offers	0.365	0.387	0.022	0.862
Clarity -> Intensity	-0.163	-0.424	0.264	0.024
Confidence -> Clarity	0.106	0.26	0.164	0.391
Confidence -> Efficacy	0.46	0.507	0.044	0.729
Efficacy -> Calls	-0.155	-0.075	0.082	0.516
Efficacy -> Clarity	0.182	0.115	0.058	0.742
Efficacy -> Offers	-0.107	-0.277	0.166	0.175
Efficacy -> Time	0.141	0.283	0.132	0.477
Emotional Intelligence -> Clarity	0.355	0.377	0.011	0.945
Emotional Intelligence -> Outcome	-0.09	-0.388	0.308	0.016
Employability Skills -> CDL	0.65	0.67	0.004	0.961
Employability Skills -> Confidence	0.536	0.719	0.151	0.39
Employability Skills -> Emotional Intelligence	0.587	0.681	0.089	0.495
Intensity -> Calls	0.168	-0.18	0.278	0.034
Intensity -> Time	0.121	-0.07	0.208	0.118
Offers -> Outcome	0.128	0.012	0.109	0.382
Support -> Outcome	0.426	0.257	0.187	0.109
Time -> Outcome	-0.147	-0.169	0.022	0.875

6.5.2.4 Moderating Effect of Mother's Highest Qualification

To analyse the effect of mother's highest qualification on respondent's job search experience, two groups were formed: group A with mothers possessing education below a bachelor's degree and group B with mothers possessing a bachelor's degree or above. When both the groups had same emotional intelligence, group B showed better job search clarity compared to group A. The results of this analysis are presented in Table 6.32.

Table 6.32 Moderating Effect of Mother's Highest Qualification (Comparison between respondents with mother's qualification below bachelor and respondents with mother's qualification bachelor degree or above)

	Path Coefficients Mean (M.Edu <Bachelor)	Path Coefficients Mean (M.Edu >=Bachelor)	Path Coefficients -diff (| M.Edu <Bac – M.Edu >=Bac|)	p-Value (M.Edu <Bac vs M.Edu >=Bac)
CDL -> Confidence	0.126	0.225	0.101	0.281
CDL -> Efficacy	0.317	0.173	0.144	0.137
CDL -> Emotional Intelligence	0.159	0.236	0.086	0.352
Calls -> Offers	0.315	0.415	0.099	0.252
Clarity -> Intensity	-0.211	-0.192	0.018	0.825
Confidence -> Clarity	0.163	0.055	0.113	0.367
Confidence -> Efficacy	0.405	0.547	0.141	0.106
Efficacy -> Calls	-0.132	-0.157	0.027	0.752
Efficacy -> Clarity	0.193	0.164	0.034	0.767
Efficacy -> Offers	-0.128	-0.148	0.02	0.814
Efficacy -> Time	0.153	0.163	0.027	0.824
Emotional Intelligence -> Clarity	0.275	0.49	0.228	0.029
Emotional Intelligence -> Outcome	-0.162	-0.102	0.063	0.514
Employability Skills -> CDL	0.664	0.647	0.015	0.801
Employability Skills -> Confidence	0.537	0.544	0.008	0.944
Employability Skills -> Emotional Intelligence	0.64	0.579	0.069	0.43
Intensity -> Calls	0.149	0.083	0.068	0.473
Intensity -> Time	0.15	-0.011	0.167	0.069
Offers -> Outcome	0.105	0.11	0.013	0.899
Support -> Outcome	0.408	0.376	0.032	0.703
Time -> Outcome	-0.126	-0.194	0.071	0.467

6.5.2.5 Moderating Effect of Father's Highest Qualification

The moderating effect of respondents' father's education was analysed on the respondents' job search experience. First, the analysis was performed by dividing the respondents in two groups: group A consisted of respondents with fathers possessing a bachelor's degree or above and group B consisted of respondents with fathers possessing an education below a bachelor's degree. When the data were compared between the two groups, three paths were found to be significantly different: from emotional intelligence to job search clarity, from employability skills to self-confidence and from job search intensity to time. With the same level of emotional intelligence, respondents from group A showed better job search clarity

compared to respondents from group B. The respondents from group A had better self-confidence when both groups had same level of employability skills. The time taken to find the job was also lower for group A respondents compared to group B respondents when the job search intensity shown by both the groups was same. Table 6.33 summarizes these results.

Table 6.33 Moderating Effect of Father's Highest Qualification (Comparison between respondents with father's qualification of bachelor or above and respondents with father's qualification below a bachelor degree)

	Path Coefficients Mean (F.Edu <Bac)	Path Coefficients Mean (F.Edu >=Bac)	Path Coefficients -diff (| F.Edu <Bac vs F.Edu >=Bac|)	p-Value (F.Edu <Bac vs F.Edu >=Bac)
CDL -> Confidence	0.254	0.137	0.142	0.164
CDL -> Efficacy	0.366	0.2	0.165	0.11
CDL -> Emotional Intelligence	0.14	0.212	0.065	0.492
Calls -> Offers	0.356	0.368	0.007	0.94
Clarity -> Intensity	-0.221	-0.192	0.03	0.734
Confidence -> Clarity	0.194	0.048	0.156	0.221
Confidence -> Efficacy	0.379	0.515	0.135	0.16
Efficacy -> Calls	-0.107	-0.152	0.044	0.636
Efficacy -> Clarity	0.177	0.197	0.018	0.876
Efficacy -> Offers	-0.155	-0.118	0.035	0.692
Efficacy -> Time	0.104	0.2	0.114	0.377
Emotional Intelligence -> Clarity	0.191	0.472	0.297	0.005
Emotional Intelligence -> Outcome	-0.205	-0.098	0.108	0.275
Employability Skills -> CDL	0.71	0.631	0.073	0.263
Employability Skills -> Confidence	0.374	0.613	0.275	0.03
Employability Skills -> Emotional Intelligence	0.633	0.608	0.02	0.834
Intensity -> Calls	0.086	0.144	0.058	0.546
Intensity -> Time	-0.043	0.162	0.209	0.026
Offers -> Outcome	0.198	0.069	0.126	0.165
Support -> Outcome	0.394	0.398	0.007	0.933
Time -> Outcome	-0.178	-0.143	0.047	0.651

The data were further divided into two groups to examine if respondents with father's education at masters or below (group A) and respondents with father's possessing a doctorate degree (group B) have any significant differences. The comparison of the two

groups showed that, with same level of self-confidence, group B had better self-efficacy than group A. Also, group B showed better job search clarity than group A, although both the groups had same levels of emotional intelligence. Table 6.34 presents these results.

Table 6.34 Moderating Effect of Father's Highest Qualification (Comparison between respondents with father's qualification of master's or below and respondents with father's qualification of PhD or Post-doctorate)

	Path Coefficients Mean (F.edu <=master)	Path Coefficients Mean (F.edu >master)	Path Coefficients -diff (| F.edu <=master – F.edu >master |)	p-Value (F.edu <=master vs F.edu >master)
CDL -> Confidence	0.184	-0.082	0.106	0.652
CDL -> Efficacy	0.276	-0.09	0.324	0.16
CDL -> Emotional Intelligence	0.21	-0.15	0.205	0.35
Calls -> Offers	0.357	0.561	0.219	0.287
Clarity -> Intensity	-0.194	-0.355	0.169	0.381
Confidence -> Clarity	0.133	-0.002	0.176	0.565
Confidence -> Efficacy	0.442	0.799	0.419	0.049
Efficacy -> Calls	-0.118	-0.478	0.353	0.078
Efficacy -> Clarity	0.196	-0.169	0.377	0.194
Efficacy -> Offers	-0.123	-0.188	0.051	0.802
Efficacy -> Time	0.132	0.379	0.437	0.094
Emotional Intelligence -> Clarity	0.32	0.936	0.649	0.015
Emotional Intelligence -> Outcome	-0.136	-0.09	0.024	0.916
Employability Skills -> CDL	0.645	0.687	0.085	0.555
Employability Skills -> Confidence	0.509	0.923	0.288	0.329
Employability Skills -> Emotional Intelligence	0.585	1.031	0.322	0.117
Intensity -> Calls	0.129	0.113	0.035	0.875
Intensity -> Time	0.09	0.036	0.152	0.502
Offers -> Outcome	0.109	0.154	0.011	0.956
Support -> Outcome	0.398	0.114	0.272	0.179
Time -> Outcome	-0.144	-0.441	0.381	0.108

6.6 Questions Related to Job Search Method and Time

Two questions were included in the survey instrument to identify the most common job search method employed by graduates and the average time taken to find a job. To answer

the first question, ***Which of the following job search methods helped you to secure a job offer?,*** respondents were asked to identify one job search method out of the ten most commonly reported job search methods in the literature that helped in securing a job offer. Table 6.35 shows the results for this question.

Table 6.35 Most Successful Job Search Method

Job Search Method	Frequency	Percentage
Newspaper job ads	46	8.6
Online job ad	81	15.2
Online job portals	36	6.8
Via social circle	162	30.4
Employment agency or recruiter	9	1.7
University's employment office	39	7.3
By contacting prospective employer	39	7.3
Job Fair	9	1.7
Employer's visit to school	43	8.1
Via social media	68	12.8
Total	**533**	**100.0**

Table 6.10 reveals that 30.4% of graduates secured their job by contacting their social circle, which includes friends, family, acquaintances and relatives, making it the most successful job search method. This is followed by online job ads that helped 15.2% of the job seekers. Social media were also a popular job search tool, enabling 12.8% of graduates to secure a job offer. The least popular methods included employment agency or recruiters and job fairs, only helping 1.7% of job seekers each. Online job portals were the third least successful method of job search, as only 6.8% of graduates were able to find a job through this job search method.

Respondents were asked ***How many months did it take you after graduation before you accepted a job offer?*** This was an open-ended question and respondents had to report the number of months it took them to accept a job offer. The minimum value reported for this question was -1, indicating the respondent accepted a job offer one month prior to his/her graduation. The maximum value reported was 24 by three respondents; 23.6% of respondents reported zero, i.e., they were able to accept a job offer immediately after their

graduation; and 84.1% accepted a job within six months of graduation. The mean time taken by graduates to accept a job offer was 3.45 months, with a standard deviation of 3.88.

6.7 Chapter Summary

This chapter focused on the data analysis procedure and results obtained. The first part explained the process to prepare data for analysis, including handling missing data, screening for outliers and dealing with non-normal data. Descriptive statistics were presented in section 6.3. The process adopted to validate the questions, including content validity and construct validity, were discussed in section 6.4.

Section 6.5 explained the procedure for data analysis. It included justifying the use of PLS-SEM for the study, differentiating between reflective and formative measures, and procedures for outer model and inner model assessment. Outer model assessment explained the procedure for assessing reflective and formative constructs. Inner model assessment included assessment of path coefficients and their significance, the coefficient of determination R^2, effect size f^2, predictive relevance Q^2 and effect size q^2. The processes of mediation and moderation analysis were discussed.

The final part presented the results of data analysis. The results of outer model assessment were discussed, then the results of inner model assessment and the mediating relationships. Twenty-two paths were found to be significant and the final model for graduate employability in Pakistan was presented in section 6.6.4. The verified model was further analysed for the effect of moderating variables that included gender, education, work experience and highest level of education attained by respondents' parents. Section 6.5.5 presented these results. Additional questions asked of respondents regarding job search method were discussed in section 6.6.

Chapter 7 – Discussion

7.1 Introduction

The data analysis and the results relating to hypotheses testing were discussed in the previous chapter. This chapter will present the discussion of results related to each specific research question in light of the literature and context of the current study. The chapter comprises an overview of the research followed by discussion of research findings. It is divided into sections for each research question.

7.2 Overview of the Research

The current study aims to help graduating students, educators and policymakers in the developing countries of Asia Pacific region, in particular Pakistan, to understand the dynamics of job search and employability after graduation by developing and testing a model of graduate employability. To achieve the aim of this study, three objectives were defined to identify the various factors that influence job search behaviour of new graduates in Pakistan, to develop and test a conceptual model for graduate employability in Pakistan, and to investigate the effect of various demographic variables (i.e., grades, experience, gender, field of education, parent's educational status) on graduate job search outcome.

The lens of SCCT CSM was identified to be the best fit for the current study (Chapter 2). The literature on Pakistan was analysed to determine the status of research on graduate employability there and identify the relevant gaps. It was concluded from the literature review that the research conducted is in its initial stage and much work needs to be done to develop a sustainable system of graduate employability that will assist students settle in their careers. Personal, social, psychological and contextual factors contributing to enhancing employability and, in turn, facilitating a successful job search outcome were identified from the literature review. SCCT CSM was used to develop a model of graduate employability (Chapter 4). The hypotheses were developed based on the relationships' determined by the model and tested using partial least square structural equation modelling.

The following sections discuss the findings based on the specific research questions.

7.3 Findings associated with RQ1

Underpinned by Social Cognitive Career Theory's Career Self-Management Model, RQ1 examined the relationship between learning experiences and ability and self-efficacy. Learning experience was conceptualised as career development learning, and employability skills possessed by an individual was used as the ability construct. RQ1 was articulated as *"Is self-efficacy positively influenced by the learning experience (career development learning) and ability (employability skills) constructs?".* To address this question, two hypotheses, H1a and H1b; were developed. The results of hypotheses testing follow.

H1a: Career Development Learning → Self-Efficacy

Career development learning is an important predictor in the literature of job search and had been used by Sumanasiri, Ab Yajid and Khatibi (2015) and Pool and Sewell (2007). The DOTS model developed by Law and Watts (1977) is a representation of career development learning. According to Watts (2006, p.2), career development learning is the ability of an individual to "manage their careers". It is the information possessed by an individual which helps them to make informed career choices, by being aware of their potential, knowing their personal interests, identifying available opportunities and knowing how to pursue those opportunities (Pool & Sewell 2007; Stoica 2010). Past studies have used career development learning in the context of job search as a predictor of positive job search outcome via a positive impact on self-efficacy (Bridgstock, Grant-Iramu & McAlpine 2018; Jollands 2015; Pool, Qualter & Sewell 2014; Pool & Sewell 2007).

The results obtained as a result of data analysis using PLS-SEM analysis demonstrate that self-efficacy is positively influenced by career development learning ($\beta = 0.195^{***}$). This suggests that the majority of Pakistani university gradutes experience enhanced self-efficacy if they have undergone career development learning during their studies. These results are consistent with the model of graduate employability proposed by Pool and Sewell (2007) and the findings of other studies conducted on the base of this model (Jollands 2015; Pool, Qualter & Sewell 2014; Stoica 2010). Jackson and Wilton (2017), Hazenberg, Seddon and Denny (2014) and Eden and Aviram (1993) also found a positive association between career development learning and job search self-efficacy. Saks, Zikic and Koen (2015) conclude that career

exploration and career planning (which comes as a result of career development learning) are positively impacting job search self-efficacy.

Career development learning enables individuals to explore their true potential, understand where their interest lies and develop themselves to be competitive for their career of choice. Gradautes possess better self-efficacy if they are clear about the type of career they want to pursue and are prepared to overcome the challenges anticipated. For the current study, career development learning was defined as a combination of self-awareness, opportunity awareness, decision making and transition learning, in line with Reddan and Rauchle (2012). Self-awareness enables a job seeker to be aware of abilities and skills possessed and how to use them while looking for the job; opportuntiy awareness provides an individual with the base to look out for a job with the knowledge of trends in the market, what opportunties to look for and how. Decision making provides job seekers with the ability to determine how their skills are relevant to job opportunities and transition learning helps them to make themselves favorable for the recruiters by understanding how recruitmenet works and to present themselves by tailoring their resume and interview skills to match job and industry requirements. Hence, an individual with career development learning has a very good understanding of the recruitment process from the knowledge of their own self through to understanding of how to appear in an interview. All these skills enhance the job seeker's self-efficacy, as they have the confidence of having all the required skills, attributes and abilities to succeed in the task at hand.

H1b: Employability skills → Self-efficacy

Employability skills is a very important factor in the context of employability. A wide-ranging literature (see Chapter 4) is focused on identifying the employability skills most desired by employers. Many authors have also treated employability skills as synonymous with employability. The hypothesis was developed in line with the CareerEDGE model of Pool and Sewell (2007). The results of the data analysis conclude that employability skills do not have a significant impact on job search self-efficacy ($\beta = 0.122^{ns}$). This suggests that the level of employability skills possessed by an individual does not contribute towards the level of job search self-efficacy. These findings are contrary to the findings by Stoica (2010) and Direito, Pereira and Duarte (2012).

These findings are interesting and unique, as previous research has concluded to the contrary. Employability skills and self-efficacy are both important contributors towards employability and job search outcome. A possible explanation for this finding may be the unique context of this study. The higher education system of Pakistan does not include the concept of graduate attributes (see Chapter 3) or career guidance for students, and this might allow students to undervalue the importance of employability skills. Hence, despite the importance of employability skills, they are found to be a non-contributor towards job search self-efficacy.

7.4 Findings associated with RQ2

RQ2 was articulated as ***"****Does self-efficacy positively impact job search clarity, job search intensity and the outcome construct (including number of interview calls received, number of job offers received, time taken to find the job and job search outcome)?".* Hypotheses H2a, H2b, H2c, H2d and H2e were used to address RQ2. Self-efficacy is one's perception of own capabilities to perform the desired tasks to achieve the required level of performance (Bandura 1986). Previous research suggests that task-related self-efficacy enhances an individual's ability to perform relevant tasks. In the context of employability; job search self-efficacy improves the job seeker's ability to perform adaptive career behaviours (Lent et al. 2017), leading to an enhanced outcome. Hence, this question aimed at exploring the impact of self-efficacy on job search clarity, job search intensity and outcome.

H2a: Self-Efficacy → Job Search Clarity

In the context of SCCT-CSM, self-efficacy is referred to as an individual's perceived ability to perform tasks required for career preparation, entry or adjustment (Lent & Brown 2013). As the focus of the current research is on employability leading to positive job search outcome, job search self-efficacy is used to conceptualise self-efficacy. A study by Taggar and Kuron (2016) on unemployed individuals in the US shows that higher job search self-efficacy is positively linked to focused and exploratory job search strategy, which is only obtained due to higher job search clarity, but it is negatively linked to haphazard job search strategy, which is an outcome of lack of job search clarity.

The results of data analysis showed a positive impact of job search self-efficacy on job search clarity ($\beta = 0.177^{**}$). This implies that job seekers have a clear idea of the type of career/job

they want to pursue if they have higher self-efficacy. Individuals with a perception that they possess the required capabilities to achieve the desired career/job will have a better and clearer understanding of the career/job they actually want to perceive in future. These findings are consistent with Dahling, Melloy and Thompson (2013) and Renn et al. (2014). Individuals with lower levels of self-efficacy will perceive they do not possess the required competencies to get the kind of job they desire which will lead to vague ideas or desires about the career/job due to such uncertainty.

H2b: Self-Efficacy → Job Search Intensity

Research on job search has shown self-efficacy to be a predictor of job search intensity, i.e., the intensity of effort with which job seekers look for a job (Saks, Zikic & Koen 2015). This suggests that individuals who have a positive perception of the possession of competencies required to find the desired job look for a job more rigorously. This hypothesis was developed in line with Bao and Luo (2015), Eden and Aviram (1993), Saks, Zikic and Koen (2015), Schaffer and Taylor (2012) and Van Hoye et al. (2015). However, the results of the current study found a non-significant relationship between job search self-efficacy and job search intensity ($\beta = 0.002^{ns}$).

These findings suggest that individuals who have positive self-belief in their efficacious abilities to produce the desired results from job search activities lag in their actual job search behaviour and hence, display less job search intensity compared to those individuals who have lower self-efficacy. The possible reason for this behaviour is that, if the individuals have self-belief in their ability to get the desired job, they target their job search and apply only for the vacancies they are interested in. However, people with lower self-efficacy do not have a targeted approach towards job search and hence, they apply for any and every job vacancy they come across. It is safe to make this assumption, as the target population for the current study is university graduates who are still looking to start a career and have no defined career path, which allows them to find a job without any preferences. These findings are consistent with Liu et al. (2014), Coen et al. (2015) and Georgiou et al. (2012). An interesting observation made here is that the results of the current study coincide with the studies on university/college graduates, whereas the results of studies on mid-career job seekers show a positive association between self-efficacy and job search intensity. This provides support for the argument presented above.

H2c: Self-efficacy → Number of interview calls

Number of interview calls received is very commonly used as a result factor to evaluate the effectiveness of job search activities. The results revealed job search self-efficacy of job seekers has a negative significant relationship with the number of interview calls received ($\beta = -0.138^{**}$).

This finding suggests that job seekers who have a positive belief in their abilities to find the desired job only apply for jobs that are relevant to their interest instead of applying for every job in the market. This leads to a lower number of interview calls, which can be explained as arising from the lower number of jobs applied for. The current research focused on graduate job seekers with less job experience; hence, having a belief in your ability to find a job and thus targeting those jobs is the key behind the results of this hypothesis testing. The graduates generally do not have a clear idea of the type of job they want to pursue and hence, they apply for most jobs, trying to enter the market. This leads to the higher number of jobs applied for, which increases the probability of receiving a higher number of interview calls, whereas job seekers with higher job search self-efficacy apply only for jobs relevant to their interest, i.e., a lower number of jobs, leading to a lower number of interview calls.

H2d: Self-efficacy → Number of job offers

In line with the discussion above, job seekers with higher job search self-efficacy were found to receive lower numbers of job offers ($\beta = -0.131^{**}$). This indicates that job seekers who believe in their abilities to land a job of their liking apply for selective jobs, which reduces the number of job offers received. This can be due to the job seeker's specialised interest in the job which enables them to be confident about their career prospects and work hard towards their desired goal until it is achieved.

H2e: Self-efficacy → less time to find a job

Self-efficacy showed a positive impact on the time taken by job seekers to find the job ($\beta = 0.162^{**}$). This suggests that a positive perception of one's abilities to find the desired job leads to finding the job much more quickly compared to job seekers with low job search self-efficacy. It can be explained that the higher level of self-efficacy enhances the quality of job application and interview skills, which, along with their focused approach, leads to their taking less time to find their job.

In conclusion, the discussion suggests that the job seekers with higher job search self-efficacy (i.e., perception of possessing the ability to perform the tasks required to find and sustain the desired job) tend to have a clear idea of the type of job they want to possess and the career they want to pursue. This enables the job seekers to focus their job search activities towards the desired goal, tailor their job application according to the requirements of the industry and employers and apply only for jobs that match their interests and goals. This leads to lower numbers of interview calls and job offers in a lesser time period. These findings are only relevant for graduate job seekers who do not have much prior work experience and are at the start of their career, because work experience, knowledge of the market and industrial connections play a role in job search and lead to results different to the findings of this study.

7.5 Findings associated with RQ3

RQ3 was formulated to assess the association of various job search factors: *"Does job search clarity enhance the job search intensity? Does job search intensity positively impact the number of interview calls and time taken to find the job?"*. Three hypotheses, H3a, H3b and H3c, were defined to evaluate RQ3. It focuses on accessing the impact of job search clarity on job search intensity and the association of job search intensity with number of interview calls and number of job offers. Job search clarity is the understanding of an individual about the type of job or career they want to pursue; it is an important factor in the context of graduate employability, because job seekers may not have a defined career path and are still in a state of confusion regarding their future career due to lack of experience of the labour market. Job seekers with a higher job search clarity are more aware of their career preferences and hence, try to find a job that matches their interests.

H3a: Job search clarity → job search intensity

The findings suggest that job search clarity is a significant predictor of job search intensity ($\beta = -0.168^{***}$). The negative path coefficient suggests that individuals who have a clear understanding of the kind of job they want invest their efforts in finding the right job and apply for only those jobs relevant to their interests and career goals. Job seekers with higher job search clarity not only have a clear idea of the type of job they want but also how to approach such jobs because they have researched the relevant job market. This leads them to spend a significant amount of time on each job application, which leads to a lower number

of jobs applied for in the same amount of time. Taggar and Kuron (2016) report that the haphazard job search strategy is adopted by job seekers who have a lower job search clarity and it leads to a higher number of applications because job seekers keep on submitting the same application without thorough research and tailoring.

H3b: Job search intensity → higher number of interview calls

Hypothesis H3b hypothesised the relationship between job search intensity and number of interview calls received by the job seeker, and results revealed a positive association (β = 0.125**). This suggests that individuals who look for a job with higher job search intensity tend to get more interview calls. This is possible because people are applying for more jobs, and thus they are more likely to get a call for an interview since the probability of reply increases with an increased number of applications. These findings are consistent with findings by Côté, Saks and Zikic (2006), Guerrero and Rothstein (2012), Saks and Ashforth (2000) and Saks (2006).

H3c: Job search intensity → less time taken to find the job

The results of data analysis supported H3c, revealing that higher job search intensity leads to lesser time to find a job (β = 0.083*). This suggests that people who look for their job more rigorously tend to find it earlier. People who display higher job search intensity tend to spend more time looking for a job, which leads to a higher number of job applications in the same period of time compared to job seekers with lower job search intensity. This enhances the probability of finding a job more quickly.

From the discussion above, it can be concluded that people who have a clear idea of the type of job they want tend to expend greater effort in the job search process and hence, display a higher job search intensity. This leads to individuals receiving higher number of interview calls and taking less time to find a job. It implies that, as the job seekers are applying for more jobs in a given amount of time, the probability of receiving a response from employers increases, leading to obtaining the desired result faster.

7.6 Findings associated with RQ4

RQ4 was formulated with the aim to evaluate the impact of personal and contextual affordances on job search self-efficacy. Four factors – self-esteem, self-confidence, emotional

intelligence and social support – were used to describe the personal and contextual affordances and hence, four hypotheses were presented to test RQ4: *"Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence self-efficacy?"*. This question was evaluated using hypotheses H4a, H5a, H6a and H7a.

H4a: Higher self-esteem relates to positive self-efficacy

According to SCCT CSM, self-esteem was hypothesized to influence job search self-efficacy. The findings revealed no significant relationship between self-esteem and self-efficacy ($\beta = 0.017^{ns}$). This suggests that, although job seekers have a positive evaluation of themselves, this has no effect on their job search self-efficacy, i.e., the perception of an individual to succeed in particular tasks. It can be concluded that the individual's overall perception of self-worth does not contribute towards the perception that individuals have regarding their ability to achieve the desired result. These findings are consistent with Georgiou et al. (2012) findings on job seekers.

H5a: Higher self-confidence leads to higher self-efficacy

Self-confidence has been described as an important predictor in the job search literature (McAuliffe et al. 2006; Pool & Sewell 2007; Wanberg, Zhang & Diehn 2010). The findings revealed a positive association between self-confidence and job search self-efficacy ($\beta = 0.395^{***}$). These suggest that individuals who have a higher perception of their personal worth and their ability to succeed at certain tasks have a higher self-efficacy, i.e., their perception to perform well in job search activities and achieve the desired result.

H6a: Higher emotional intelligence leads to higher self-efficacy

Emotional intelligence has been studied in the context of employability and job search (including Behjat & Chowdhury 2012; Coetzee & Beukes 2010; Fabio & Kenny 2015) because it is believed to influence various factors contributing towards successful job search outcomes. The current hypothesis was postulated in line with the results obtained from studies and the model proposed by Pool and Sewell (2007). The current study did not find a significant relationship between emotional intelligence and job search self-efficacy ($\beta = 0.013^{ns}$). This suggests that, although job seekers have the ability to be aware of their and others' emotions, and know how to deal with them, this does not impact their understanding of the fact that they can achieve the desired results from their job search activities.

These findings are contrary to those of studies by Behjat and Chowdhury (2012), Fabio and Kenny (2015), Potgieter and Coetzee (2013) and Syed, Abiodullah and Yousaf (2014), which found a positive significant relationship between emotional intelligence and self-efficacy, suggesting that people who are aware of and know how to deal with their own and other's emotions are more likely to have a positive evaluation of their ability to find a job of their liking. Although Syed, Abiodullah and Yousaf (2014) collected data from the same population as the population used in the current study, the results obtained differ. The variant results might be due to the time when data collection was conducted: Syed, Abiodullah and Yousaf (2014) collected data from students in their final year of study, near completion, whereas the current study collected data from individuals who were already employed. This might have contributed to respondents' perception of their emotional intelligence and job search self-efficacy because people gain a better understanding of themselves when they reflect on an event rather than when they are actually experiencing it.

H7a: Higher social support relates to positive self-efficacy

The contextual influence in SCCT CSM was conceptualised as social support and hypothesized to have a positive influence on job search self-efficacy. Social support is widely studied in the context of employability and is found to be a significant (direct and indirect) predictor of job search outcome. Several studies (Fabio and Kenny (2015); Guan et al. (2016); Guerrero and Rothstein (2012); Lent and Brown (2013); Lim, Lent and Penn (2016); Lin and Flores (2011); Maddy, Cannon and Lichtenberger (2015); Renn et al. (2014); Russell, Holmstrom and Clare (2015) and Van Hoye et al. (2015) have reported a positive significant association between emotional intelligence and job search self-efficacy.

However, the findings of the current study concluded to the contrary, with a non-significant relationship between emotional intelligence and job search self-efficacy ($\beta = -0.046^{ns}$). This might be due to the uniqueness of this study. The data were collected from individuals who had graduated in the past two years at the time of data collection and were already employed. This may have led respondents to recall their job search experience and respond accordingly. The findings of this hypothesis testing suggests that, although job seekers have positive support from their social circle (friends and family members), this does not impact their job search self-efficacy. The reason may be the social structure of the society where, although people support each other in hard times by providing verbal encouragement, they do not

actually contribute to enhance levels of self-perception and the support provided is only to make each other feel better instead of helping to grow and develop.

In conclusion, the impact of personality and contextual influences was tested on job search self-efficacy and only self-confidence is found to positively and significantly impact job search self-efficacy.

7.7 Findings associated with RQ5

RQ5 was *"Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence job search clarity?"* with the aim to analyse the impact of personal and contextual influences. Hypotheses H4b, H5b, H6b and H6b are used to address RQ5. According to the SCCT CSM, the personal (self-esteem, self-confidence, emotional intelligence) and contextual (social support) factors were hypothesized to positively impact job search clarity.

H4b: Higher self-esteem relates to higher job search clarity

Hypothesis H4b tested the relationship between self-esteem and job search clarity and resulted in a non-significant negative relationship ($\beta = -0.021^{ns}$). This suggests that the self-evaluation of an individual regarding themselves in general does not impact the level of clarity an individual has for the kind of career they want to pursue in their life. According to SCCT CSM, the personal influence of a job seeker is predicted to influence the goal variable or job search clarity (as hypothesized in this study), but the findings contradict the previously tested relationship. A possible explanation may be the concept behind self-esteem. Self-esteem is an overall evaluation of an individual of their personality which (in the current study) does not impact the level of clarity job seekers have for their future careers. However, job search clarity is found to be impacted by self-efficacy (see section 7.3.2), which is the self-evaluation in the context at hand as compared to self-esteem which is a general self-concept.

H5b: Higher self-confidence leads to higher job search clarity

Self-confidence was found to have a positive significant relationship with job search clarity ($\beta = 0.136^{*}$), which implies that the stronger an individual's self-confidence, the greater will be their job search clarity. This finding suggests that individuals who have trust in their abilities, skills and qualities to find the desired job have a better understanding of the kind of job they

want to secure and the career they desire to pursue. A job seeker's self-confidence enhances their self-worth and belief that they are able to find the job they desire, which enhances their job search clarity. Self-confidence is reported as a determinant of job search by studies including Pool and Sewell (2007) and Wanberg, Zhang and Diehn (2010). Although the direct relationship between two variables has not been tested before, it provides support for the relationship developed by SCCT CSM.

H6b: Higher emotional intelligence leads to higher job search clarity

The relationship between emotional intelligence and job search clarity was tested using hypothesis H6b and was found to be positive and significant ($\beta = 0.361^{***}$). This implies that, if individuals have a good understanding of their own and others' emotions and know how to deal with them, it enhances their ability to evaluate their desires and decide on the type of career they want to pursue in their life. These findings suggest that a job seeker's ability to identify, analyse and deal with emotions is not only helpful in social interactions but contributes to all aspects of their life. People with higher emotional intelligence use their abilities to identify and analyse their emotions regarding their desired career and hence, report higher job search clarity. Coetzee and Beukes (2010) conclude that job seekers who are able to perceive and manage their own and others' emotions (i.e., possess higher emotional intelligence) have the ability to set clear and measurable goals (i.e., have higher job search clarity). Liptak (2005) concludes that emotional intelligence helps graduates to find a job but does not specify if it has an impact on job search clarity. The current finding supports the relationship hypothesized using SCCT CSM.

H7b: Higher social support relates to positive job search clarity

Social support was hypothesized to have a positive relationship with job search clarity. The findings revealed social support does not contribute to job search clarity ($\beta = 0.003^{ns}$). This result suggests that the support provided to job seekers from their social circle does not help them to identify and clarify their career interests. It implies that the level of job search clarity a job seeker possesses is his/her own understanding of the type of job they want to do, and they do not receive any support in identifying their career path.

These results may be unique to the current study only because the target population includes Pakistani graduates and unfortunately Pakistan does not have a system of career counsellors, as happens in Western countries, who provide support to students in identifying their career

interests. In Pakistan, students have to navigate their way through by themselves with minimum support and the information gained from their immediate family and friends. These findings are contrary to the model proposed by Lent and Brown (2013) and the findings of Lim, Lent and Penn (2016).

In conclusion, the findings of RQ5 reveal that job seekers with higher emotional intelligence and self-confidence have better job search clarity, whereas social support and self-esteem do not contribute towards it. Job seekers' belief in their self-worth and likelihood of succeeding enhance not only their self-confidence but also their confidence in their abilities to find a relevant job, whereas emotional intelligence provides job seekers with the ability to identify their career-relevant interests, contributing to enhancement of job search clarity.

7.8 Findings associated with RQ6

RQ6 was postulated to evaluate the impact of personal and contextual influences on job search intensity: *"Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influence job search intensity?"*. To answer this question, four hypotheses were used: H4c, H5c, H6c and H7c. Job search intensity is the frequency with which individuals find jobs and is measured as the number of times each job search method was used in a week during job search duration.

H4c: Higher self-esteem relates to higher job search intensity

The results of H4c, testing the relationship between self-esteem and job search intensity, found a non-significant relationship ($\beta = -0.064^{ns}$). These findings revealed that the self-esteem of an individual does not impact their job search activities. It suggests that, although job seekers highly regard their personal worth and self-value, this does not impact their job search behaviour and activities, and hence, has no significant relationship with job search intensity. These findings are consistent with the findings of Georgiou et al. (2012) and Saks and Ashforth (2000), whereas Sverko et al. (2008) conclude to the contrary, showing a significant relationship between self-esteem and job search intensity. This inconsistency may be explained with the help of the population used: Georgiou et al. (2012) and Saks and Ashforth (2000) collected data from university graduates, a target population similar to the current study, whereas Sverko et al. (2008) collected data from the population of job seekers

who were not exclusively recent university graduates. Thus the relationship between various variables can differ based on the attributes of the target population.

H5c: Higher self-confidence leads to higher job search intensity

Relationship testing between self-confidence and job search intensity resulted in a non-significant result ($\beta = 0.037^{ns}$), which suggests that an individual's belief in self-worth and the likelihood of succeeding at job search do not impact their job search intensity. Self-confidence has been reported as a significant predictor of job search outcome (Pool & Sewell 2007; Wanberg, Zhang & Diehn 2010). Lent and Brown (2013) tested this relationship proposed by SCCT CSM i.e., the impact of personal influence on action, and found a significant association. Unfortunately, hypothesized relationship was not found to be significant. The non-significance of this result may be due to the personal attributes of individuals that are beyond the scope of the current study.

H6c: Higher emotional intelligence leads to higher job search intensity

Emotional intelligence was found to have a non-significant relationship with job search intensity ($\beta = -0.061^{ns}$). This finding suggests that an individual's ability to perceive and manage their own and others' emotions does not contribute to the frequency with which they look for the job. As discussed in the previous section, emotional intelligence contributes to job search clarity but shows no effect on job search intensity. This result is contrary to the findings of Coetzee and Beukes (2010), which conclude that emotional intelligence leads to higher employability-related behaviours (including job search intensity). Liptak (2005) also states that emotional intelligence helps graduates to find the job.

H7c: Higher social support relates to positive job search intensity

The contextual influence factor, social support, was hypothesized to influence job search self-efficacy in graduate job seekers. This hypothesis was postulated in line with SCCT CSM and the results of Russell, Holmstrom and Clare (2015), Schaffer and Taylor (2012) and Sverko et al. (2008), who observe a positive impact of social support on job search intensity. The results here revealed that social support does not impact job search intensity ($\beta = -0.031^{ns}$). This suggests that the presence of support from the social group of a job seeker, including family and friends, does not contribute to the frequency with which a job seeker finds a job. This may be due to the type of support extended to the job seeker from people surrounding him/her.

These findings are contrary to findings of studies on varying population samples, including graduates and experienced job seekers. The social setting of Pakistan can be regarded as a collectivist society (see Chapter 3), which may take the pressure off the job seeker to find a job as soon as possible by providing financial and moral support. Generally, graduates in Pakistan live with their parents instead of moving out (as is prevalent in the Western world), which does not pressure them to find a job as soon as possible after graduation because they do not have any financial responsibility.

The findings of RQ6 concluded that personal and contextual influences do not contribute towards job search intensity. The personal influences discussed in this study provide psychological support to the job seeker, contributing to feelings of self-worth and likelihood of succeeding at the job search, together with the ability to understand and evaluate personal and other emotions. These factors are found to have no influence on job search intensity. Social support, on the other hand, although it can provide relevant physical and information support to the job seeker to enhance job search intensity, the context of this study and its findings do not support the notion because no relationship was observed.

7.9 Findings associated with RQ7

RQ7 was *"Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) positively influences job search outcome?"*. This question addresses the influence of self-esteem, self-confidence, emotional intelligence and social support on job search outcome. Job search outcome is defined as the combination of employment quality, satisfaction with the job and intention to quit the job. Four hypotheses, H4d, H5d, H6d and H7d, related to this question.

H4d: Higher self-esteem relates to positive job search outcome

The results of H4d found an insignificant relationship between self-esteem and job search outcome ($\beta = 0.018^{ns}$). This suggests that a job seeker's perception of self-worth does not contribute to job search outcome. The result is consistent with results discussed in sections 7.3.4, 7.3.5 and 7.3.6, where it was found that self-esteem does not contribute to job search self-efficacy, job search clarity and job search intensity. Self-esteem does not contribute to any of the factors involved in job search process and hence, has no impact on the outcome.

These findings are consistent with Georgiou et al. (2012), who report no association between self-esteem and job search outcome.

H5d: Higher self-confidence leads to positive job search outcome

The results of H5d revealed that self-confidence does not have a significant impact on job search outcome ($\beta = -0.054^{ns}$). This result suggests that positive self-evaluation and trust in one's abilities to find the relevant job do not contribute towards the results achieved at the end of job search activities. Self-confidence has been reported as an important predictor of job search (Pool & Sewell 2007; Wanberg, Zhang & Diehn 2010) but its impact on job search outcome has not been tested. The results obtained here can be explained thus: although an individual has a positive evaluation of their abilities and self-worth, and this evaluation contributes to the pre-requisites of job search process (i.e., self-efficacy and job search clarity), it does not contribute towards the process (job search intensity) and the outcome of the process, due to its dependence on various other extra-personal factors.

H6d: Higher emotional intelligence leads to positive job search outcome

The results revealed that emotional intelligence has a significant negative relationship with job search outcome ($\beta = -0.127^{*}$). This suggests that individuals who have the ability to perceive and deal with their own and others' emotions are more likely to have a negative job search outcome. Individuals with the ability to identify and evaluate emotions are more likely to be unhappy with the job they have found, reporting lesser satisfaction with it and intending to quit it.

These findings are contrary to findings of earlier studies. Liptak (2005) reports that emotional intelligence is associated with positive job search outcome. García and Costa (2013) conclude that emotional intelligence predicts early career success. The inconsistency between these findings is due to the factors used to define job search success. The current finding can be explained as resulting from individuals with higher emotional intelligence possessing the ability to identify and evaluate their emotions; they use the same ability to identify and evaluate their job search outcome and their sensitive nature makes it difficult for them to be fully satisfied with the outcome achieved – hence, a negative association with job search outcome is reported.

H7d: Higher social support relates to positive job search outcome

The results of hypothesis H7d revealed a positive significant relationship between social support and job search outcome ($\beta = 0.378^{***}$), which suggests that job seekers receiving social support during their job search are likely to be more satisfied with the job they have received, do not intend to quit and believe their employment is of considerable quality. The support received by the job seekers while they are looking for a job helps them to make a better decision when it comes to selecting and accepting a job. Friends and family members around the job seeker provide him/her with the relevant information, which helps in making a decision that aligns with career interests. It can be explained through the collectivist social structure of Pakistan, where the concept of seeking advice and providing support on important life decisions is prevalent. This finding supports the relationship proposed by Lent and Brown (2013). Social support is proposed to be an important predictor of job search outcome by Wanberg, Zhang and Diehn (2010) in their "getting ready for work" inventory.

In conclusion, the findings of RQ7 revealed that social support and emotional intelligence are important predictors of job search outcome, whereas the results did not support the impact of self-esteem and self-confidence on job search outcome. The social support (including informational support and advice) received by job seekers, along with their own ability to analyse the situation, understand their interests and perceive the outcome of their decision, leads to enhanced job search outcomes with increased employment quality, enhanced satisfaction with the attained job and lower intention to quit.

7.10 Findings associated with RQ8

RQ8 aimed at exploring the interaction of various outcome variables: *"Does number of interview calls positively influence number of job offers received? Is a better job search outcome associated with a higher number of job offers and higher time taken to find the job?"*. Three hypotheses, H8a, H8b and H8c, were defined to address RQ8: the relationship between number of interview calls and number of job offers, number of job offers and job search outcome, and time taken to find the job and job search outcome. The time taken to find a job is one of the least studied constructs in the literature of job search.

H8a Higher number of interview calls leads to higher number of job offers

The findings of H8a showed a positive significant association between number of interview call and number of job offers ($\beta = 0.365^{***}$), suggesting that job seekers who received a higher number of interview calls also received a higher number of job offers. That is, individuals who have received a higher number of interview offers have a more competitive and strong profile for the job, as well as understanding how to approach the job, which leads them to receive more job offers compared to job seekers who have received fewer interview calls. The number of interview calls and job offers are the most commonly used variables of job search outcome in the literature. These findings are consistent with Côté, Saks and Zikic (2006), Crossley and Stanton (2005), Georgiou et al. (2012), Guerrero and Rothstein (2012), Moynihan et al. (2003) and Saks (2006) who have also found a positive association between number of interview calls and job offers.

H8b Higher number of job offers results in a better job search outcome

Most literature on job search has used the number of interview calls and job offers as the outcome variable for job search. However, the current study adopted job search outcome as a combination of employment quality, intention to quit and satisfaction with the job, in line with Wanberg, Hough and Song (2002). The results showed a positive significant relationship between number of job offers and job search outcome ($\beta = 0.104^{*}$), revealing that, if the job seeker receives a higher number of job offers, they are more likely to experience a better job search outcome. This may be because the job seekers receiving a higher number of job offers have the option to choose from the pool of job offers they had, and hence, they are able to opt for the job that best suits their interests, leading to higher satisfaction and quality.

H8c Higher time taken to find a job leads to a better job search outcome

Time taken to find a job was found to have a negative significant impact on job search outcome ($\beta = -0.144^{**}$). This suggests that job seekers who have taken less time to find a job are able to secure a job with a higher job search outcome: job seekers who take less time to find a job have a better profile and job search approach that leads them to find a job more quickly compared to other job seekers, who have either a weak profile in comparison to others or do not have a targeted job search approach. It also leads to enhanced job search outcome, as these individuals are able to make better decisions and accept a job most suited to their needs.

In conclusion, job seekers with a better and competitive job search profile and approach are able to receive more interview calls and job offers in less time compared to less competitive job seekers, leading to better job search outcome. Generally, individuals who have a better understanding of their needs and job market demands create a profile that meets the needs of the job and employers, leading them to success in a much shorter time.

7.11 Findings associated with RQ9

RQ9 was *"Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) mediate the relationship between job search clarity and job search intensity?"*. The purpose of this question was to test the mediating effect of personal and contextual influences on the relationship between job search clarity and job search intensity. This question was defined in line with the SCCT CSM model proposed by Lent and Brown (2013). H9a, H9b, H9c and H9d were used for addressing RQ9.

H9a: Job search clarity → job search intensity via self-esteem

The results of data analysis revealed that relationship between job search clarity and job search intensity is not mediated by self-esteem ($\beta = -0.023^{ns}$) and this result is in line with the result of Hypothesis H4c, where the self-esteem was observed to have no effect on job search intensity independently. The possible explanation of this could be the unique context of this research. The target population of this study was asked to think about the time when they were looking for the job and then respond to the survey. Job seekers are often observed to possess and report low self-esteem as they are going through a period of struggle which also involves rejections that can lead to the feelings being unworthy and a failure. Hence, although job search clarity directly influences job search intensity, the relationship becomes non-significant when it is tested via self-esteem.

H9b: Job search clarity → job search intensity via self-confidence

The non-significant relationship between job search clarity and job search intensity via self-confidence ($\beta = 0.017^{ns}$) can also be explained with the help of the discussion above. The job search process is mentally and emotionally a stressful one. Job seekers often face low self-confidence due to not receiving any reply or a positive reply to their job applications and interviews. Hence, although job search clarity directly and positively contributes to job search

intensity, the relationship becomes non-significant when self-confidence is brought into the equation.

H9c: Job search clarity → job search intensity via emotional intelligence

Emotional intelligence was tested to mediate the relationship between job search clarity and job search intensity and results revealed a negative non-significant relationship ($\beta = -0.033^{ns}$). Hypothesis H6c tested the direct independent impact of emotional intelligence on job search intensity and it also revealed a negative non-significant impact. The results can be explained in light of the context of the study. Graduate job seekers in Pakistan face social pressure to find a job, which hinders their ability to deal with their emotional side, despite having the ability to understand and deal with their emotions. Another possible explanation may be the lack of career support provided to students in Pakistan in higher education institutions. Due to lack of support and knowledge, job seekers may not be able to use their emotions in the job search process and the intensity with which they find the job is only determined by the clarity of their ideas regarding the type of job they want to find and pursue.

H9d: Job search clarity → job search intensity via social support

The relationship between job search clarity and job search intensity was found to possess a non-significant relationship when tested via social support ($\beta = 0.003^{ns}$). This implies that, although job seekers possess job search clarity which impacts the intensity with which job seekers look for jobs, social support does not play a role in this relationship. A possible explanation lies in the social structure of the Pakistani society. As discussed above, despite the social pressure in society to find a job soon after graduation, the society is structured such that young graduates do not have social responsibilities. Marriage and starting a family are to happen after one has a stable career, children tend to live with their parents until they are married and they are not bound to contribute towards household expenses. Hence, the social support present around the job seeker does not impact their job search intensity; rather it provides them with the comfort of being well taken care of.

In conclusion, the results of RQ9, which tested the mediation of personal and contextual influences on the relationship between job search clarity and job search intensity revealed non-significant results. Although job seekers' job search clarity determines the intensity with which they look for a job because a clear idea of the type of career they want to pursue

enables job seekers to only target job advertisements that coincide with their interests and hence, they display a lower job search intensity, no impact of any of the mediating factors was observed on this relationship. This has been explained by way of the unique context of the current study. Another interesting observation was that job search intensity was not influenced by any personal and contextual factors, even independently, and is only impacted by job search clarity.

7.12 Findings associated with RQ10

A second mediating path was hypothesized on the relationship between job search intensity and job search outcome. Personal and contextual influences were used as the mediating variables. RQ10 was *"Do personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support) mediate the relationship between job search intensity and job search outcome?"*. Two job search outcome variables (number of interview calls and time taken to find a job) were hypothesized to be impacted by job search intensity, and hence, the mediation effect was observed on both variables. Eight hypotheses, H9e, H9f, H9g, H9h, H9i, H9j, H9k and H9l, were used to answer RQ10. H9e, H9f, H9g and H9h tested the mediating effect of self-esteem, self-confidence, emotional intelligence and social support on the relationship between job search intensity and number of interview calls. The mediating relationship between job search intensity and time taken to find a job was tested using H9i, H9j, H9k and H9l. These mediating paths were defined in line with the notion presented by SCCT CSM. The results are discussed as follows.

H9e: Job search intensity → interview calls via self-esteem

The mediating effect of self-esteem on the relationship between job search intensity and jobs search outcome was tested and the results revealed a negligible non-significant effect ($\beta = 0.000^{ns}$). SmartPLS 3, the software used for data analysis, only returns results with a maximum of three decimal points and a value of zero suggests that the path coefficient is very small, which can be equated to zero (Hair et al. 2017). This result can be interpreted that, although job search intensity has a positive and significant direct impact on the number of interview calls, self-esteem does not mediate the relationship and the effect of job search intensity on number of interview calls when tested through self-esteem and is almost reduced to a point

of no impact. Further, job seekers are prone to report low self-esteem, which may explain the current result.

H9f: Job search intensity → interview calls via self-confidence

H9f tested the mediating effect of self-confidence on the relationship between job search intensity and number of interview calls and the results revealed a negative non-significant impact ($\beta = -0.001^{ns}$). Although the results of data analysis revealed a positive direct significant relationship between job search intensity and number of interview calls received by the job seekers, the non-significant result of mediation suggests that the job seeker's job search intensity, along with the self-confidence, does not influence the number of interview calls received.

The relationship was proposed in line with the theory, but the result can be explained with the help of the nature of the three variables involved. If a job seeker applies for a job rigorously, they are expected to receive a greater number of interview calls because more job applications increase the probability of a reply. However, self-confidence cannot determine number of interview offers since interview calls are determined by the quality of the job application. If a job seeker is adhering to the job description in their application, which can be impacted by the job seeker's level of self-confidence, they may receive a higher number of interview calls. The earlier results also revealed that job search intensity is also not impacted by self-confidence and so it is unlikely that a job seeker's self-confidence is playing a role in the quality of job applications they are submitting and hence, a non-significant relationship was observed.

H9g: Job search intensity → interview calls via emotional intelligence

Emotional intelligence was hypothesized to mediate the relationship between job search intensity and the number of interview calls received; the results of data analysis revealed a non-significant impact ($\beta = 0.008^{ns}$). This suggests that, although job search intensity predicts number of interview calls received, the relationship becomes non-significant when tested via emotional intelligence. This result can also be explained on the same lines as for Hypothesis H9f. Job seekers are more likely to receive a call to attend an interview if their job application meets the requirements of employers. Before attending the interview, the only interaction between a job seeker and the job applicant is via the job application and job application is

considered as a chance for the job seeker to present himself as the most deserving candidate by highlighting skills and experience that are desired by the employer. As emotional intelligence does not play a role in the determining job search intensity (tested using H6c), it is very unlikely that job seekers have used their emotional intelligence in developing the job application and thus this leads to the non-significant relationship observed here.

H9h: Job search intensity → interview calls via social support

The relationship between job search intensity and the number of interview calls received was hypothesized to be mediated by social support. The results of data analysis found a negligible non-significant mediating impact ($\beta = 0.000^{ns}$), which suggests that mediation of social support on the path between job search intensity and the number of interview calls received is so small that it can be equated to zero. This is surprising because commonly a job seeker's social circle can help him to achieve a job interview but the current results found to the contrary. A possible explanation of this result may lie in the social structure of the society. As discussed above (results of Hypothesis H7d), the collectivist society of Pakistan provides job seekers with the emotional support to continue with their job search without burdening them with responsibilities. However, job seekers may not be receiving support to connect with prospective employers. The target population for the current study was graduates of universities with minimum or no work experience. Hence, either they do not have the right social circle or do not have relevant information on how to use their social network to their benefit in a job search.

H9i: Job search intensity → time taken to find the job via self-esteem

The mediation of self-esteem on the relationship between job search intensity and time taken to find a job was found to be non-significant ($\beta = 0.001^{ns}$). Job seekers who look for a job intensively are likely to find one earlier, but self-esteem showed almost no impact on the path. The job seeker's time to find a job is dependent on the quality of their job application and their performance in the interview, as well as the intensity of their search. Job seekers are also likely to report low self-esteem because the job search process is an emotionally and psychologically exhausting one: job seekers have to keep updating their resumes according to job advertisements, but may be met with the disappointment of rejection or non-response. In the current study, in particular, job seekers were asked to report on their past events and

experience of job search which may have resulted in their reporting low self-esteem in comparison to their current personality (as respondents were employed at the time of data collection). Hence, the respondents' bias may explain the results obtained.

H9j: Job search intensity → time via self-confidence

Self-confidence was found to have a negative non-significant mediating impact on the relationship between job search intensity and time taken to find the job ($\beta = -0.008^{ns}$). This finding suggests that the time taken to find the job was not influenced by job search intensity when tested through self-confidence. A possible explanation for this result may lie in the conceptual model of the current study. The factors for this study were identified from the literature review and the conceptual model was developed based on the theory in which some factors contributing to the current results were not studied in this research.

The job seekers' self-confidence possibly does not contribute towards the time taken to find the job, as the respondents have minimal to no work experience. The minimum work experience, along with minimum career support for job seekers in Pakistan, creates a scenario where job seekers lack relevant information and support regarding how to behave in job interviews. The time taken to secure a job is dependent on the quality of the answers provided in the interview, which may not be up to employers' expectations because the job seekers do not have the relevant support, together with the intensity with which job is being searched. Self-confidence can play a role in the quality of their interview responses but unfortunately this factor was not included in the current study.

H9k: Job search intensity → time via emotional intelligence

In line with the career self-management model, H9k was postulated to analyse the mediating effect of emotional intelligence on the path between job search intensity and time taken to find the job. The results of data analysis showed a non-significant impact ($\beta = 0.001^{ns}$). This suggests that job search intensity has no significant effect on the time taken to find the job through emotional intelligence. This result may be explained in the context of the research. Emotional intelligence enables a job seeker to understand emotions and deal with them accordingly, but in the current study it does not impact the time taken to find a job. Emotional intelligence and career guidance may provide job seekers with the relevant information and understanding on how to behave in an interview by getting clues from the interviewer and

hence, tailor their performance accordingly. However, emotional intelligence in the absence of career guidance is unable to provide job seekers with the relevant tools and skills that will help them find a job more quickly. Hence, it does not mediate the proposed relationship.

H9l: Job search intensity → time via social support

Social support was hypothesized to mediate the relationship between job search intensity and time taken to find the job using H9l. The results of data analysis revealed a negligible non-significant impact ($\beta = 0.000^{ns}$). These findings suggest that time taken to find the job reduces with increased job search intensity, but the influence of job search intensity on time taken to find a job became almost zero when the relationship was tested using social support. The social structure of Pakistani society may again explain this result, because it does not pressure a job seeker with financial responsibility until they find their first job, since children tend to live with their parents until they are married. At the same time, there is social pressure on job seekers to find the job as soon as possible because there is no concept of working in odd jobs and jobs not relevant to the field of study in order to survive and develop relevant skills until job seekers find a job in line with their field of study. These mixed signals to job seekers may lie behind the non-significant impact of social support on the relationship between job search intensity and time taken to find the job.

In conclusion, personal and contextual influences were found to have non-significant impact on the relationship between job search intensity and two outcome variables, with some relationships having almost a zero impact. This suggests that self-esteem, self-confidence, emotional intelligence and social support do not influence the impact of the action variable on the outcomes. It is also interesting to observe that three variables in question here, job search intensity, time taken to find the job and number of interview calls, showed no impact from personal and contextual influences, which may be a possible explanation behind the current results.

7.13 Discussion Related to the Additional Paths Added to the Model

Once the hypotheses related to the proposed model were tested, a few more paths were added to the model because no significant path was observed from employability skills to any variable. Employability skills is an important predictor of an individual's employability

(Sumanasiri, Ab Yajid & Khatibi 2015) and has been studied extensively in the job search literature. However, the model conceptualised for the current study was based on SCCT CSM and the relationships defined were based on the paths defined by the theory selected as the theoretical foundation for this study. Employability skills was added to the model as the ability factor taken from social cognitive career theory's performance model (see Chapter 4 for the rationale). Based on the proposed model, employability skills were hypothesized to impact job search self-efficacy, but the results of data analysis were unable to support the proposed hypothesis. In order to identify the influence of employability skills on the job search constructs, more paths were added to the model. Those paths can be categorised into two: paths from employability skills to career development learning and personal influences, and paths from career development learning to personal influences. The discussion of the results obtained follows.

Employability skills were observed to have a positive influence on career development learning ($\beta = 0.648^{***}$), emotional intelligence ($\beta = 0.588^{***}$), self-esteem ($\beta = 0.572^{***}$) and self-confidence ($\beta = 0.528^{***}$). Career development learning is the knowledge that enables an individual to manage their career and is generally provided to job seekers in the form of seminars, workshops or training. The results suggest that, if the job seeker has a higher level of employability skills, i.e., the skills other than technical skills required to perform the job well, they also possess a higher level of career development learning, i.e., the understanding to manage their career. The higher levels of employability skills reported not only explain the possession of employability skills by job seekers but also understanding of the requirements of the job market in terms of generic skills and how these skills can be used by job seekers to perform well in their jobs. With this understanding, job seekers are better able to manage their careers, perform well and hence, progress.

Employability skills are found to have a positive significant impact on emotional intelligence. This implies that job seekers with a higher level of employability skills also possess higher emotional intelligence. To the author's knowledge, this is the first study analysing the impact of employability skills on emotional intelligence. Although previous research (Pool & Sewell 2007; Stoica 2010; Sumanasiri, Ab Yajid & Khatibi 2015; Syed, Abiodullah & Yousaf 2014) has used both these variables as predictors of employability, their direct relationship has not been analysed. The direct impact can be attributed to the factor composition of these variables.

Employability skills, as measured in the current study, includes communication skills, team working skills and self-management skills. All these skills are found to have a direct relationship with emotional intelligence, i.e., the ability to understand and manage one's own and others' emotions. Goleman (1998, p.4) posited that personality, soft skills and character have been used in job-related research and offered a new name for these human-related skills and talents, 'emotional intelligence', which explains the positive significant relationship between the two variables.

Employability skills was found to have a positive significant impact on self-esteem. This finding is consistent with Ibrahim et al. (2017) that the development of soft skills (employability skills) leads to enhanced self-esteem. Self-esteem is the evaluation of an individual about themselves. With the possession of enhanced employability skills, job seekers are likely to have a positive evaluation of themselves because employability skills are not only relevant to the job industry and careers but also contribute to everyday life activities. Employability skills was also observed to positively enhance the job seekers' self-confidence. This result is in line with the model of graduate employability proposed by Pool and Sewell (2007). It implies that the possession of employability skills boosts the job seeker's self-confidence. It enables the job seeker to believe in their abilities to succeed at the job search and find their desired job because they possess the relevant skills and abilities that are required to perform the job.

Career development learning was observed to have a positive influence on emotional intelligence ($\beta = 0.211^{***}$) and self-confidence ($\beta = 0.18^{***}$). Career development learning enables an individual to identify their career interest, make informed decisions and approach the job market accordingly. Enhanced career development learning equips the job seeker with the tools required to approach the job market, increasing their belief in the abilities that will lead them to successful job search outcome. Further, with the knowledge and information about their career choices and job market, job seekers are better able to make sense of the emotions they encounter while searching for a job and can better deal with them.

7.14 Findings associated with RQ11

Five demographic variables (gender, cumulative grade point average, work experience, fathers' highest qualification and mothers' highest qualification) were used to study their impact on the relationships defined in this study. RQ11, *"Does respondents' demographic*

profile (gender, education, experience, parents' highest qualification) impact their job search?", was used to analyse the impact of control variables. The impact is discussed below.

7.14.1 Moderating Effect of Gender

Gender is one of the most commonly used demographic variables in social research. Current research observed the impact of gender on the paths of the model for graduate employability, using multigroup analysis in SMartPLS3. It is interesting to see that the only relationship impact by the gender of the job seeker is the effect of job search self-efficacy on number of interview calls (β_{diff} = 0.355*). Female job seekers were observed to obtain more interview calls compared to male job seekers, given the same level of job search self-efficacy.

Pakistan is a male-dominated society where women have always made sacrifices and must fight for their rights. Women have also been denied the right to education. However, there has been a change in society's attitudes. Lately parents have started investing in their female child's education, which has led women to step out and prove themselves better than their male counterparts. Previous research has shown that female students perform better academically (Arshad, Zaidi & Mahmood 2015) and have better self-concept and career maturity than male students (Zahra & Malik 2018). This change in societal dynamics and mindset has filtered into the society. Females are working hard to get their fair share and are given more opportunities to contribute to the economic growth of Pakistan. Hence, with the same level of self-efficacy, employers are sending more interview calls to female job seekers compared to the male job seekers.

Various other factors could possibly have an impact on this relationship, such as the CGPA of job seekers, work experience or the quality of resume submitted. Female job seekers may have better CGPAs and look for a job more rigorously with tailored resumes, leading to a higher number of interview calls.

7.14.2 Moderating Effect of Cummulative Grade Point Average

Cumulative grade point average (CGPA) is thought to an important factor in job search since students spend a lot of time and energy in improving their CGPA, believing it to be a deciding factor for their job search success. Khan (2014) concludes that students have a passion for good academic grades which can be attributed to their parents' interests, psychological

pressure, academic self-concept, academic recognition and employability. Another factor for increased interest in grades is the lack of proper career guidance, which makes students believe in the importance of grades and neglect the need to develop other relevant skills, abilities and attributes.

The impact of CGPA on the relationships of the model of graduate employability was tested in two groups. First, respondents with CGPA above 3.00 and below 3.00 were compared and only one relationship was found to be significant: the impact of self-efficacy on time taken to find a job ($\beta_{diff} = 0.229^{*}$). This suggests that job seekers with a CGPA above 3.00 were more likely to find a job earlier compared to job seekers with a CGPA less than 3.00, given the same level of self-efficacy. There is a possible explanation for this result. Job seekers with a CGPA above 3.00 find a job more quickly because they may accept any job offered instead of waiting for the right job, and this leads to lower job search time. It is also possible that these respondents show quicker job search outcomes because they were able to find their desired job faster than those respondents who had a CGPA below 3.00.

Recruiters' attitude towards the job seeker can also be a possible reason behind this result as recruiters might be using CGPA as a deciding factor when it comes to offering a job. Hence, the recruiter's attitude towards selecting an applicant, an applicant's ability to take up a job based on their job search clarity and the job seeker's ability to find a job matching their interest are three possible reasons behind the job seekers with a CGPA above 3.00 finding a job more quickly than other job seekers when they have the same level of job search self-efficacy.

When the respondents with CGPA above and below 3.50 were compared, two relationships were found to have a significant impact. With the same number of interview calls, respondents with a CGPA less than 3.5 received more job offers compared to those with a CGPA above 3.5 ($\beta_{diff} = 0.242^{*}$). This implies that, if job seekers receive the same number of interview calls, those with a CGPA below 3.50 receive more job offers compared to others. It is an interesting result, as, according to a general notion, it is believed that better grades lead to better job prospects. As discussed earlier, sometimes students spend all their efforts in improving their grades, which comes at the expense of other relevant skills and attributes required to perform well in the job market. The students with CGPA lower than 3.50 getting more job offers can be attributed to their overall employable personality and attributes they

displayed during interviews, whereas the job seekers with CGPAs above 3.50 may be relying on their technical education alone to get a job.

Job seekers with CGPA below 3.50 were observed to get better job search outcomes compared to others, given the same level of emotional intelligence ($\beta_{diff} = 0.258^{*}$). Emotional intelligence was found to impact job search outcome because the job seekers with better emotional intelligence were able to identify and deal with their emotions; this helps them to deal with the issues around job search options and making better decisions, providing them with better quality jobs and also satisfaction. With the same level of emotional intelligence, job seekers with a CGPA less than 3.50 were found to have better job search outcomes compared to job seekers with CGPA above 3.50. This result can be explained in line with the results explained above, i.e., job seekers with CGPA less than 3.50 get more job offers with same number of interview offers. Because of the lack of offers received by the job seekers with higher CGPA, it leads them to have fewer options to decide upon and hence, a lower job search outcome compared to other job seekers.

7.14.3 Moderating Effect of Work Experience

Work experience is another important factor contributing to the job search outcome since it is generally believed that job seekers with some job experience are able to find a better job quicker because they have the relevant knowledge, information, experience, skills and network to facilitate the job search process. A comparison was conducted among the responses of job seekers with no work experience and those who had some work experience and one relationship was found to have a significant impact, i.e., job search self-efficacy on number of job offers. Job seekers with no job experience were found to receive more job offers compared to those who have some job search experience, given that both groups showed the same level of self-efficacy ($\beta_{diff} = 0.185^{*}$). It is an interesting result and against the general perception, but it can be explained with the help of the context in which this study was conducted. This study looks at the job search experience of graduate job seekers who have no work experience before graduation due to the social structure of society. In these circumstances, respondents must be looking for entry-level jobs in the market and applying for them. Generally, entry-level jobs do not expect job seekers to have job experience and hence, with the same level of self-efficacy, job seekers with no job experience observed to secure more job offers.

Another comparison was conducted between job seekers who had less than one year's work experience and those with more. The one year's experience was the cut off because some universities have requirements for students to complete an internship in their final year of study to gain relevant skills and knowledge required to perform in the job market. Interestingly, three relationships were found to have a significant difference. With the same level of job search clarity, job seekers with less than one year's experience found the job more intensively compared to those who had more than one year ($\beta_{diff} = 0.264^{*}$). Although the job seekers displayed the same level of job search clarity, those with more experience may have had a higher level of clarity and more rigid criteria for the type of job they required or the type of industry they wanted to work with based on their previous experience. Hence, they would be looking for jobs only in their specified fields, leading to lower search intensity.

Moreover, with the same level of job search intensity, job seekers with less than one year's experience received more interview calls than those with more ($\beta_{diff} = 0.278^{*}$). This result can be attributed to the result and explanation presented above. Although job seekers with higher work experience are looking for the job with similar intensity as those with lower experience, they do not get the same number of calls due for a number of likely reasons. As the target population of this study was graduate job seekers, they are most likely to be applying for entry-level jobs. Hence, those with higher work experience may be getting fewer interview calls due to being overqualified in terms of work experience. Job seekers with greater work experience (given the same job search clarity of two groups) look only for specific jobs because they are more specialised and only seek relevant jobs. The fewer interview calls obtained for the same level of job search intensity might also lead them to decrease their job search intensity so that they can focus only on jobs relevant to their experience and where they anticipate a response from recruiters, instead of applying for jobs which might not return them a response.

The third relationship impacted by work experience is between emotional intelligence and job search outcome. The impact of emotional intelligence on job search outcome has been discussed in previous sections and it is concluded that job seekers' emotional intelligence leads to better job search outcomes because it helps them make better decisions by understanding their emotions and feelings. Job seekers with less than one year's work experience reported better job search outcomes compared to those with more, although

both groups showed the same level of emotional intelligence (β_{diff} = 0.308*). This implies that, although job seekers possess the same level of emotional intelligence, respondents with less than one year's work experience had better job search outcomes. This may for the same reason discussed above. Job seekers with more experience receive fewer interview calls compared to those with less. This may lead them to settle for a job which is not in line with their expectations. The previous job experience might also have provided them with a benchmark with which they compare their current job, whereas job seekers with lesser experience do not have a solid benchmark to compare their job search outcome and this may lead them to be happy with the job offered.

7.14.4 Moderating Effect of Mother's Education

In the context of job search, parents' education helps job seekers because more educated and experienced parents are able to share their experience, knowledge and networks in the job market to facilitate their children in making better decisions and finding a better job. Parents' education is relevant in this context because the respondents belong to a generation who are first- or second-generation in their families to enter higher education. Pakistan was created almost 70 years ago and the generation who were in their childhood or adulthood at the time of Partition were not very educated due to the political crisis and race for survival. Matters settled and people started to focus on their education for better life opportunities. Yet many respondents reported that the majority of mothers have an education only to high-school level. The current study looked at the impact of parent's education on the model of graduate employability.

The impact of a mother's education was observed and only one relationship was found to have a significant impact. Job seekers with mothers' education equal to or more than bachelor level were found to have better job search clarity if both groups had the same level of emotional intelligence (β_{diff} = 0.228*). Emotional intelligence has been observed to have a positive impact on job search clarity because it gives a job seeker the ability to understand and deal with emotions related to job and career and have a better and clearer idea of the kind of job and career they want to pursue. This result suggests that, if the job seeker's mother has a graduate degree at least, this helps the job seeker have a clearer, better understanding of the kind of career they want to pursue because they may receive help from their mothers in taking the critical decisions of life, despite the same level of emotional intelligence.

7.14.5 Moderating Effect of Father's Education

The highest level of education obtained by job seekers' fathers was used to observe its effect on the various paths of the graduate employability model and a few paths were found to have a significant impact of father's education. It was observed that, with the same level of emotional intelligence, children of those with at least a graduate degree showed better job search clarity compared to those with less than a graduate qualification ($\beta_{diff} = 0.297^{**}$). The same relationship was also observed in the significant difference when children of those with at least a master's degree were compared with those with a doctorate degree ($\beta_{diff} = 0.649^{*}$). This suggests that the father's qualification has an impact on job search clarity. If the job seeker's father has a higher qualification, this helps the seeker better understand the dynamics of the job market, their own interests and which career path to follow, even if all job seekers have the same level of emotional intelligence. It is interesting that the same relationship was found to have a significant impact even when job seekers were compared based on their mother's qualification. Parents with higher qualifications might have better understanding of the job market dynamics due to being employed in more sophisticated jobs, which may help job seekers to have a better, clearer idea of the kind of job and career they want to pursue.

With the same level of employability skills, job seekers were found to have better self-confidence if their father had at least a graduate degree compared to others ($\beta_{diff} = 0.275^{*}$). The higher level of father's qualification might provide job seekers with the relevant information and knowledge, as shared by fathers, leading them to have better self-confidence towards their job search. If the job seeker's father does not have the same level of qualification as they have (i.e., graduation in the current study), it might be making them nervous and anxious due to the fear of not having the relevant experience in the family, leading to lower self-confidence. Further to this, it was also observed that, with the same level of self-confidence, job seekers displayed better self-efficacy when their fathers had a doctorate degree compared to others ($\beta_{diff} = 0.419^{*}$). This again suggests the same explanation as above. Having well-educated parents not only helps job seekers by providing information about the job market and jobs, it also gives comfort to them in having someone in the family who they can rely on and hence, they display better job search self-efficacy, i.e., the ability to succeed at the task at hand.

Father's education was also observed to impact the relationship between job search intensity and time taken to find the job. Job seekers reported a lesser time taken if their father had a minimum of a bachelor's degree, provided that the two groups showed same job search intensity (β_{diff} = 0.209*). With the same job search intensity, job seekers finding a job more quickly due to their father's minimum graduate degree may be due to their fathers' having used their network for the job seekers to find a job faster.

7.15 Chapter Summary

The current chapter discussed the findings obtained as the result of data analysis presented in Chapter 6. The chapter provided a brief overview of the research. Each section from 7.3 to 7.12 discussed the findings for research questions RQ1 to RQ10. Section 7.12 discussed the paths added to the model. The chapter concludes by discussing the moderating effect of demographic variables on the model of graduate employability (section 7.13).

Two major findings were observed. First, self-esteem was not found to impact any job search construct significantly; hence, this construct was removed from the final tested model. Second, employability skills were found to have an indirect relationship on job search constructs via career development learning and personal influences instead of the direct impact on job search self-efficacy as hypothesized in the initial model. Employability skills showed a direct impact on emotional intelligence and self-confidence and also an indirect impact via career development learning. Career development learning and self-confidence were found to influence self-efficacy, whereas emotional intelligence and self-confidence showed an association with job search clarity. Job search self-efficacy contributes towards job search clarity, number of interview calls received, number of job offers, and time taken to find the job. Job search clarity influences job search intensity and job search intensity was found to be only influenced by job search clarity. Job search intensity determined the number of interview calls and time taken to find the job. Number of job offers and time taken to find the job impacted the job seeker's search outcome, together with social support.

The contextual factor studied here, social support, was found to impact only job search outcome. Most results found in this study can be attributed to the unique context of the research influenced by the social structure of Pakistani society and its job market dynamics.

The next chapter will discuss the limitations, implications and scope for further research.

Chapter 8 – Conclusion, Implications and Limitations

8.1 Introduction

The final chapter draws the main conclusions of the thesis. It discusses the implications of the research and highlights theoretical contributions and practical implications. The study's limitations are addressed, and directions for future research presented.

8.2 Concluding Remarks

This thesis explored the interaction of determinants of employability and job search with each other and on the job search outcome. Eleven research questions were used to develop a model of graduate employability relevant to Pakistan. The main conclusions obtained are outlined in Table 8.1.

Table 8.1 Main Conclusions of Specific Research Questions

Specific Research Question	Main Conclusions
RQ1	• Career development learning significantly impacts self-efficacy • Employability skills do not contribute to self-efficacy
RQ2	• Self-efficacy shows a positive significant impact on job search clarity and time taken to find the job • Self-efficacy shows a negative significant impact on number of interview calls and number of job offers • Self-efficacy shows a non-significant impact on job search intensity
RQ3	• Job search clarity has a negative significant influence on job search intensity • Job search intensity positively influences number of interview calls and time taken to find the job
RQ4	• Self-confidence shows a positive significant influence on self-efficacy • Self-esteem, emotional intelligence and social support do not impact self-efficacy
RQ5	• Self-confidence and emotional intelligence show a positive significant impact on job search clarity • Self-esteem and social support show no impact on job search clarity
RQ6	• Job search intensity is not influenced by any personal and contextual influences (self-esteem, self-confidence, emotional intelligence and social support)
RQ7	• Job search outcome is positively influenced by social support • Job search outcome is negatively influenced by emotional intelligence

	• Self-esteem and self-confidence show no impact on job search outcome
RQ8	• A higher number of interview calls leads to a higher number of job offers • A higher number of jobs offered results in better job search outcomes • Less time taken to find the job results in better job search outcomes
RQ9	• The relationship between job search clarity and job search intensity is not mediated by self-esteem, self-confidence, emotional intelligence or social support
RQ10	• The relationship between job search intensity and number of interview calls is not mediated by self-esteem, self-confidence, emotional intelligence or social support • The relationship between job search intensity and time taken to find the job is not mediated by self-esteem, self-confidence, emotional intelligence or social support
Additional paths	• Career development learning shows a positive significant impact on emotional intelligence • Career development learning shows a positive significant impact on self-confidence • Career development learning does not show any impact on self-esteem • Employability skills have a positive significant impact on career development learning • Employability skills show a positive significant impact on self-esteem • Employability skills show a positive significant impact on self-confidence • Employability skills show a positive significant impact on emotional intelligence
RQ11	• Female job seekers obtain more interview calls than male job seekers • With the same self-efficacy, job seekers with CGPA above 3.00 find a job earlier than job seekers with CGPA below 3.00 • With the same number of interview calls, job seekers with CGPA below 3.50 obtain more interview calls than job seekers with CGPA above 3.50 • With the same level of emotional intelligence, job seekers with CGPA below 3.50 have better job search outcomes than job seekers with CGPA above 3.50 • With the same level of self-efficacy, job seekers with no job experience obtain more job offers than those with job experience • With the same level of job search clarity, job seekers with less than one year's work experience looked for a job more intensively than job seekers with more than one year's work experience • With the same level of emotional intelligence, job seekers with less than one year's work experience have better job search outcomes than job seekers with more than one year's work experience • With the same level of emotional intelligence, job seekers show better job search clarity if their mothers have at least a bachelor's degree • With same level of emotional intelligence, job seekers show better job search clarity that increases with their fathers' education level

	• With same level of employability skills, job seekers show better self-confidence if their fathers have at least a bachelor's degree • With same level of self-confidence, job seekers show better self-efficacy if their fathers have at least a doctorate degree • For the same job search intensity, a job seeker takes lesser time to find a job if their father has at least a bachelor's degree

This study has developed a model of graduate employability in the context of Pakistan by identifying determinants of job search outcome and their relationships with each other. Although many researchers have studied factors contributing to graduate employability and successful job search outcome, there is a lack of studies that have tried to consolidate the factors and their impact in one single study. Researchers in the Western world have looked at graduate employability from various aspects but the current study is first of its kind for Pakistan. The conceptual model developed and tested here is comprehensive and has examined the concept of graduate employability in various contexts. The study is of significance because the number of graduates in Pakistan is increasing annually at an exponential rate, whereas the government and policymakers are unable to provide work opportunities to accommodate those graduates in the job market. This has created strong competition in the market, but with lack of support and guidance available for job seekers from their HEI, creating an environment of uncertainty for job seekers.

Social cognitive career theory's career self-management model was used as the theoretical foundation for the study. As this is a fairly new model of SCCT, not many researchers have used it in the context of graduate employability and job search. The proposed model was conceptualised based on the factors contributing to graduate employability and job search outcome reported in the literature. The findings enhance our understanding of the interaction of various job search constructs in the context of Pakistan. Many new relationships, not studied previously, were found to be significant, whereas some of the well-tested relationships showed a non-significant result. This underlines the importance of context in research on graduate employability and job search.

Several implications of this research have been explained in section below, contributing to theory and practice. Theoretical contributions will provide insights into the new relationships tested, along with the development of the whole model of graduate employability. Practical implications will provide valuable suggestions to stakeholders in employability, including

graduates, job seekers, teachers, HEIs, employers and policymakers. The implications include ways in which the tested model of graduate employability can be used to develop and enhance employability of graduates with the help of interventions initiated by employability stakeholders and create an environment and develop policies to help job seekers and the overall economy of the country. The limitations of the study and directions for future research will been discussed to help future researchers build on the current research.

8.3 Implications of the study

This study proposed a model of graduate employability by determining the relevant job search antecedents and personal, social and psychological factors, using a review of the literature. The main focus was the graduate's job search in developing countries, particularly Pakistan. Graduate employability and job search have been studied, but previous studies have generally been in developed countries. Most previous studies have largely investigated the effect of a few job search antecedents on employability and job search outcome. No single study has comprehensively incorporated all dimensions of employability in a single model. Hence, the findings of this study have significant theoretical and practical implications.

8.3.1 Theoretical Contribution

The current study is a first of its kind to the author's knowledge where the (social, psychological, personal and contextual) determinants of employability are combined in a single model to explore their effect on job search outcome. There is a need to develop a study that proposes an integrated model of graduate employability to investigate the relationship of various antecedents on job search outcome. Studies (Wanberg, Kanfer & Rotundo 1999; Wanberg, Zhang & Diehn 2010) have been published where researchers have combined the various antecedents in a single model and developed a model for graduate employability and job search, but those studies were based on literature reviews and the models were not tested empirically. Hence, the current study not only proposes a model of graduate employability but also adds to the body of literature by empirically testing the proposed model.

Many studies have employed SCCT CSM since its inception in 2013 but few have used it in the context of graduate job seekers (Lent et al. 2017; Lent et al. 2019a; Perez-Lopez, Gonzalez-

Lopez & Rodriguez-Ariza 2019). The studies employing SCCT CSM on graduates are focused on their career decision making, career exploration, entrepreneurial intentions or job search intentions. Hence, no study has been conducted by employing SCCT CSM to test employability and job search outcomes of graduates. Most of these studies, too, have been conducted in developed countries. Hence, the current study will contribute to the body of knowledge by using SCCT CSM in the context of graduate employability in the developing world.

Many studies have used SCCT CSM for the theoretical base in their study but most (Dahling, Melloy & Thompson 2013; Lim, Lent & Penn 2016) have only used the underlying relationships instead of employing the whole model. The current study contributes to the body on knowledge by not only employing the model in the context of graduate employability but also testing the complete model in one study instead of selecting a few underlying relationships.

The model developed for this study was based on extensive literature review. The factors relevant to the context of the study were identified and operationalised using factors and relationships determined by SCCT CSM. Due to the exploratory nature of this study, some of the relationships proposed and tested in this study have not being tested earlier (to the author's knowledge): for example, the positive association between self-confidence and self-esteem and the relationship between job search intensity and time taken to find the job. Hence, the current study contributes to the body of knowledge by proposing and testing new relationships between job search determinants.

Some results obtained from the analysis in this study are contrary to the previously published literature – for example, the relationship between emotional intelligence and self-efficacy, and the impact of social support on self-efficacy or social support on job search. The current study has contributed to the body of literature by analysing those results and justifying them according to the study context. A justification has been presented by analysing the context of earlier studies and the impact of other factors on the result of current study – for example, the impact of social and cultural values of Pakistani society. The literature on some relationships (e.g., the impact of self-efficacy on job search intensity) is unable to converge on a single conclusion. Hence, the discussion presented here analyses the context of previous research as well as current findings and hence, adds to the body of literature by presenting a justification for the divergence in results in the literature.

The current study analysed the results of data analysis extensively in the light of study context. The concept of graduate attributes is not prevalent in the Pakistani higher education system and its impact has been observed on the relationship between employability skills and self-efficacy. Due to the social structure of Pakistani society, the social circle of an individual provides emotional support to the person in need instead of informational or instrumental support. This contributes to the non-significant relationship between social support and self-efficacy. Due to the support provided to job seekers, they tend to take their time in finding the job, explaining the reason behind the non-significant mediating effect of social support on the relationship between job search intensity and time taken to find the job.

The job seekers answered the survey by recalling their job search experience, which led to relationships, including self-esteem, to be non-significant because the job search process is stressful and job seekers often give way to self-pity due to rejection and hence, report low self-esteem. Hence, the current study adds to the literature by explaining the impact of various contextual factors prevalent in Pakistani society on the study results. This also explains the importance of understanding the context of the study in job search and employability research and the impact of various macro and micro contextual factors on the outcome.

Although the current study employs SCCT CSM as a theoretical foundation, and uses the connections defined by the theory to define various relationships in the conceptual model, future researcher employing other theories or models in their study can also use the results of this study to define their conceptual models and hence, test them.

Most research (Collet, Hine & du Plessis 2015; Lim et al. 2016; Messum et al. 2016; Tsitskari et al. 2017) on employability skills looks at the level of skills possessed by job seekers, the level of skills desired by employers and the skills gap. Research has also shown employability skills to be a strong predictor of employability and successful job search outcome, but there is a lack of research on the relationship between employability skills and other factors contributing to employability. This study adds to the literature by identifying the relationship between employability skills and other factors, i.e., a direct relationship with emotional intelligence and self-confidence and an indirect relationship with job search clarity and job search self-efficacy.

The study used a quantitative data collection technique of online surveys. The data collection tool was developed by identifying the scales employed by earlier researchers and analysing their reliability and validity indexes. Although the same constructs have been used in earlier studies, the context of those studies does not align with the current study. Hence, to use the already developed scales, the author modified the scales according to the current study. This contributes to the body of knowledge by developing and testing the scales for various constructs used in the current study in the context of graduate employability and job search. These scales can be used by future researchers for studying these constructs in the context of graduate employability.

The scales used here are not only modified according to the current constructs; new constructs are also developed by combining already-existing scales. The construct defined as 'job search outcome' in the current study is a combination of employment quality, intention to quit and satisfaction with the job. This construct has not been used in the graduate employability literature before (to the author's knowledge). Earlier studies have focused on number of interview calls, number of job offers and employment status as outcome variable. Along with job search outcome, time taken to find the job is also employed in this study as the outcome variable. Hence, the current study contributes to the literature by defining job search outcome and using time taken to find the job as the outcome variable for job search and employability research.

Overall, the current study analyses the skills and activities of job seekers in Pakistan. The originality of this study is based on its unique, comprehensive conceptualization and construct of the graduate employability model with particular reference to a Pakistani context. The literature review could not find any similar study conducted in Pakistan or in any other developing country in the region that examines predictors of job search outcome other than just employability skills. Hence, the current study not only contributes to literature for Pakistan, but future researchers into developing countries in general and in the Asia Pacific region in particular can use the findings of this study to develop their models and hence, test them.

8.3.2 Practical Contribution

The model developed and tested in this study for graduate employability is a first of its kind in Pakistan, as no other model has ever been developed and tested in the country and the region. Most studies (Mirza, Jaffri & Hashmi 2014; Wickramasinghe & Perera 2010; Zaharim et al. 2010) conducted in the region have focused on employability skills and other factors attributing to employability. The findings of the current study can be used by stakeholders of employability at different levels to develop a sustainable system of employability to help graduates approach their desired employment opportunities, enable employers find the right candidates, support universities in creating graduates according to job market demand and overall achieve economic benefits for the society. The practical implications for individuals (students/graduates and teachers), higher education institutions and policymakers are discussed below in detail.

8.3.2.1 Implications for Individuals

The findings can be used by individuals, both students/graduates (who are in the job search position) and educators (who are in the teaching positions to future job seekers) to enhance the employability of job seekers. The tested model of employability explains the factors and attributes contributing to employability of an individual, their interaction with each other and relation to the job search outcome. Students/graduates can use the findings to gain understanding of the attributes and skills required to enhance employability. This will enable them to work on developing and improving their employable personalities by addressing the requirements of the job market and employers. Research (Abbasi, Ali & Bibi 2018; Mirza, Jaffri & Hashmi 2014) has supported the notion that employers are not happy with the quality of employability attributes possessed by graduates and graduates need to work further to enhance their personalities to match the demands of employers. By using the current model of graduate employability, students and graduates can become more employable and meet the demands of employers.

The current model of graduate employability is useful for educators, too. By understanding the factors contributing to employability of their students, teachers can help students in various ways. Teachers can guide their students in the right direction by explaining to them the requirements of the job market and industry. The course content and assessment can be

created in a way that facilitates the development of the pre-requisites of employability and successful job search outcome. If students are subjected to a curriculum and environment where they continuously obtain feedback on how to improve the level of desired attributes they possess, both directly and indirectly, it will make them work on their skills and attributes continuously, leading to the development of a personality that is desired by employers.

8.3.2.2 Implications for Higher Education Institutions

The concept of employability attributes is common in many developed countries and industry research suggests that the concept of employability attributes has helped universities achieve a higher employability ranking globally (Glass 2018; Lavender 2014; UoS 2019). This concept, however, is absent from Pakistan's higher education system (see Chapter 3). The model of graduate employability tested in the current study provides an overview of the skills, competencies and attributes desired by stakeholders of the job market. This model can be used by HEIs to develop a concept similar to graduate attributes. It will provide a framework for students in terms of the requirements they need to fulfil before graduating. The graduate attributes defined by the HEIs will also provide basic guidelines for faculty members for developing the curriculum. Such a curriculum will assist students in developing the required skills, attributes and competencies to achieve successful employment.

Career development learning has proven to contribute significantly to employability of job seekers (Sumanasiri, Ab Yajid & Khatibi 2015). The results of the current study also observe a positive link between career development learning and factors predicting employability and job search outcome (e.g., self-efficacy, self-confidence). The review of support services provided by HEIs in Pakistan (Chapter 3) identified the lack of support for students in terms of career development learning. The HEIs can work towards the development of a system that provides students with the relevant support and services to enhance their understanding of labour market requirements and helps them identify their career interests and achieve their career goals. This system will help many students from their initial years at university to choose the right career path for themselves and hence, be more productive and effective in their careers. The system can also provide students with support to develop resumes according to market demands and prepare for interviews.

Employability skills have been shown to enhance employability and job search outcomes. According to the results of the current study, understanding and development of these skills enhances an individual's self-confidence, which further leads to enhanced job search outcomes. The current study also lists the skills that are most commonly required by employers and most helpful in finding jobs according to job seekers. HEIs can use this list of skills as a baseline to develop employability attributes. Support can be provided to students based on identified skills by developing the curriculum around them, and this will enable students to develop and practise employability skills while at university and hence, use them during job search and once employed.

By using the model tested here as the baseline, HEIs can work in collaboration with industry to elicit their needs. Knowledge and understanding of the needs of the labour market and employers will help HEIs and educators better prepare their students for the labour market after graduation. It will not only be beneficial for students but also for institutions, given their alumni's enhanced employability score.

8.3.2.3 Implications for Policymakers

The results of the study can be used by policymakers, including in HEIs, the HEC and government. Because of the absence of graduate attributes conceptually, policymakers can work towards development of a policy to introduce and implement the concept. The HEC can introduce a broad concept that can be utilised by individual HEIs as a template in order to tailor it more specifically according to demands of each field of study and employer needs in that field.

The industry-academia partnership has been a focus in developing countries over recent years as universities have taken on the role of producing and sharing knowledge and information relevant to the industry needs (Fischer et al. 2018). The tested model can be used as a foundation by policymakers to develop a system of collaboration between academia and industry. This will enable academia to understand the requirements of industry, develop the curriculum around industry needs, produce graduates aligned with those needs and hence, close the skills gap in Pakistani labour market.

Policymakers can work towards the implementation of a policy that aligns with design of the curriculum around industry requirements. Industry requirements change rapidly due to

technical advances and automation. Policymakers need to ensure that the curriculum taught in HEIs is up-to-date and a match with requirements of employers. The policy may include a mandatory update of the curriculum every three to five years.

8.3.3 Implications of the Current Study in the Pakistani Employability Context

The model of graduate employability developed in the study provides implications for the Pakistani employability context. The social structure of Pakistani society provides support to job seekers in terms of verbal persuasion, whereas instrumental and informational support is found to be lagging. This has resulted in lower job search clarity and job search intensity. The presence of a social circle on which an individual can rely on during the time of need is a great asset but, in the current context, the social circle can extend help further than emotional support. The Pakistani higher education system lacks the concept of career coaching and guidance, but job seekers perform better in their job search if they receive support where they can discuss their future career options with an individual with the relevant knowledge and skills. In the absence of a professional practitioner, support can be provided by parents, relatives, colleagues or friends who have knowledge of the job market and how to approach it. This can lead to better job search clarity, resulting in better job search intensity. With better understanding of the job market and employer requirements, job seekers will be able to prepare themselves better for the job market, hence, enhancing the employability climate of the country.

Self-esteem, although an important predictor of job search outcome, was observed to have a non-significant impact on other job search predictors and outcomes. These results are attributed to the self-reflection of the respondents on their job search journey and it is interesting to find that the respondents reported very low self-esteem during their journey. Self-esteem is an individual's overall evaluation of self and, with low self-evaluation, job seekers are unlikely to perform to the best of their abilities. This can negatively contribute to the overall employability of not only the individual but also the society. Hence, it is important for the job seeker to have firm faith in their abilities and for those around the job seeker to boost their morale during the stressful job search exercise.

Pakistan is a collectivist society where the individuals tend to live together in harmony, and it is important to get approval from the elders in the family before making significant life

decisions. Deciding a field of study and the type of job one wants to do is such a decision; it is weighed from all angles before an individual is given approval to proceed. Fields of study related to arts are not acceptable in the society and hence, children are pressured to become doctors, engineers, lawyers, accountants and other professionals, even if against their will. This not only demotivates the young but also hinders their ability to perform at their best. Eventually, when they enter the job market, they are either not proficient enough due to lack of interest in the field or they try to switch their field to the one in which they are more interested. This not only hinders individual ability to find a job in their field of study but also negatively impacts national employability.

8.4 Limitations of the Study

Despite the potential contribution of the current study, there are several limitations that should be taken into account when the results are interpreted. Some are specific to the study, whereas others are associated with the research design employed.

The data were collected using social media networks. Potential research respondents were contacted via networks including Facebook and LinkedIn and a link to the survey was shared. Respondents were asked to complete the survey at their own convenience. It is impossible to guarantee that most of the target population uses social media or that the proportion of the population contactable via social media is a true representation of the whole population. Hence, the results are based on responses of only a sample of the population contactable via social media and willing to respond. This omits individuals who do not have access to internet, technology or social media.

There is a wide range of fields studied at graduate level in universities in Pakistan. However, the study focused only on graduates of four fields: engineering, management, social sciences and information technology. The reason for selection of these four fields is homogeneity in the way these graduates enter the labour market. Most universities in Pakistan have a requirement for these graduates to complete an internship before graduation. Upon graduation, universities arrange job fairs, and graduates generally apply for jobs published on various platforms. Hence, the results of this study are more appropriately applicable to segments of the population with similar job search experiences.

Assumptions were made while hypothesizing the model in this study. First, job seekers do not have any financial responsibilities, given that the social structure of Pakistan is based on a collectivist approach where children tend to stay with their parents until married, and sometimes even after that, and they do not have financial responsibilities to themselves or their families because parents are expected to take care of them and provide for their support while studying. However, this is a snapshot of a certain social class in the society and job seekers belonging to lower-middle and lower classes have to work harder than others to make ends meet. Researchers such as Van Hoye et al. (2015) and Sverko et al. (2008) have observed the effect of economic responsibility and financial hardship on job search activities.

Another assumption associated with the collectivist dimension was that job seekers were not suffering from any mental health or psychological issues due to joblessness at the time of job search. As the society tends to stay together and help each member in difficult times, it is assumed that people going through unemployment period can rely on their social circle and hence, do not face mental and psychological issues. However, research (Crossley & Stanton 2005; Saks & Ashforth 2000; Vinokur & Schul 2002; Wanberg, Zhang & Diehn 2010) has shown that psychological issues, including stress, depression and anxiety, impact the way people look for jobs.

The current study was designed and executed as a cross-sectional survey that presents a snapshot at one point in time (Cooper & Schindler 2006). Andreassen et al. (2016) state that a limitation associated with cross-sectional study is its inability to define causal relationships as significant associations because the data collected are at a single point in time. There are many possible biases at play in cross-sectional studies that can be addressed through longitudinal studies: for instance, a longitudinal approach can be used to collect data at significant points in time – for example before graduation, during the process of job search and after the job has been secured – to get a more robust response.

Another limitation is recall bias. The data were collected from respondents who had graduated in the previous past two years at the time of data collection and were already employed. Respondents were expected to recall their job search experience and answer questions accordingly. This leads to recall bias: respondents are likely to recall either more or less information, depending on the outcome. This issue is associated with cross-sectional studies and can be avoided by collecting data using longitudinal design.

Social desirability response bias is another limitation associated with the findings. This bias is observed when there are respondent perceptions of what is socially desirable and hence, respondents answer accordingly (van de Mortel 2008). Respondents often report either higher or lower on particular scales in a desire to be socially desirable. In future, then, researchers can use other scales to complement and compare the results to avoid social desirability response bias.

There is also the impact of various social, economic and political factors. The data collected here are influenced by the unemployment rate, the rate of businesses' growth, the labour force participation rate and other economic factors impacting the labour market at the time of collection. These findings will be valid only while market conditions stay stable and will not be generalizable if conditions change drastically (for example, an event like the global financial crisis happens or a sudden increase in foreign investment takes place).

8.5 Directions for Future Research

This study focused on a model of graduate employability in Pakistan based on social cognitive career theory's career self-management model. The data were collected using a cross-sectional methodology and assumptions were made when postulating the framework. However, based on the limitations of the study, the following directions are provided for future researchers in order to enhance the contribution made to knowledge by this study.

- As social media were used to collect data, a more robust sample can be chosen by employing other methods to reach potential respondents: for example, yearly graduation books published by universities.
- Participants included the graduates of four fields. The scope of the research can be broadened by including other graduates. Data can also be collected from graduates of various fields and comparison made to identify if differences are present.
- Future researchers can include other factors, including financial strain, stress, anxiety, depression, and major personality traits, to study their impact on job search activities and outcomes.
- The social support used here was a generic factor and did not take into account forms of support studied by others (Russell, Holmstrom & Clare 2015), such as emotional, informational or instrumental support. If future researchers can use a more detailed

instrument for social support, more meaningful insights can be obtained which may lead to different results.

- The study was conducted as a cross-sectional one. By employing a longitudinal survey design, researchers will be able to measure the impact of personal, psychological and social factors, together with job search activities, over a period of time, which will enable conclusions about causation.
- By employing a longitudinal study, the effect of recall bias can be minimized. The current study asked respondents to recall their experience. However, data can be collected at various points in time by employing a longitudinal study. Respondents can be asked to report the level of skills they possessed at the time of graduation. Then they can report at regular intervals regarding their job search activities. The job search outcome can be reported after they have found a job. In this way the impact of recall bias can be diminished.
- A social desirability scale can also be included to minimize social desirability response bias.
- Other socio-demographic variables can be employed to test their moderation effects.
- The model developed here can be employed with other populations to study their employability and job search outcomes.

References

Abbasi, FK, Ali, A & Bibi, N 2018, 'Analysis of skill gap for business graduates: Managerial perspective from banking industry', *Education + Training*, vol. 60, no. 4, pp. 354-367.

Abdi, H 2003, 'Partial least square regression (PLS regression)', *Encyclopedia for Research Methods for the Social Sciences*, vol. 6, no. 4, pp. 792-795.

Addison, JT & Portugal, P 2001, *Job search methods and outcomes*, Discussion Paper Series, IZA, DP No 349.

Adelaide 2018, *University of Adelaide Graduate Attributes*, The University of Adelaide, viewed 25 June 2019, <https://www.adelaide.edu.au/learning/strategy/gradattributes/>.

Adeleke, AQ, Bahaudin, AY & Kamaruddeen, AM 2015, 'A partial least square structural equation modeling (PLS-SEM) preliminary analysis on organisational internal and external factors influencing effective construction risk management among Nigerian construction industries', *Revista Tecnica de la Facultad de Ingenieria Universidad del Zulia*, vol. 38, no. 3, pp. 143-155.

Advance HE 2019, *Graduate attributes framework*, Advance HE, viewed 7 July 2019, <https://www.heacademy.ac.uk/knowledge-hub/graduate-attributes-framework>.

Ahmad, R & Azim, P 2010, 'Youth population and the labour market of Pakistan: A micro level study', *Pakistan Economic and Social Review*, vol. 48, no. 2, pp. 183-208.

Ahmad, S 2018, *Unleashing the potential of a young Pakistan,* Human Development Reports, United Nations Development Programme.

Ajwad, MI, Abduloev, I, Audy, R, Hut, S, Laat, Jd, Kheyfets, I, Larrison, J, Nikoloski, Z & Torracchi, F 2014, *The skills road: Skills for employability in Uzbekistan*, World Bank, Washington, USA.

Ajzen, I 1985, 'From intentions to actions: a theory of planned behavior', in J Kuhl and J Beckmann (eds), Action Control. *From Cognition to Behavior*, Springer, Berlin, Heidelberg.

Ajzen, I 1991, 'The theory of planned behaviour', *Organisational Behavior and Human Decision Processes,* vol 50, pp. 179-211.

Ali, H, Malik, MS, Awais, M & Debaj, D 2014, 'Protean attitude, career self-management and career satisfaction: A new facet of perceived employability in recessionary times', *Vidyabharati International Interdisciplinary Research Journal*, vol. 3, no. 2, pp. 55-61.

Andreassen, CS, Billieux, J, Griffiths, MD, Kuss, DJ, Demetrovics, Z, Mazzoni, E & Pallesen, S 2016, 'The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study', *Psychology of Addictive Behaviors*, vol. 30, no. 2, pp. 252-262.

Andrews, J & Higson, H 2008, 'Graduate employability, 'soft skills' versus 'hard' business knowledge: A European study', *Higher Education in Europe*, vol. 33, no. 4, pp. 411-422.

Araujo, T, Neves, D & Banisch, S 2014, *The dynamics of innovation in job search strategies: Some empirical findings*, Lisboa School of Economics & Management, Department of Economics, WP15.

Arifeen, M 2017, 'Pakistan's literacy deplorably low when compared to its neighbors', *Pakistan & Gulf Economist*, 14 August, <http://www.pakistaneconomist.com/2017/08/14/pakistans-literacy-deplorably/>

Aring, M 2012, *Youth and skills: Putting education to work*, Education for All Global Monitoring Report 2012, UNESCO, 2012/ED/EFA/MRT/PI/19.

Ariss, AA & Sidani, Y 2016, 'Comparative international human resource management: Future research directions', *Human Resource Management Review*, vol. 26, no. 4, pp. 352-358.

Armatas, C & Vincent, A 2013, 'Using business simulations to assist undergraduate students from non-english speaking backgrounds with employability skills development: A meaningful learning approach', *International Journal of Learning in Higher Education*, vol. 19, no. 3, pp. 143-155.

Arshad, M, Zaidi, SMIH & Mahmood, K 2015, 'Self-esteem & academic performance among university students', *Journal of Education and Practice*, vol. 6, no. 1, pp. 156-162.

Arthur, MB, Inkson, K & Pringle, JK 1999, *The new careers: Individual action and economic change*, Sage Publications Ltd, London.

Ashraf, RU, Hou, F, Kirmani, SAA, Ilyas, M, Zaidi, SAH & Ashraf, MS 2018a, 'Collaborative university-industry linkages in Pakistan', *Human Systems Management*, vol. 37, no. 2, pp. 207-218.

Ashraf, RU, Hou, F, Kirmani, SAA, Ilyas, M, Zaidi, SAH & Ashraf, MS 2018b, 'Student employability via university-industry linkages', *Human Systems Management*, vol. 37, no. 2, pp. 219-232.

Atiq, AuR, Anis, H & Khan, SA 2009, 'Skill shortage versus subject choice, case of Pakistan', *The Pakistan Development Review*, vol. 48, no. 4, pp. 487-496.

Awan, AG & Zia, A 2015, 'Comparative analysis of public and private educational institutions: A case study of district Vehari-Pakistan. ', *Journal of Education and Practice*, vol. 6, no. 16, pp. 122-130.

Aycan, Z & Fikret-Pasa, S 2003, 'Career choice, job selection criteria, and leadership preferences in a traditional nation: The case of Turkey', *Journal of Career Development*, vol. 30, no. 2, pp. 129-144.

Aycan, Z, Kanungo, RN, Mendonca, M, Yu, K, Deller, J, Stahl, G & Khurshid, A 2009, 'Impact of culture on human resource management practices: A 10-country comparison', *Applied Psychology*, vol. 49, no. 1, pp. 192-221.

Babbie, E 2004, *The practice of social research*, 10th edn., Wadsworth/Thomson Learning, USA.

Babbie, E & Mouton, M 2001, *The practice of social research*, Oxford University Press, Cape Town.

Bachmann, R & Baumgarten, D 2013, 'How do the unemployed search for a job? - Evidence from the EU labour force survey', *IZA Journal of European Labor Studies*, vol. 2, no. 1, pp. 1-25.

Bakari, H & Hunjra, AI 2018, 'Access to higher education: The source of graduate employability and wellbeing', *Journal of Education and Educational Development*, vol. 5, no. 5, pp. 126-145.

Bakari, H & Khoso, I 2017, 'psychological determinants of graduate employability: A comparative study of business and agriculture students across Pakistan', *Business & Economic Review*, vol. 9, no. 4, pp. 113-140.

Balcar, J, Janíčková, L & Filipová, L 2014, 'What general competencies are required from the Czech labour force?', *Prague Economic Papers*, vol. 2014, no. 2, pp. 250-265.

Bandura, A 1977, 'Self-efficacy: Toward a unifying theory of behavioral change', *Psychological Review*, vol. 84, no. 2, pp. 191-215.

Bandura, A 1986, *Social foundations of thought and action: A social cognitive theory*, Englewood Cliffs, Prentice-Hall, New Jersey.

Bandura, A 1997, *Self-efficacy: The exercise of control*, W. H. Freemab, New York.

Bao, Z & Luo, P 2015, 'How college students' Job search self-efficacy and clarity affect job search activities', *Social Behavior and Personality*, vol. 43, no. 1, pp. 39-51.

Behjat, S & Chowdhury, MS 2012, 'Emotional intelligence, self-efficacy and diversity receptiveness of university students: A correlation study', *International Journal of Academic Research in Business*, vol. 2, no. 4, pp. 301-312.

Bengali, K 1999, *History of educational policy making and planning in Pakistan*, Sustainable Development Policy Institute, Working Paper Series # 40.

Bernal, G, Maldonado-Molina, MM & Río, MRSd 2003, 'Development of a brief scale for social support: reliability and validity in Puerto Rico', *International Journal of Clinical and Health Psychology*, vol. 3, no. 2, pp. 251-264.

Berntson, E & Marklund, S 2007, 'The relationship between perceived employability and subsequent health', *Work & Stress: An International Journal of Work, Health & Organisations*, vol. 21, no. 3, pp. 279-292.

Bethlehem, K 2009, *Applied survey methods: A statistical perspective*, John Wiley & Sons, Inc, USA.

Beukes, C 2010, *The relationship between employability and emotional intelligence*, Unpublished research report. Department of Industrial and Organisational Psychology, University of South Africa.

Bezuidenhout, M 2011, *The development and evaluation of a measure of graduate employability in the context of the new world of work*, thesis, Faculty of Economic and Management Sciences, University of Pretoria, South Africa.

Bibi, T 2015, 'Article 25th A: Implications of free and compulsory secondary education', *VFAST Transactions on Education and Social Sciences*, vol. 6, no. 1, pp. 1-7.

Blau, G 1993, 'Further exploring the relationship between job search n voluntary individual turnover', *Personnel Psychology*, vol. 46, pp. 313 - 330.

Blau, G 1994, 'Testing a two-dimensional measure of job search behaviour', *Organizational Behavior and Human Decision Processes*, vol. 59, pp. 288-312.

Blom, A & Saeki, H 2011, *Employability and skill sets of newly graduated engineers in India*, Policy Research Working Paper Series, The World Bank South Asia Region, WPS5640.

Bowden, J, Hart, G, King, B, Trigwell, K & Watts, O 2000, *Generic capabilities of ATN university graduates*, Australian Government Department of Education, Training and Youth Affairs, Canberra, <http://www.clt.uts.edu.au/atn.grad.cap.project.index.html>

Bridgstock, R 2009, 'The graduate attributes we've overlooked: Enhancing graduate employability through career management skills', *Higher Education Research & Development*, vol. 28, no. 1, pp. 31-44.

Bridgstock, RS, Grant-Iramu, M & McAlpine, A 2018, 'Integrating career development learning into the curriculum: Collaboration with the careers service for employability', *Journal of Teaching and Learning for Graduate Employability*, vol. 10, no. 1, pp. 56-72.

Brown, DJ, Cober, RT, Kane, K, Levy, PE & Shalhoop, J 2006, 'Proactive personality and the successful job search: A field investigation with college graduates', *Journal of Applied Psychology*, vol. 91, no. 3, pp. 717-26.

Brown, SD, Lent, RW, Telander, K & Tramayne, S 2011, 'Social cognitive career theory, conscientiousness, and work performance: A meta-analytic path analysis', *Journal of Vocational Behavior*, vol. 79, no. 1, pp. 81-90.

Brown, SD, Tramayne, S, Hoxha, D, Telander, K, Fan, X & Lent, RW 2008, 'Social cognitive predictors of college students' academic performance and persistence: A meta-analytic path analysis', *Journal of Vocational Behavior*, vol. 72, no. 3, pp. 298-308.

Bryman, A 2008, *Social research methods*, Oxford university press.

Byrne, BM 2001, *Structural Equation Modelling with AMOS: Basic concepts, application and Programming*, Mahwah, USA.

Calisir, N, Basak, E & Calisir, F 2016, 'Key drivers of passenger loyalty: A case of Frankfurt–Istanbul flights', *Journal of Air Transport Management*, vol. 53, pp. 211-217.

Carroll, D 2013, 'A panel data investigation of the relationship between graduate job search and employment outcomes', *Journal of Institutional Research*, vol. 18, no. 1, pp. 47–55.

CBI 1999, *Making employability work: An agenda for action*, Confederation of British Industry, London.

Chavan, RR & Surve, AY 2014, 'Assessing parameters of employability skills: An employers' perspective', Asian Journal of Management Research, vol. 5, no. 2, pp. 254-260.

Chen, DJQ & Lim, VKG 2012, 'Strength in adversity: The influence of psychological capital on job search', *Journal of Organizational Behavior*, vol. 33, no. 6, pp. 811-839.

Choudhry, MA 2005, *Pakistan: where and who are the world's illiterates?*, United Nations Educational, Scientific and Cultural Organization, 2006/ED/EFA/MRT/PI/22.

Coen, AD, Forrier, A, Cuyper, ND & Sels, L 2015, 'Job seekers' search intensity and wage flexibility: does age matter?', *Ageing and Society*, vol. 35, no. 02, pp. 346-366.

Coetzee, M & Beukes, CJ 2010, 'Employability, emotional intelligence and career preparation support satisfaction among adolescents in the school-to-work transition phase', *Journal of Psychology in Africa*, vol. 20, no. 3, pp. 439-446.

Cohen, J 1988, *Statistical Power Analysis for the Behavioural Sciences*, Lawrence Erlbaum, Mahwah, New Jersey.

Collet, C, Hine, D & du Plessis, K 2015, 'Employability skills: Perspectives from a knowledge-intensive industry', *Education + Training*, vol. 57, no. 5, pp. 532-559.

Compeau, DR & Higgins, CA 1995, 'Application of social cognitive theory to training for computer skills', *Information Systems Research*, vol. 6, no. 7, pp. 118-143.

Cooper, DR & Schindler, PS 2006, *Business research methods*, McGraw Hill, New York.

Coopersmith, S 1967, *The antecedents of self-esteem*, W.H. Freeman, San Francisco.

Côté, S, Saks, AM & Zikic, J 2006, 'Trait affect and job search outcomes', *Journal of Vocational Behavior*, vol. 68, no. 2, pp. 233-252.

Counsell, D 1996, 'Graduate careers in the UK: An examination of undergraduates' perceptions', *Career Development International*, vol. 1, no. 7, pp. 44-51.

Cox, RH, Martens, MP & Russell, WD 2003, 'Measuring anxiety in athletics: The revised competitive state anxiety inventory-2', *Journal of Sport & Exercise Psychology*, vol. 25, no. 4, pp. 519-533.

Cranmer, S 2006, 'Enhancing graduate employability: best intentions and mixed outcomes', *Studies in Higher Education*, vol. 31, no. 2, pp. 169-184.

Creswell, JW 2009, *Research design: Qualitative, quantitative, and mixed methods approaches*, SAGE Publications, Thousand Oaks, CA.

Crossley, CD & Stanton, JM 2005, 'Negative affect and job search: Further examination of the reverse causation hypothesis', *Journal of Vocational Behavior*, vol. 66, no. 3, pp. 549-560.

Crossman, JE & Clarke, M 2010, 'International experience and graduate employability: Stakeholder perceptions on the connection', *Higher Education*, vol. 59, no. 5, pp. 599-613.

Dahling, JJ, Melloy, R & Thompson, MN 2013, 'Financial strain and regional unemployment as barriers to job search self-efficacy: A test of social cognitive career theory', *Journal of Counselling Psychology*, vol. 60, no. 2, pp. 210-8.

Dash, NK 2005, *Selection of the research paradigm and methodology*, viewed 25 Feb, 2017, <http://www.celt.mmu.ac.uk/researchmethods/Modules/Selection_of_methodology/>.

Davies, A, Fidler, D & Gorbis, M 2011, *Future work skills 2020*, University of Phoenix Research Institute, Palo Alto, CA, SR-1382A.

De Grip, A, Van Loo, J & Sanders, J 2004, 'The industry employment index: Taking account of supply and demand characteristics', *International Labour Review*, vol. 143, no. 3, pp. 211-233.

De Vos, A & Soens, N 2008, 'Protean attitude and career success: The mediating role of self-management', *Journal of Vocational Behavior*, vol. 73, no. 3, pp. 449-456.

Del Corso, J & Rehfuss, MC 2011, 'The role of narrative in career construction theory', *Journal of Vocational Behavior*, vol. 79, no. 2, pp. 334-339.

Dickinson, M 2000, 'Giving undergraduates managerial experience', *Education + Training*, vol. 42, no. 3, pp. 159-170.

Direito, I, Pereira, A & Duarte, AMdO 2012, 'Engineering undergraduates' perception of soft skills: Relation with self-efficacy and learning styles', *Procedia - Social and Behavioral Sciences*, vol. 55, pp. 843-851.

DoE 2006, *Employability skills framework*, Department of Education, Victoria, Australia.

Dong, Y & Peng, C-YJ 2013, 'Principled missing data methods for researchers', SpringerPlus, vol. 2, no. 222, pp. 1-17, viewed 22 October, 2018 <https://link.springer.com/article/10.1186/2193-1801-2-222>

Dorsten, LE & Hotchkiss, L 2005, *Research Methods and Society: Foundations of social inquiry*, Pearson Education, Inc., New Jersey.

Eden, D & Aviram, A 1993, 'Self-efficacy training to speed reemployment: Helping people to help themselves', *Journal of Applied Psychology*, vol. 78, no. 3, pp. 352-360.

Eden, S 2014, 'Out of the comfort zone: Enhancing work-based learning about employability through student reflection on work placements', *Journal of Geography in Higher Education*, vol. 38, no. 2, pp. 266-276.

Ellis, R & Taylor, M 1983, 'Role of self-esteem within the job search process', *Journal of Applied Psychology*, vol. 68, no. 4, pp. 632 - 640.

Fabio, AD & Kenny, ME 2015, 'The contributions of emotional intelligence and social support for adaptive career progress among Italian youth', *Journal of Career Development*, vol. 42, no. 1, pp. 48-59.

Fabio, AD & Palazzeschi, L 2009, 'Emotional intelligence, personality traits and career decision difficulties', *International Journal for Educational and Vocational Guidance*, vol. 9, no. 2, pp. 135-146.

Farndale, E & Sanders, K 2017, 'Conceptualizing HRM system strength through cross-cultural lens', *The International Journal of Human Resource Management*, vol. 28, no. 1, pp. 132-148.

Farooq, S 2011a, 'Mismatch between education and occupation: A case study of Pakistani graduates', *The Pakistan Development Review*, vol. 50, no. 4, pp. 531-553.

Farooq, S 2011b, 'The utilization of education and skills: incidence and determinants among Pakistani graduates', *The Pakistan Development Review*, vol. 50, no. 3, pp. 219-244.

Farooq, S 2017, 'The utilisation of education and skills: Non-pecuniary consequences among graduates', *The Pakistan Development Review*, vol. 56, no. 1, pp. 1-17.

Field, A 2009, *Discovering Statistics using SPSS (and sex and drugs and rock 'n' roll)*, Sage Publications, Dubai.

Fischer, BB, Schaeffer, PR, Vonortas, NS & Queiroz, S 2018, 'Quality comes first: University-industry collaboration as a source of academic entrepreneurship in a developing country', *The Journal of Technology Transfer*, vol. 43, no. 2, pp. 263–284.

Fornell, C & Larcker, DF 1981, 'Evaluating structural equation models with unobservable variables and measurement error', *Journal of Marketing Research*, vol. 18, no. 1, pp. 39-50.

Fort, I, Jacquet, F & Leroy, N 2011, 'Self-efficacy, goals, and job search behaviors', *Career Development International*, vol. 16, no. 5, pp. 469-481.

Fort, I, Pacaud, C & Gilles, P-Y 2015, 'Job search intention, theory of planned behavior, personality and job search experience'*, International Journal for Educational and Vocational Guidance*, vol. 15, no. 1, pp. 57-74.

Fowler, M, Brawn, R, Marriott, A, Roy, PL, Scott, N & Patterson, H 2013, 'Addressing the employability needs of forensic science graduates', *The Higher Education Academy*, Proceedings of HEA STEM Conference 2013, pp. 145-150.

Franzen, A 2006, 'Social networks and labour market outcomes: The non-monetary benefits of social capital', *European Sociological Review*, vol. 22, no. 4, pp. 353-368.

Freeman, P & Rees, T 2010, 'Perceived social support from team-mates: Direct and stress-buffering effects on self-confidence', *European Journal of Sport Science*, vol. 10, no. 1, pp. 59-67.

Frijters, P, Shields, MA & Price, SW 2005, 'Job search methods and their success: A comparison of immigrants and natives in the UK', *The Economic Journal*, vol. 115, no. 507, pp. F359-F376.

Fugate, M, Kinicki, AJ & Ashforth, BE 2004, 'Employability: A psycho-social construct, its dimensions, and applications', *Journal of Vocational Behavior*, vol. 65, no. 1, pp. 14-38.

Furnell, J & Scott, G 2015, 'Are we all on the same page? Teacher, graduate and student perceptions of the importance of skills thought to enhance employability', *Journal of Learning Development in Higher Education*, vol. 667, no. 8, pp. 1-10.

Gao, S, Mokhtarian, PL & Johnston, RA 2008, 'Non-normality of data in structural equation models', *Transportation Research Record: Journal of the Transportation Research Board*, vol. 2082, no. 1, pp. 116-124.

García, JMdH & Costa, JLC 2013, 'Does trait emotional intelligence predict unique variance in early career success beyond IQ and personality?', *Journal of Career Assessment*, vol. 22, no. 4, pp. 715-725.

Garson, GD 2016, *Partial least squares: Regression and structural equation models*, Statistical Associates Publishing, USA.

Gazier, B 1998, *Employability: Concepts and policies*, Institute for Applied Socio-Economics, Berlin.

Gazier, B 2001, 'Employability: the complexity of a policy notion', in Baukens, M (ed), *Employability: From theory to practice*, pp. 3-23.

Geisser, S 1974, 'A predictive approach to the random effects model', *Biomatrika*, vol. 61, no. 1, pp. 101-107.

Georgiou, K, Nikolaou, I, Tomprou, M & Rafailidou, M 2012, 'The role of job seekers' individual characteristics on job seeking behaviour and psychological well-being', *International Journal of Selection and Assessment*, vol. 20, no. 4, pp. 414-422.

Ghauri, S & Ayub, N 2018, 'HR professionals' preferred skill for business graduates in service sector', *Pakistan Business Review*, vol. 20, no. 1, pp. 209-221.

Ghazali, G & Bennett, D 2017, 'Employability for music graduates: Malaysian educational reform and the focus on generic skills', *International Journal of Music Education*, vol. 35, no. 1, pp. 1-13.

Glass, D 2018, *University of Melbourne moves to 6th in global rankings for graduate employability*, University of Melbourne, viewed 7 July 2019, <https://about.unimelb.edu.au/newsroom/news/2018/september/university-of-melbourne-moves-to-6th-in-global-rankings-for-graduate-employability>.

GMAC 2012, *Jobs trends outlook for India 2012*, Graduate Management Admission Council, Data-To-Go Series: India Regional Outlook.

Gökçearslan, Ş, Mumcu, FK, Haşlaman, T & Çevik, YD 2016, 'Modelling smartphone addiction: The role of smartphone usage, self-regulation, general self-efficacy and cyberloafing in university students', *Computers in Human Behavior*, vol. 63, no. 1, pp. 639-649.

Gokuladas, VK 2010, 'Technical and non-technical education and the employability of engineering graduates: An Indian case study', *International Journal of Training and Development*, vol. 14, no. 2, pp. 130-143.

Goleman, D 1998, *Working with emotional intelligence*, Bloomsbury, London.

Govt. of Pakistan 2014, *Pakistan Economic Survey 2013-14: Chapter 12: Population, labour force and employment,* Ministry of Finance, Government of Pakistan, Islamabad.

Govt. of Pakistan 2015a, *Pakistan Economic Survey 2014-15: Chapter 12: Population, labour force and employment*, Ministry of Finance, Government of Pakistan, Islamabad.

Govt. of Pakistan 2015b, *Pakistan Economic Survey 2014: Chapter 10: Education*, Ministry of Finance, Government of Pakistan, Islamabad.

Govt. of Pakistan 2019, *Pakistan Economic Survey 2018-19*, Economic Adviser's Wing, Finance Division, Government of Pakistan, Islamabad.

Green, CP 2012, 'Short term gain, long term pain. Informal job search methods and post-displacement outcomes', *Journal of Labor Research*, vol. 33, no. 3, pp. 337-352.

Greenwood, PE, O'Leary, K & Williams, P 2015, *The paradigm shift: Redefining education*, Deloitte, Australia.

Griffin, M & Annulis, H 2013, 'Employability skills in practice: The case of manufacturing education in Mississippi', *International Journal of Training and Development*, vol. 17, no. 3, pp. 221-232.

Guan, P, Capezio, A, Restubog, SLD, Read, S, Lajom, JAL & Li, M 2016, 'The role of traditionality in the relationships among parental support, career decision-making self-efficacy and career adaptability', *Journal of Vocational Behavior*, vol. 94, pp. 114-123.

Guan, Y, Deng, H, Sun, J, Wang, Y, Cai, Z, Ye, L, Fu, R, Wang, Y, Zhang, S & Li, Y 2013, 'Career adaptability, job search self-efficacy and outcomes: A three-wave investigation among Chinese university graduates', *Journal of Vocational Behavior*, vol. 83, no. 3, pp. 561-570.

Guan, Y, Guo, Y, Bond, MH, Cai, Z, Zhou, X, Xu, J, Zhu, F, Wang, Z, Fu, R, Liu, S, Wang, Y, Hu, T & Ye, L 2014, 'New job market entrants' future work self, career adaptability and job search outcomes: Examining mediating and moderating models', *Journal of Vocational Behavior*, vol. 85, no. 1, pp. 136-145.

Guba, EC 1990, *The paradigm dialog*, SAGE Publications, Inc., USA.

Guerrero, L & Rothstein, MG 2012, 'Antecedents of underemployment: Job search of skilled immigrants in Canada', *Applied Psychology*, vol. 61, no. 2, pp. 323-346.

Guiso, L, Sapienza, P & Zingales, L 2006, *Does culture affect economic outcomes?*, NBER Working Paper Series, National Bureau of Economic Research, NBER Working Paper No. 11999.

Guthrie, G 2010, *Basic research methods: An entry to social science research*, SAGE Publications India Pvt Ltd, New Delhi.

Haider, SZ 2008, 'Challenges in higher education: Special reference to Pakistan and South Asian developing countries', *Nonpartisan Education Review*, vol. 4, no. 2, pp. 1-12.

Hair, JF, Black, WC, Babin, BJ & Anderson, RE 2010, *Multivariate data analysis: A global perspective*, 7th edn., Pearson Prentice Hall, USA.

Hair, JF, Hult, GTM, Ringle, CM & Sarstedt, M 2017*, A premier on partial least squares structural equation modelling (PLS-SEM),* 2nd edn., Sage Publications, Los Angeles.

Hair, JF, Ringle, CM & Sarstedt, M 2011, 'PLS-SEM: Indeed a silver bullet', *Journal of Marketing Theory and Practice*, vol. 19, no. 2, pp. 139-152.

Hair, JF, Ringle, CM & Sarstedt, M 2013, 'Partial least squares structural equation modelling: Rigorous applications, better results and higher acceptance', *Long Range Planning*, vol. 46, no. 1-2, pp. 1-12.

Hair, JF, Sarstedt, M, Hopkins, L & Kuppelwieser, VG 2014, 'Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research', *European Business Review*, vol. 26, no. 2, pp. 106-121.

Hair, JF, Sarstedt, M, Ringle, CM & Mena, JA 2012, 'An assessment of the use of partial least squares structural equation modelling in marketing research', *Journal of the Academy of Marketing Science*, vol. 40, no. 3, pp. 414-433.

Hall, DT & Moss, JE 1998, 'The new protean career contract: Helping organizations and employees adapt', *Organizational Dynamics*, vol. 26, no. 3, pp. 22-37.

Haque, S 2013, 'University graduates unemployment in Pakistan: Employability strategy for the univeristy graduates', *Indian Journal of Commerce & Management Studies*, vol. 4, no. 2, pp. 54-61.

Harkness, JA, Van de Vijver, FJR & Mohler, PP 2003*, Cross-cultural survey methods*, Wiley-Interscience, Hoboken New Jersey.

Harvey, L 2001, 'Defining and measuring employability', *Quality in Higher Education*, vol. 7, no. 2, pp. 97-109.

Harvey, L & Bowers-Brown, T 2004, *Employability cross-country comparisons*, Graduate Market Trends, Winter 2004/5.

Hassan, MUu & Noreen, Z 2013, 'Educational mismatch between graduates possessed skills and market demands in Pakistan', *International Education Studies*, vol. 6, no. 11, pp. 122-129.

Hatzigeorgiadis, A, Zourbanos, N, Mpoumpaki, S & Theodorakis, Y 2009, 'Mechanisms underlying the self-talk–performance relationship: The effects of motivational self-talk on self-confidence and anxiety', *Psychology of Sport and Exercise*, vol. 10, no. 1, pp. 186-192.

Hazenberg, R, Seddon, F & Denny, S 2014, 'Programme recruitment and evaluation: The effect of an employability enhancement programme on the general self-efficacy levels of unemployed graduates', *Journal of Education and Work*, vol. 28, no. 3, pp. 273-300.

HEC 2016a, *Enrolment at Pakistani Universities/Dais and Constituent Colleges*, Higher Education Commission, Pakistan, viewed 28 June 2018, <https://www.hec.gov.pk/english/universities/Pages/Enrollment/PU-Enrollment.aspx>.

HEC 2016b, *Graduates having 16 years of education and above from universities campuses and affiliated colleges,* Higher Education Commission, Pakistan, viewed 4 July 2018, <https://hec.gov.pk/english/universities/Pages/AJK/Graduates-16-years.aspx>.

HEC 2016c, *University Wise Enrolment of Year 2014-15*, Higher Education Commission, Pakistan, viewed 4 July 2018, <https://hec.gov.pk/english/universities/Pages/AJK/University-wise-enrollment-of-yearwise.aspx>.

Heck, RH & Thomas, SL 2000, *An introduction to multilevel modelling techniques*, Lawrence Erlbaum Associates, Inc, USA.

Hillage, J & Pollard, E 1998, *Employability: developing a framework for policy analysis*, The Institute for Employment Studies, Department for Education and Employment, Research Report RR85.

HM Treasury 1997, *Treasury Press Release 122/97, 13th October: Gordon Brown unveils UK Employment Action Plan*, HM Treasury, London.

Ho, HF 2015, 'Matching university graduates' competences with employers' needs in Taiwan', International Education Studies, vol. 8, no. 4, pp. 122-133.

Hofstede Insights 2019, *What about Pakistan?*, Hofstede Insights, viewed 25 June 2019, <https://www.hofstede-insights.com/country/pakistan/>.

Holzer, HJ 1988, 'Search method use by unemployed youth', *Journal of Labor Economics*, vol. 6, no. 1, pp. 1-20.

Hoodbhoy, P 2009, 'Pakistan's higher education system - What went wrong and how to fix It', *The Pakistan Development Review*, vol. 48, no. 4, pp. 581–594.

Hoye, GV & Saks, AM 2008, 'Job search as goal-directed behavior: objectives and methods', *Journal of Vocational Behavior*, vol. 73, no. 3, pp. 358-367.

Hoyt, KB 1978, *Employability: are the schools responsible?*, New Directions for Education and Work: Reassessing the Link between Work and Education, pp. 29-33

Huang, CC, Wang, YM, Wu, TW & Wang, PA 2013, 'An empirical analysis of the antecedents and performance consequences of using the Moodle platform', *International Journal of Information and Education Technology*, vol. 3, no. 2, pp. 217-221.

Husain, MY, Mokhtar, SB, Ahmad, AA & Mustapha, R 2010, 'Importance of employability skills from employers' perspective', *Procedia - Social and Behavioral Sciences*, vol. 7, no. C, pp. 430-438.

Ibrahim, HI, Zulkafli, AH, Shah, KAM & Amran, A 2017, 'Building self-esteem through work-integrated learning', *International Journal of Learning and Teaching*, vol. 3, no. 1, pp. 73-77.

Ikram, Z 2016, *Process of curriculum development in Pakistan: Problems and issues*, EAST (Educational Assessment, System & Training), viewed 7 July 2019, <https://east.education/process-of-curriculum-development-in-pakistan-problems-and-issues/>.

ILO 2000, *Training for employment: Social Inclusion, productivity and youth employment: Human resources training and development: Vocational guidance and vocational training*, International Labour Organization, Geneva.

ILO 2015, *World employment social outlook trends*, International Labour Office, Geneva.

ILO 2016, *World employment social outlook*, International Labour Office, Geneva.

ILO 2018, *World Employment Social Outlook - Trends 2018*, International Labour Office, Geneva.

ILO 2019, *World Employment and Social Outlook*, International Labour Organization, Geneva.

Indarti, E 2016, 'Bridging the gaps: A paradigmatic insight into philosophy of law', *Diponegoro Law Review*, vol. 1, no. 1, pp. 1-16.

Jackson, D 2013a, 'Business graduate employability – where are we going wrong?', *Higher Education Research & Development*, vol. 32, no. 5, pp. 776-790.

Jackson, D 2013b, 'Student perceptions of the importance of employability skill provision in business undergraduate programs', *Journal of Education for Business*, vol. 88, no. 5, pp. 271-279.

Jackson, D 2014, 'Testing a model of undergraduate competence in employability skills and its implications for stakeholders', *Journal of Education and Work*, vol. 27, no. 2, pp. 220-242.

Jackson, D & Wilton, N 2017, 'Perceived employability among undergraduates and the importance of career self-management, work experience and individual characteristics', *Higher Education Research & Development*, vol. 36, no. 4, pp. 747-762.

Jamaludin, NL, Sam, DL, Sandal, GM & Adam, AA 2016, 'The influence of perceived discrimination, orientation to mainstream culture and life satisfaction on destination loyalty intentions: The case of international students', *Current Issues in Tourism*, vol. 21, no. 8, pp. 934-949.

Javed, MA & Ali, A 2017, 'Educational development in Pakistan: A critical appraisal of Muhammad Pervez Musharraf Presidency (1999-2008)', *International Journal of Scientific and Research Publications*, vol. 7, no. 3, pp. 277-282.

Johari, MH, Zaini, RM, Zaharim, A, Basri, H & Zaidi Omar, M 2011, 'Perception and expectation toward engineering graduates by employers: A UKM study case,' 2011 *3rd International Congress on Engineering Education: Rethinking Engineering Education, The Way Forward*, ICEED 2011, pp. 203-207.

Jollands, M 2015, 'A framework for graduate employability adapted for discipline differences,' *Learning for Life and Work in a Complex World: 38th Higher Education Research and Development Society of Australasia (HERDSA) Annual International Conference*, Higher Education Research and Development Society of Australasia, pp. 1-10.

Junejo, I, Memon, AK & Mohammad, J 2018, 'Current practices in higher education institutes Pakistan and gap reduction between industry and academia: A systematic literature review approach', *Asian Journal of Contemporary Education*, vol. 2, no. 2, pp. 173-181.

Kafetsios, K & Zampetakis, LA 2008, 'Emotional intelligence and job satisfaction: Testing the mediatory role of positive and negative affect at work', *Personality and Individual Differences*, vol. 44, no. 3, pp. 712-722.

Kaplan, D 2009, *Structural equation modelling: Foundations and extensions*, 2nd edn., Sage Publications, Inc, USA.

Khan, MA 2014, 'Students' passion for grades in higher education institutions in Pakistan', *Procedia - Social and Behavioral Sciences*, vol. 112, pp. 702-709.

Kim, SY, Fouad, N & Lee, J 2018, 'The roles of work and family in men's lives: Testing the social cognitive career model of career self-management', *Journal of Vocational Behavior*, vol. 106, pp. 153-164.

Kinash, S & Crane, L 2015, 'Enhancing graduate employability of the 21st century learner,' *International Mobile Learning Festival*, *May 2015, Hong Kong*, pp. 148-171.

Kline, RB 2011, *Principles and practice of structural equation modelling*, 3rd edn., The Guilford Press, USA.

Knight, PT & Yorke, M 2002, 'Employability through the curriculum', *Tertiary Education and Management*, vol. 8, pp. 261-276.

Krauss, SE 2005, 'Research paradigms and meaning making: A primer', *The Qualitative Report*, vol. 10, no. 4, pp. 758-770.

Kuhn, P & Skuterud, M 2000, 'Internet and traditional job search methods, 1994-1999,' *IRPP and CERF Conference on Creating Canada's Advantage in an Information Age, Mai, Citeseer*, pp. 1-16.

Kuhn, P & Skuterud, M 2004, 'Internet job search and unemployment durations', *The American Economic Review*, vol. 94, no. 1, pp. 218-232.

Kuhn, T 1962, *The structure of scientific revolutions*, University of Chicago Press.

Kumar, A 2009, *Personal, academic and career development in higher education: SOARing to success*, Routledge.

Kuzubas, TU & Szabo, A 2014, *Multiple job search networks: Theory and evidence from Indonesia*, 2013/06.

Lauder, S-A 2013, *Employability skills: The connection between skills and employment*, BliiP Global Employability.

Lavender, T 2014, *Recruiters rank U of T grads first in employability for Canada, 13th in world*, viewed 6 July, 2019, <https://www.utoronto.ca/news/recruiters-rank-u-t-grads-first-employability-canada-13th-world>.

Law, B & Watts, AG 1977, 'Schools. Careers and community. A study of some approaches to career education in schools', London: Church Information Office, pp. 8-10.

Lawrence, T 2002, 'Teaching and assessing employability skills through skills in USA', *ASQ World Conference on Quality and Improvement Proceedings. American Society for Quality*, pp. 285-295.

Lent, RE & Brown, SD 1996, 'Social cognitive approach to career development: An overview', *The Career Development Quarterly*, vol. 44, pp. 310-321.

Lent, RW 2013, 'Social cognitive career theory', in SD Brown and RW Lent (eds), *Career Development and Counseling: Putting Theory and Research to Work*, John Wiley and Sons Inc., New Jersey, USA.

Lent, RW & Brown, SD 2006a, 'Integrating person and situation perspectives on work satisfaction: A social-cognitive view', *Journal of Vocational Behavior*, vol. 69, no. 2, pp. 236-247.

Lent, RW & Brown, SD 2006b, 'On conceptualizing and assessing social cognitive constructs in career research: A measurement guide', *Journal of Career Assessment*, vol. 14, no. 1, pp. 12-35.

Lent, RW & Brown, SD 2013, 'Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span', *Journal of Counseling Psychology*, vol. 60, no. 4, pp. 557-568.

Lent, RW, Brown, SD & Hackett, G 1994, 'Toward a unifying social cognitive theory of career and academic interest, choice, and performance', *Journal of Vocational Behavior*, vol. 45, no. 1, pp. 79-122.

Lent, RW, Ezeofor, I, Morrison, MA, Penn, LT & Ireland, GW 2016, 'Applying the social cognitive model of career self-management to career exploration and decision-making', *Journal of Vocational Behavior*, vol. 93, no. 1, pp. 47-57.

Lent, RW, Ireland, GW, Penn, LT, Morris, TR & Sappington, R 2017, 'Sources of self-efficacy and outcome expectations for career exploration and decision-making: A test of the social cognitive model of career self-management', *Journal of Vocational Behavior*, vol. 99, pp. 107-117.

Lent, RW, Morris, TR, Penn, LT & Ireland, GW 2019a, 'Social-cognitive predictors of career exploration and decision-making: Longitudinal test of the career self-management model', *Journal of Counseling Psychology*, vol. 66, no. 2, pp. 184-194.

Lent, RW, Wang, RJ, Morris, TR, Ireland, GW & Penn, LT 2019b, 'Viewing the career indecision profile within a theoretical context: Application of the social cognitive career self-management', *Journal of Counseling Psychology*, Advance online publication.

Lim, RH, Lent, RW & Penn, LT 2016, 'Prediction of job search intentions and behaviors: Testing the social cognitive model of career self-management', *Journal of Counseling Psychology*, vol. 63, no. 5, pp. 594-603.

Lim, T, Fadzil, M, Latif, LA, Goolamally, NT & Mansor, N 2011, 'Producing graduates who meet employer expectations: Open and distance learning is a viable option,' *International Conference on Languages, Literature and Linguistics, Kuala Lumpur, Malaysia*, viewed 12 Oct 2016, <http://iclll2011.oum.edu.my/extfiles/pdf/Producing%20Graduates%20Who%20Meet%20Employer%20Expectations,%20Open%20and%20Distance%20Learning%20IS%20a%20Viable%20Option.pdf>.

Lim, Y-M, Lee, TH, Yap, CS & Ling, CC 2016a, 'Employability skills, personal qualities, and early employment problems of entry-level auditors: Perspectives from employers, lecturers, auditors, and students', *Journal of Education for Business*, vol. 91, no. 4, pp. 185-192.

Lin, H-F 2010, 'Applicability of the extended theory of planned behavior in predicting job seeker intentions to use job-search websites', *International Journal of Selection and Assessment*, vol. 18, no. 1, pp. 64-74.

Lin, YJ & Flores, LY 2011, 'Job search self-efficacy of East Asian international graduate students', *Journal of Career Development*, vol. 40, no. 3, pp. 186-202.

Lincoln, YS & Guba, EG 2000, 'Paradigmatic controversies, contradictions, and emerging confluences', in NK Denzin and YS Lincoln (eds), *Handbook of qualitative research*, Thousand Oaks, CA: Sage, pp. 163-188.

Liptak, JJ 2005, 'Using emotional intelligence to help college students succeed in the workplace', *Journal of Employment Counseling*, vol. 42, no. 1, pp. 171-178.

Liu, S, Wang, M, Liao, H & Shi, J 2014, 'Self-regulation during job search: The opposing effects of employment self-efficacy and job search behavior self-efficacy', *Journal of Applied Psychology*, vol. 99, no. 6, pp. 1159-1172.

Locke, EA, Chah, D-O, Harrison, S & Lustgarten, N 1989, 'Separating the effects of goal specificity from goal level', *Organizational Behavior and Human Decision Processes*, vol. 43, no. 2, pp. 270-287.

Locke, EA & Latham, GP 2002, 'Building a practically useful theory of goal setting and task motivation: A 35-year odyssey', *American Psychologist*, vol. 57, no. 9, pp. 705-717.

Lowry, PB & Gaskin, J 2014, 'Partial least square (PLS) structural equation modelling (SEM) for building and testing behavioral causal theory: When to choose it and how to use it', *IEEE Transactions on Professional Communication*, vol. 57, no. 2, pp. 123-146.

Lu, T & Adler, H 2009, 'Career goals and expectations of hospitality and tourism students in China', *Journal of Teaching in Travel & Tourism*, vol. 9, no. 1-2, pp. 63-80.

Luke, J, McIlveen, P & Perera, HN 2016, 'A thematic analysis of career adaptability in retirees who return to work', *Frontiers in Psychology*, vol. 7, no. 1, p. 193.

Maddy, LM, Cannon, JG & Lichtenberger, EJ 2015, 'The effects of social support on self-esteem, self-efficacy, and job search efficacy in the unemployed', *Journal of Employment Counseling*, vol. 52, no. 2, pp. 87-95.

Mansour, BE & Dean, JC 2016, 'Employability skills as perceived by employers and university faculty in the fields of human resource development (HRD) for entry level graduate jobs', *Journal of Human Resource and Sustainability Studies*, vol. 04, no. 01, pp. 39-49.

Mariappan, R 2013, 'Job search methods of rural migrants in urban unorganised sector labour market in India'*, Journal of Social and Economic Development*, vol. 15, no. 2, pp. 29-46.

Marshall, D 2018, 'Higher education's contribution to graduate employability and the social good', *South African Journal of Science*, vol. 114, no. 1-2, pp. 1-2.

Martini, M, Mariani, L & Cavenag, D 2018, 'Governance of labor market services and employability', in A Farazmand (ed.) *Global Encyclopedia of Public Administration, Public Policy, and Governance*, Springer International Publishing AG.

Mau, WC & Kopischke, A 2001, 'Job search methods, job search outcomes and job satisfaction of college graduates: A comparison of race and sex', *Journal of Employment Counseling*, vol. 38, no. 3, pp. 141-149.

McArdle, S, Waters, L, Briscoe, JP & Hall, DT 2007, 'Employability during unemployment: Adaptability, career identity and human and social capital', *Journal of Vocational Behavior*, vol. 71, no. 2, pp. 247-264.

McAuliffe, G, Jurgens, JC, Pickering, W, Calliotte, J, Macera, A & Zerwas, S 2006, 'Targeting low career confidence using the career planning confidence scale', *Journal of Employment Counseling*, vol. 43, no. 3, pp. 117-129.

McCash, P 2006, 'We're all career researchers now: breaking open career education and DOTS', *British Journal of Guidance & Counselling*, vol. 34, no. 4, pp. 429-449.

McGrath, S 2009, *What is employability?*, Learning to Support Employability Project Paper 1.

McIlveen, P 2014, *Is there any fundamental theory for measuring and analyzing students' employability?*, viewed 3 March 2016, <https://www.researchgate.net/post/Is_there_any_fundamental_theory_for_measuring_and_analyzing_students_employability>.

McIlveen, P, Brooks, S, Lichtenberg, A, Smith, M, Torjul, P & Tyler, J 2011, 'Career development learning frameworks for work-integrated learning', in S. Billett & A. Henderson (Eds.) *Developing Learning Professionals*, Springer, Dordrecht, pp. 149-165.

McIlveen, P & Pensiero, D 2008, 'Transition of graduates from backpack-to-briefcase: A case study', *Education + Training*, vol. 50, no. 6, pp. 489-499.

McKeown, T & Lindorff, M 2011, 'The graduate job search process – a lesson in persistence rather than good career management?', *Education + Training*, vol. 53, no. 4, pp. 310-320.

McMurray, AJ, Pace, RW & Scott, D 2004, *Research: A common sense approach*, Thomas/Social Science Press, Australia.

McQuaid, R, Green, A & Danson, M 2005, 'Introducing employability', *Urban Studies*, vol. 42, no. 2, pp. 191-195.

McQuaid, RW & Lindsay, C 2005, 'The concept of emplyability', *Urban Studies*, vol. 42, no. 2, pp. 197–219.

Memon, GR 2007, 'Education in Pakistan: The key issues, problems and the new challenges', *Journal of Management and Social Sciences*, vol. 3, no. 1, pp. 47-55.

Messum, D, Wilkes, L & Jackson, D 2011, 'Employability skills: Essential requirements in health manager vacancy advertisements', *Asia Pacific Journal of Health Management*, vol. 6, no. 2, pp. 22-28.

Messum, D, Wilkes, L & Jackson, D 2015, 'What employability skills are required of new health managers?', *Asia Pacific Journal of Health Management*, vol. 10, no. 1, pp. 28-35.

Messum, D, Wilkes, LM, Jackson, D & Peters, K 2016, 'Employability skills in health services management: Perceptions of recent graduates', *Asia Pacific Journal of Health Management*, vol. 11, no. 1, pp. 25-32.

Mirza, FM, Jaffri, AA & Hashmi, MS 2014, *An assessment of industrial employment skill gaps among university graduates in the Gujrat-Sialkot-Gujranwala Industrial Cluster, Pakistan*, Pakistan Strategy Support Program, Working Paper No. 17.

Mitchell, GW, Skinner, LB & White, BJ 2010, 'Essential soft skills for success in the twenty-first century workforce as perceived by business educators', *The Delta Pi Epsilon Journal*, vol. L2, no. 1, pp. 43-53.

MoST 2012, *Yearbook 2012-13*, MoS Technology (ed.), Islamabad.

Moynihan, LM, Roehling, MV, LePine, MA & Boswell, WR 2003, 'A longitudinal study of the relationships among job search self-efficacy, job interviews, and employment outcomes', *Journal of Business and Psychology*, vol. 18, no. 2, pp. 207-233.

Neuman, WL 2011, *Social research methods: Qualitative and quantitative approaches*, 7th edn., Pearson Education Inc., USA.

Ng, ESW & Burke, RJ 2006, 'The next generation at work – business students' views, values and job search strategy', *Education + Training*, vol. 48, no. 7, pp. 478-492.

Nickson, D, Warhurst, C, Commander, J, Hurrell, SA & Cullen, AM 2012, 'Soft skills and employability: Evidence from UK retail', *Economic and Industrial Democracy*, vol. 33, no. 1, pp. 65-84.

Nuffic 2012, *Education system Pakistan described and compared with the Dutch system*, Nuffic, Netherlands.

Obeidat, B, Al-Sarayrah, S, Tarhini, A, Al-Dmour, RH, Ali-Salti, Z & Sweis, R 2016, 'Cultural influences on strategic human resource managemet practices: A Jordanian case study', *International Business Research*, vol. 9, no. 10, pp. 94-114.

Omar, NH, Abdul Manaf, A, Helma Mohd, R, Che Kassim, A & Abd. Aziz, K 2012, 'Graduates' employability skills based on current job demand through electronic advertisement', *Asian Social Science*, vol. 8, no. 9, pp. 103-110.

Pakistan Population 2019, *Pakistan Population 2019*, viewed 9 July 2019, <http://worldpopulationreview.com/countries/pakistan-population/>.

Papadopoulos, T & Armatas, C 2013, 'Evaluation of an ICT skills program: Enhancing graduate capabilities and employability', *International Journal of Electronic Commerce Studies*, vol. 4, no. 1, pp. 93-102.

PBS 2019, *Population Census*, Pakistan Bureau of Statistics, viewed 25 June, <http://www.pbs.gov.pk/content/population-census>.

Pensiero, D & McIlveen, P 2006, 'Developing an integrated approach to graduates' transition into the workforce,' *2nd Biennial Conference of the Academy of World Business, Marketing and Management Development: Business Across Borders in the 21st Century*, *July 2006, Paris.*

Perez-Lopez, MC, Gonzalez-Lopez, MJ & Rodriguez-Ariza, L 2019, 'Applying the social cognitive model of career self-management to the entrepreneurial career decision: The role of exploratory and coping adaptive behaviours', *Journal of Vocational Behavior*, vol. 112, pp. 255-269.

Ponterotto, JG 2005, 'Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science', *Journal of Counseling Psychology*, vol. 52, no. 2, pp. 126 -13.

Pool, LD, Qualter, P & Sewell, PJ 2014, 'Exploring the factor structure of the CareerEDGE employability development profile', *Education + Training*, vol. 56, no. 4, pp. 303-313.

Pool, LD & Sewell, P 2007, 'The key to employability: Developing a practical model of graduate employability', *Education + Training*, vol. 49, no. 4, pp. 277-289.

Poon, J 2012, 'Real estate graduates' employability skills: The perspective of human resource managers of surveying firms', *Property Management*, vol. 30, no. 5, pp. 416-434.

Posel, D, Casale, D & Vermaak, C 2014, 'Job search and the measurement of unemployment in South Africa', *South African Journal of Economics*, vol. 82, no. 1, pp. 66-80.

Potgieter, I & Coetzee, M 2013, 'Emotional intelligence as a predictor of postgraduate students' psychological employability attributes', *Journal of Psychology in Africa*, vol. 23, no. 2, pp. 187-194.

Pradhan, S 2015, 'Study of employability and needed skills for LIS graduates', *DESIDOC Journal of Library and Information Technology*, vol. 35, no. 2, pp. 106-112.

Presti, AL 2014, 'Predictors of job-search behaviors among Italian job-centers users', *Applied Psychology Bulletin*, vol. 62, no. 269, pp. 3-16.

Qomariyah, N, Savitri, T, Hadianto, T & Claramita, M 2016, 'Formulating employability skills for graduates of public health study program', *International Journal of Evaluation and Research in Education*, vol. 5, no. 1, pp. 22-31.

Rahman, MKU & Fazal, H 2018, 'Information and communication technology workforce employability, Khyber Pukhtunkhwa, Pakistan', *Middle East Journal of Business*, vol. 13, no. 1, pp. 12-16.

Rahmat, N, Ayub, AR & Buntat, Y 2016, 'Employability skills constructs as job performance predictors for Malaysian polytechnic graduates: A qualitative study', *Malaysian Journal of Society and Space*, vol. 12, no. 3, pp. 154-167.

Rajapakse, RPCR 2017, 'Importance of soft skills on employability of finance graduates', *Asian Journal of Multidisciplinary Studies*, vol. 5, no. 1, pp. 136-141.

Ramadi, E, Ramadi, S & Nasr, K 2015, 'Engineering graduates' skill sets in the MENA region: a gap analysis of industry expectations and satisfaction', *European Journal of Engineering Education*, vol. 41, no. 1, pp. 34-52.

Rao, MS 2014, 'Enhancing employability in engineering and management students through soft skills', *Industrial and Commercial Training*, vol. 46, no. 1, pp. 42-48.

Raza, SA, Majid, Z & Zia, A 2010, 'Perceptions of Pakistani university students about roles of academics engaged in imparting development skills: Implications for faculty development', *Bulletin of Education and Research*, vol. 32, no. 2, pp. 75-91.

Raza, SA & Naqvi, SA 2011, 'Quality of Pakistani university graduates as perceived by employers: Implications for faculty development', *Journal of Quality and Technology Management*, vol. 7, no. 1, pp. 57-72.

Reddan, G & Rauchle, M 2012, 'Exploring the links between career development learning and work-integrated learning', *Australian Journal of Career Development*, vol. 21, no. 1, pp. 38-48.

Rees, T & Freeman, P 2007, 'The effects of perceived and received support on self-confidence', *Journal of Sports Science*, vol. 25, no. 9, Jul, pp. 1057-65.

Renn, RW, Steinbauer, R, Taylor, R & Detwiler, D 2014, 'School-to-work transition: Mentor career support and student career planning, job search intentions, and self-defeating job search behavior', *Journal of Vocational Behavior*, vol. 85, no. 3, pp. 422-432.

Robles, MM 2012, 'Executive perceptions of the top 10 soft skills needed in today's workplace', *Business Communication Quarterly*, vol. 75, no. 4, pp. 453-465.

Rosenberg, M 1965, 'The measurement of self-esteem', *Society and the adolescent self-image*, vol. 297, p. V307.

Rowley, C, Bae, J, Horak, S & Bacouel-Jentjens, S 2016, 'Distinctiveness of human resource management in the Asia Pacific region: Typologies and levels', *The International Journal of Human Resource Management*, vol. 28, no. 10, pp. 1393-1408.

Russell, J, Holmstrom, AJ & Clare, DD 2015, 'The differential impact of social support types in promoting new entrant job search self-efficacy and behavior', *Communication Research Reports*, vol. 32, no. 2, pp. 170-179.

Ryan, RM & Deci, EL 2000, 'Self-determination theory and the facilitation of intrinsic motivation, social development and wellbeing ', *American Psychologist*, vol. 55, no. 1, pp. 68-78.

Saad, MSM & Majid, IA 2014, 'Employers' perceptions of important employability skills required from Malaysian engineering and information and communication (ICT) graduates', *Global Journal of Engineering Education*, vol. 16, no. 3, pp. 110-115.

Saeed, K & Rashidi, Z 2017, 'Essential employability skills for marketing careers gap analysis of education and profession', *Pakistan Business Review*, vol. 19, no. 2, pp. 302-319.

Saher, U & Hussain Ch, A 2019, 'A comparison of self-perceived employability of graduates from public and private sector universities in Punjab', *Bulletin of Education and Research*, vol. 41, no. 1, pp. 119-130.

Saks, AM 2006, 'Multiple predictors and criteria of job search success', *Journal of Vocational Behavior*, vol. 68, no. 3, pp. 400-415.

Saks, AM & Ashforth, BE 1999, 'Effects of individual differences and job search behaviors on the employment status of recent university graduates', *Journal of Vocational Behavior*, vol. 54, vol. 2, pp. 335-349.

Saks, AM & Ashforth, BE 2000, 'Change in job search behaviors and employment outcomes', *Journal of Vocational Behavior*, vol. 56, no. 2, pp. 277-287.

Saks, AM & Ashforth, BE 2002, 'Is job search related to employment quality? It all depends on the fit', *Journal of Applied Psychology*, vol. 87, no. 4, pp. 646-654.

Saks, AM, Zikic, J & Koen, J 2015, 'Job search self-efficacy: Reconceptualizing the construct and its measurement', *Journal of Vocational Behavior*, vol. 86, pp. 104-114.

Salleh, R, Md Yusof, MA & Memon, MA 2016, 'Attributes of graduate architects: An industry perspective', *Social Sciences (Pakistan),* vol. 11, no. 5, pp. 551-556.

Salovey, P & Mayer, J 1990, 'Emotional intelligence', *Imagination, Cognition, and Personality*, vol. 9, no. 3, pp. 185-211.

Samani, SA 2016, 'Steps in research process (partial least square of structural equation modeling (PLS-SEM) a review)', *International Journal of Social Science and Business*, vol. 1, no. 2, pp. 55-66.

Sanders, J & de Grip, A 2004, 'Training, task flexibility and the employability of low-skilled workers', *International Journal of Manpower*, vol. 25, no. 1, pp. 73-89.

Sarfraz, I, Rajendran, D, Hewege, C & Mohan, MD 2018, 'An exploration of global employability skills: a systematic research review', *International Journal of Work Organisation and Emotion*, vol. 9, no. 1, pp. 63-88.

Sarkar, M, Overton, T, Thompson, C & Rayner, G 2016, 'Graduate employability: Views of recent science graduates and employers', *International Journal of Innovation in Science and Mathematics Education*, vol. 24, no. 3, pp. 31-48.

Sarstedt, M, Ringle, CM, Smith, D, Reams, R & Hair, JF 2014, 'Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers', *Journal of Family Business Strategy*, vol. 5, no. 1, pp. 105-115.

Saunders, M, Lewis, P & Thornhill, A 2009, *Research methods for business students*, 5th edn., Pearson Education Limited, England.

Savickas, ML 2005, 'The theory and practice of career construction', in SD Brown and RW Lent (eds), *Career development and counselling,* Wiley New Jersey, pp. 42–70.

Savickas, ML 2013, 'Career construction theory and practice', in SD Brown and RW Lent (eds), *Career Development and Counselling: Putting Theory and Research to Work*, John Wiley and Sons, Inc, New Jersey, USA, pp. 147 - 183.

Savolainen, R 2018, 'Self-determination and expectancy-value: Comparison of cognitive psychological approaches to motivators for information seeking about job opportunities', *Aslib Journal of Information Management*, vol. 70, no. 1, pp. 123-140.

Schaffer, M & Taylor, MA 2012, 'Job search behaviors among African-Americans', *Journal of Managerial Psychology*, vol. 27, no. 8, pp. 814-828.

Schrag, F 1992, 'In defense of positivist research paradigms', *Educational Researcher*, vol. 21, no. 5, pp. 5-8.

Schumacker, RE & Lomax, RG 2010, *A beginner's guide to structural equation modelling*, 3rd edn., Taylor and Francis Group, LLC, USA.

Sekaran, U 2003, *Research methods in business: A skill building approach*, 4th edn., John Wiley & Sons, Inc., USA.

Selvadurai, S, Choy, EA & Maros, M 2012, 'Generic skills of prospective graduates from the employers' perspectives', *Asian Social Science*, vol. 8, no. 12, pp. 295-303.

Seth, D & Seth, M 2013, 'Do soft skills matter? - Implications for educators based on recruiters' perspective', *IUP Journal of Soft Skills*, vol. 7, no. 1, pp. 7-20.

Shah, SAM & Amjad, S 2011, 'Cultural diversity in Pakistan: National vs provincial ', *Mediterranean Journal of Social Sciences,* vol. 2, no. 2, pp. 331-344.

Shahzadi, I, Hassan, B, Sabir, F & Kamran, MR 2014, 'An increasing tendency of management studies in Pakistan: A perception of employability skills in business graduates', *International Journal of Scientific & Engineering Research*, vol. 5, no. 3, pp. 409-421.

Sheikh, A 2017, 'Govt redefines literacy for count', *The Express Tribune*, 28 February.

Siddiq, MK 1978, *Pakistan: An educational spectrum*, Arslan Publication, Lahore, Pakistan,

Singh, GKG & Singh, SKG 2008, 'Malaysian graduates' employability skills', *Unitar E-Journal*, vol. 4, no. 1, pp. 15-45.

Smith, C, Ferns, S & Russell, L 2014, *Conceptualizing and measuring 'employability' - lessons from a National OLT Project*, Australian Collaborative Education Network, Gold Coast, pp. 139-148, <http://acen. edu. au/2014-conference-proceedings/>.

Smith, S & Edwards, JA 2012, 'Embedding information literacy skills as employability attributes', *ALISS Quarterly*, vol. 7, no. 4, pp. 22-27.

Soenens, B & Vansteenkiste, M 2005, 'Antecedents and outcomes of self-determination in 3 life domains: The role of parents' and teachers' autonomy support', *Journal of Youth and Adolescence*, vol. 34, no. 6, pp. 589-604.

Söllner, M, Hoffmann, A, Hirdes, EM, Rudakova, L, Leimeister, S & Leimeister, JM 2010, 'Towards a formative measurement model for trust', *23. Bled eConference eTrust: Implications for the Individual, Enterprises and Society (Bled), Bled, Slovenia.*

Song, Z, Wanberg, C, Niu, X & Xie, Y 2006, 'Action–state orientation and the theory of planned behavior: A study of job search in China', *Journal of Vocational Behavior*, vol. 68, no. 3, pp. 490-503.

Srivastava, A & Khare, M 2012, *Skills for employability: South Asia*, Results for Development Institutes (R4D).

Stephenson, J 1998, 'The concept of capability and its importance in higher education' in Stepenson, J & Yorke, M, (eds.) *Capability and quality in higher education*, Routledge, London: Kogan, pp.1-13.

Stoica, AE 2010, *Development and testing of a comprehensive skill framework for the successful employability of MBA graduates*, Waseda University Graduate School of Business Studies Branch, Departmental Bulletin Paper, Issue Nov 2010, pp. 103-127.

Stone, M 1974, 'Cross-validatory choice and assessment of statistical predictions', *Journal of Royal Statistical Society*, vol. 36, no. 2, pp. 111-147.

Sumanasiri, EGT, Ab Yajid, MS & Khatibi, A 2015, 'Conceptualizing learning and employability "learning and employability framework"', *Journal of Education and Learning*, vol. 4, no. 2, pp. 53-63.

Sumanasiri, EGT, Yajid, MSA & Khatibi, A 2015, 'Review of literature on Graduate Employability', *Journal of Studies in Education*, vol. 5, no. 3, pp. 75-88.

Sutton, N 2002, 'Why can't we all just get along?', *Canada Computing*, vol. 28, no. 16, p. 20.

Sverko, B, Galic, Z, Sersic, DM & Galesic, M 2008, 'Unemployed people in search of a job: reconsidering the role of search behavior', *Journal of Vocational Behavior*, vol. 72, no. 3, pp. 415-428.

Sweetland, SR 1996, 'Human capital theory: foundations of a field of inquiry', *Review of Educational Research*, vol. 66, no. 3, pp. 341-359.

Syed, SZ, Abiodullah, M & Yousaf, A 2014, 'Assessing emotional intelligence and interpersonal skills of university students as predictor of employability', *21st Century Academic Forum Conference*, pp. 243 - 255.

Taggar, S & Kuron, LKJ 2016, 'The toll of perceived injustice on job search self-efficacy and behavior', *Career Development International*, vol. 21, no. 3, pp. 279-298.

Tay, C, Ang, S & Van Dyne, L 2006, 'Personality, biographical characteristics, and job interview success: A longitudinal study of the mediating effects of interviewing self-efficacy and the moderating effects of internal locus of causality', *Journal of Applied Psychology*, vol. 91, no. 2, pp. 446-54.

Tenenhaus, M, Amato, S & Vinzi, VE 2004, 'A global goodness-of-fit index for PLS structural equation modeling,' In *Proceedings of the XLII SIS Scientific Meeting*, *Padova*, vol. 1, pp. 739-742.

Thompson, MN, Dahling, JJ, Chin, MY & Melloy, RC 2016, 'Integrating job loss, unemployment, and reemployment with social cognitive career theory', *Journal of Career Assessment*, vol. 25, no. 1, pp. 40-57.

Tobias, RD 1995, 'An introduction to partial least squares regression,' *Proceedings of the twentieth annual SAS users group international conference, Cary: SAS Institute Inc*., pp. 1250-1257.

Truong, Q, Heijden, BIvD & Rowley, C 2010, 'Globalisation, competitiveness and human resource management in a transitional economy: The case of Vitenam', *International Journal of Business Studies*, vol. 18, no. 1, pp. 75-100.

Try, S 2005, 'The use of job search strategies among university graduates', *The Journal of Socio-Economics*, vol. 34, no. 2, pp. 223-243.

Tsitskari, E, Goudas, M, Tsalouchou, E & Michalopoulou, M 2017, 'Employers' expectations of the employability skills needed in the sport and recreation environment', *Journal of Hospitality, Leisure, Sport & Tourism Education*, vol. 20, pp. 1-9.

Tubergen, Fv 2011, 'Job search methods of refugees in the Netherlands: Determinants and consequences', *Journal of Immigrant & Refugee Studies*, vol. 9, no. 2, pp. 179-195.

UNESCO 2019, *Pakistan*, UNESCO Institute of Statistics, viewed 3 July 2019, <http://uis.unesco.org/en/country/pk>.

UoS 2019, *Our world university rankings*, viewed 7 July 2019, <https://sydney.edu.au/about-us/our-world-rankings.html>.

UTS 2019, *Our Graduate Attributes*, University of Technology Sydney, viewed 25 June 2019, <https://www.uts.edu.au/research-and-teaching/learning-and-teaching/curriculum-design/our-graduate-attributes>.

van de Mortel, TFh 2008, 'Faking it: Social desirability response bias in self-report research', *Australian Journal of Advanced Nursing*, vol. 25, no. 4, pp. 40-48.

van Hooft, EAJ, Born, MP, Taris, TW & van der Flier, H 2004, 'Job search and the theory of planned behavior: Minority–majority group differences in The Netherlands', *Journal of Vocational Behavior*, vol. 65, no. 3, pp. 366-390.

van Hooft, EAJ & De Jong, M 2009, 'Predicting job seeking for temporary employment using the theory of planned behaviour: The moderating role of individualism and collectivism', *Journal of Occupational and Organizational Psychology*, vol. 82, no. 2, pp. 295-316.

Van Hoye, G, Saks, AM, Lievens, F & Weijters, B 2015, 'Development and test of an integrative model of job search behaviour', *European Journal of Work and Organizational Psychology*, vol. 24, no. 4, pp. 544-559.

Vansteenkiste, M, Lens, W, De Witte, H & Feather, NT 2005, 'Understanding unemployed people's job search behaviour, unemployment experience and well-being: a comparison of expectancy-value theory and self-determination theory', *British Journal of Social Psychology*, vol. 44, no. Pt 2, pp. 268-287.

Vashisht, A, Pandey, DK & Pathak, R 2016, 'Education vs employability- the need to bridge the skills gap among the engineering and management graduates in Madhya Pradesh (India)', *Global Journal of Multidisciplinary Studies*, vol. 5, no. 5, pp. 72-76.

Veiga, SPdM & Gabriel, AS 2016, 'The role of self-determined motivation in job search: A dynamic approach', *Journal of Applied Psychology*, vol. 101, no. 3, pp. 350-61.

Vilorio, D 2011, 'Focused jobseeking: A measured approach to looking for work', *Occupational Outlook Quarterly*, vol. 55, no. 1, pp. 2-11.

Vinokur, AD & Schul, Y 2002, 'The web of coping resources and pathways to reemployment following a job loss', *Journal of Occupational Health Psychology*, vol. 7, no. 1, pp. 68-83.

Visser, PS, Krosnick, JA & Lavrakas, P 2000, 'Survey research', in HT Reis and CM Judd (eds), *Handbook of research methods in social psychology*, Cambridge University Press, New York.

Wanberg, CR 2012, 'The individual experience of unemployment', *Annual Review of Psychology*, vol. 63, pp. 369-96.

Wanberg, CR, Hough, LM & Song, Z 2002, 'Predictive validity of a multidisciplinary model of reemployment success', *Journal of Applied Psychology*, vol. 87, no. 6, pp. 1100-1120.

Wanberg, CR, Kanfer, R & Rotundo, M 1999, 'Unemployed individuals: motives, job-search competencies, and job-search constraints as predictors of job seeking and reemployment', *Journal of Applied Psychology*, vol. 84, no. 6, pp. 897-910.

Wanberg, CR, Watt, JD & Rumsey, DJ 1996, 'Individuals without jobs: An empirical study of job-seeking behaviour and reemployment', *Journal of Applied Psychology*, vol. 81, no. 1, pp. 76-87.

Wanberg, CR, Zhang, Z & Diehn, E 2010, 'Development of the “getting ready for your next job” inventory for unemployed individuals', *Personnel Psychology*, vol. 63, pp. 439-478.

Warraich, NF & Ameen, K 2011, 'Employability skills of LIS graduates in Pakistan: Needs and expectations', *Library Management*, vol. 32, no. 3, pp. 209-224.

Watts, AG 2006, *Career development learning and employability*, The Higher Education Academy, Learning and Employability Series 2.

Weerasekara, CM 2013, 'Determining factors of state university arts graduates' employability in Sri Lanka', *2nd International Economics Research Conference, Sri Lanka Forum of University Economists (SLERC - 2013), 13 – 14 December, 2013, Sri Lanka*, pp. 131-138.

Wickramasinghe, V & Perera, L 2010, 'Graduates', university lecturers' and employers' perceptions towards employability skills', *Education + Training*, vol. 52, no. 3, pp. 226-244.

Wong, CS & Law, KS 2002, 'The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study', *The leadership quarterly*, vol. 13, no. 3, pp. 243-274.

Wong, KKK 2013, *Partial Least squares structural equation modeling (PLS-SEM) techniques using SmartPLS*, Marketing Bulletin, Technical Note 1.

Wood, R & Bandura A 1989, ‘Social cognitive theory of organisational management’, *Academy of Management Review,* vol. 14, no. 3, pp. 361-384.

World Bank 2019, *Rural population (% of total population)*, The World Bank Group, viewed 5 July 2019, <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=PK&view=chart>.

Xie, B, Xia, M, Xin, X & Zhou, W 2016, 'Linking calling to work engagement and subjective career success: The perspective of career construction theory', *Journal of Vocational Behavior*, vol. 94, pp. 70-78.

Yang, H, Cheung, C & Fang, CC 2015, 'An empirical study of hospitality employability skills: perceptions of entry-level hotel staff in China', *Journal of Hospitality & Tourism Education*, vol. 27, no. 4, pp. 161-170.

Yorke, M & Knight, PT 2004, *Embedding employability into the curriculum*, Learning & Employability Series 1, The Higher Education Academy, UK.

Yusof, ZM, Misiran, M, Mahmuddin, M & Yasin, A 2014, 'A statistical analysis on employability among university graduate: A case study in Malaysia', *Research Journal of Applied Sciences*, vol. 9, no. 4, pp. 187-190.

Yuzainee, MY, Zaharim, A & Omar, MZ 2011, 'Employability skills for an entry-level engineer as seen by Malaysian employers,' *2011 IEEE Global Engineering Education Conference, EDUCON 2011*, pp. 80-85.

Zaharim, A, Omar, MZ, Yusoff, YM, Muhamad, N, Mohamed, A & Mustapha, R 2010, 'Practical framework of employability skills for engineering graduates in Malaysia', *Education Engineering (EDUCON)*, pp. 921-927.

Zahid, G, Hooley, T & Neary, S 2019, 'Careers work in higher education in Pakistan: current practice and options for the future', *British Journal of Guidance & Counselling*, pp. 1-11.

Zahra, ST & Malik, AA 2018, 'Relationship between self-concept and career maturity in Pakistani high school students', *Bahria Journal of Professional Psychology*, vol. 17, no. 1, pp. 1-16.

Zhao, X, Lynch, JG & Chen, Q 2010, 'Reconsidering Baron and Kenny: Myths and truths about mediation analysis', *Journal of Consumer Research*, vol. 37, no. 2, pp. 197-206.

Zikic, J & Saks, AM 2009, 'Job search and social cognitive theory: The role of career-relevant activities', *Journal of Vocational Behavior*, vol. 74, no. 1, pp. 117-127.

Appendix A - Survey Instrument

Survey Questionnaire

Modelling graduate employability: Causative factors for job search outcome in Pakistan

X1: When did you graduate?

☐ 2016 ☐ 2015 ☐ Other

X2: Major field of study

☐ Engineering ☐ Management Sciences

☐ Social Sciences ☐ Information Technology ☐ Other

Directions:

Please read each question carefully and respond by choosing an appropriate response.

Please ensure you answer all questions, however your participation is voluntary. If you feel uncomfortable, you may choose to withdraw your participation at any time. There are no right or wrong answer. The first response that comes to your mind is usually the best answer.

This questionnaire is divided into three parts.

Section A refers to questions regarding participant's personality, skills and competencies they had at the time of their graduation.
Section B refers to participant's job search outcome and satisfaction with their current job.
Section C refers to participant's background information and will be used for statistical purpose only.

Section – A

To answer the questions in this section, you have to think about your personality you had at the time of your graduation and rate your ***own ability to carry out each skill/ability/competency***.

Rate each item in this section on the scale of *1 = Poor to 5 = Excellent*;

Following items refer to **self-esteem** i.e., the evaluation which you make and maintain with regard to yourself

	Your ability/ possession of skill
Items	**Poor Fair Average Good Excellent**
A1: On the whole, I am satisfied with myself	☐ ☐ ☐ ☐ ☐
A2: At times I think I am no good at all*	☐ ☐ ☐ ☐ ☐
A3: I feel that I have a number of good qualities	☐ ☐ ☐ ☐ ☐
A4: I am able to do things as well as most other people	☐ ☐ ☐ ☐ ☐
A5: I feel I do not have much to be proud of*	☐ ☐ ☐ ☐ ☐
A6: I certainly feel useless at times*	☐ ☐ ☐ ☐ ☐
A7: I feel that I'm a person of worth, at least on an equal plane with others	☐ ☐ ☐ ☐ ☐
A8: I wish I could have more respect for myself*	☐ ☐ ☐ ☐ ☐
A9: All in all, I am inclined to feel that I am a failure*	☐ ☐ ☐ ☐ ☐
A10: I take a positive attitude toward myself	☐ ☐ ☐ ☐ ☐

Listed below items refer to your **self-confidence** i.e., your trust in your own skills, qualities and abilities to perform a specific task	
	Your ability/ possession of skill
Items	**Poor Fair Average Good Excellent**
B1: I feel self-confident	☐ ☐ ☐ ☐ ☐
B2: I'm confident I can meet the challenge	☐ ☐ ☐ ☐ ☐
B3: I'm confident about performing well	☐ ☐ ☐ ☐ ☐
B4: I'm confident because I mentally picture myself reaching my goal	☐ ☐ ☐ ☐ ☐
B5: I'm confident of coming through under pressure	☐ ☐ ☐ ☐ ☐

Following items refer to **self-efficacy** i.e., your belief in your ability to perform job search tasks effectively.	
	Your ability/ possession of skill
Items	**Poor Fair Average Good Excellent**
C1: I feel certain about my ability to get the job I want	☐ ☐ ☐ ☐ ☐
C2: I have what it takes to get a good job	☐ ☐ ☐ ☐ ☐
C3: I am certain that my job search will be successful	☐ ☐ ☐ ☐ ☐

Following questions refers to **Employability Skills.**	
	Your ability/ possession of skill
Items	**Poor Fair Average Good Excellent**
D1: Read and understand	☐ ☐ ☐ ☐ ☐
D2: Write effectively for a wide range of audience	☐ ☐ ☐ ☐ ☐
D3: Listen and understand	☐ ☐ ☐ ☐ ☐
D4: Speak effectively to communicate your point of view	☐ ☐ ☐ ☐ ☐
D5: Present effectively to a wide range of audience (presentation skills)	☐ ☐ ☐ ☐ ☐
D6: Identify problems	☐ ☐ ☐ ☐ ☐
D7: Analyse situation in relation to problem at hand	☐ ☐ ☐ ☐ ☐
D8: Think critically	☐ ☐ ☐ ☐ ☐
D9: Make an effective decision	☐ ☐ ☐ ☐ ☐
D10: Creative thinking	☐ ☐ ☐ ☐ ☐
D11: Bring innovation in work and solutions	☐ ☐ ☐ ☐ ☐
D12: Lead a group of people	☐ ☐ ☐ ☐ ☐
D13: Provide constructive feedback	☐ ☐ ☐ ☐ ☐
D14: Teach new skills to others	☐ ☐ ☐ ☐ ☐
D15: Take initiative	☐ ☐ ☐ ☐ ☐
D16: Work in a team setting	☐ ☐ ☐ ☐ ☐
D17: Support others in work	☐ ☐ ☐ ☐ ☐
D18: Cooperative with peers for work	☐ ☐ ☐ ☐ ☐
D19: Use modern tools	☐ ☐ ☐ ☐ ☐
D20: Operate modern software (relevant to my field of study)	☐ ☐ ☐ ☐ ☐
D21: Manage, interpret and use information using IT equipment	☐ ☐ ☐ ☐ ☐
D22: Plan and organise	☐ ☐ ☐ ☐ ☐
D23: Manage time	☐ ☐ ☐ ☐ ☐

D24: Multitask and deliver results on time	☐ ☐ ☐ ☐ ☐
D25: Work under pressure	☐ ☐ ☐ ☐ ☐
D26: Desire to gain knowledge while at workplace from peers and seniors	☐ ☐ ☐ ☐ ☐
D27: Desire to upgrade subject relevant skills by taking course or workshops	☐ ☐ ☐ ☐ ☐
D28: Speak a second language (other than mother-tongue)	☐ ☐ ☐ ☐ ☐
D29: Work with people from different cultures	☐ ☐ ☐ ☐ ☐
D30: Respect differences and accept others	☐ ☐ ☐ ☐ ☐

Following items refer to **emotional intelligence** i.e., your ability to emotionally relate to yourself or others to deal with social and environmental pressures.

	Your ability/ possession of skill
Items	**Poor Fair Average Good Excellent**
E1: Good sense of why I have certain feelings most of the time	☐ ☐ ☐ ☐ ☐
E2: Good understanding of my own emotions	☐ ☐ ☐ ☐ ☐
E3: Understanding of what I feel	☐ ☐ ☐ ☐ ☐
E4: Knowledge of whether or not I am happy	☐ ☐ ☐ ☐ ☐
E5: Knowledge of my friends' emotions from their behaviour	☐ ☐ ☐ ☐ ☐
E6: Good observation of others' emotions	☐ ☐ ☐ ☐ ☐
E7: Sensitive to others' feelings and emotions	☐ ☐ ☐ ☐ ☐
E8: Good understanding of the emotions of people around me	☐ ☐ ☐ ☐ ☐
E9: Setting goals for myself and then trying my best to achieve them	☐ ☐ ☐ ☐ ☐
E10: Assuring myself that I am a competent person	☐ ☐ ☐ ☐ ☐
E11: Self-motivating person	☐ ☐ ☐ ☐ ☐
E12: Always encouraging myself to try my best	☐ ☐ ☐ ☐ ☐
E13: Ability to control my temper and handle difficulties rationally	☐ ☐ ☐ ☐ ☐
E14: Capability of controlling my own emotions	☐ ☐ ☐ ☐ ☐
E15: Ability to always calm down quickly when I am very angry	☐ ☐ ☐ ☐ ☐
E16: Good control of my own emotions	☐ ☐ ☐ ☐ ☐

Following questions refer to **career development learning** i.e., learning that enables an individual to identify available opportunities, make informed career choices and present oneself effectively in front of prospective employers.

	Your ability/ possession of skill
Items	**Poor Fair Average Good Excellent**
F1: Awareness of my knowledge, abilities and skills and how to deploy them	☐ ☐ ☐ ☐ ☐
F2: Application of my strengths, goals and motivation while searching for job	☐ ☐ ☐ ☐ ☐
F3: Awareness of general trends and opportunities for graduate employment in my discipline	☐ ☐ ☐ ☐ ☐
F4: Awareness of requirements of graduate recruiters from job seekers	☐ ☐ ☐ ☐ ☐
F5: Ability to relate my knowledge, skills and strengths with different employment opportunities	☐ ☐ ☐ ☐ ☐
F6: Awareness of effective job search strategies	☐ ☐ ☐ ☐ ☐
F7: Application of my understanding of recruitment and selection methods to application	☐ ☐ ☐ ☐ ☐

F8: Ability to find relevant vacancy information including ways of accessing unadvertised vacancies	☐ ☐ ☐ ☐ ☐
F9: Tailoring my self-presentation in resumes and interviews to meet the specific job requirement	☐ ☐ ☐ ☐ ☐

Listed below items refer to **job search clarity** i.e., the clear idea of type of career, work or job desired by you	
	Your ability/ possession of skill
Items	**Poor Fair Average Good Excellent**
G1: Clear idea of the type of job that I want to find	☐ ☐ ☐ ☐ ☐
G2: Clear idea of the type of company I want to work for	☐ ☐ ☐ ☐ ☐
G3: Clear idea of where I want to work	☐ ☐ ☐ ☐ ☐
G4: Clear job search objectives	☐ ☐ ☐ ☐ ☐
G5: Need help to decide what type of work I would really enjoy	☐ ☐ ☐ ☐ ☐

Section – B

To answer the questions in this section, you have to think about your current personality, job search outcome and satisfaction with your job.

H: Following questions refers to **job search intensity**. For each item, indicate how many times you used each job search method in a week when you were looking for job.				
Job Search Method	**0**	**1-4**	**5-8**	**>8**
H1: Responded to job ads in newspaper	☐	☐	☐	☐
H2: Responded to online job ads	☐	☐	☐	☐
H3: Visited online job portals like seek.com.au	☐	☐	☐	☐
H4: Contacted friends or relatives to ask for possible job leads	☐	☐	☐	☐
H5: Contacted employment agency or recruiter to ask for possible job opening	☐	☐	☐	☐
H6: Contacted university's employment office	☐	☐	☐	☐
H7: Contacted a prospective employer yourself	☐	☐	☐	☐
H8: Attended a job fair	☐	☐	☐	☐
H9: Attended employer's visit to school	☐	☐	☐	☐
H10: Used social media (e.g. LinkedIn) to connect with employers and look for job	☐	☐	☐	☐

Following questions refer to you **job search outcome**.

I: Which of the following job search methods helped you to secure a job offer? (Mark the one that applies)

- ☐ Job ad in newspaper
- ☐ Online job ad
- ☐ Online job portal like seek.com.au
- ☐ Through social circle (friends, family, relatives or acquaintances)
- ☐ Employment agency or recruiter
- ☐ University's employment office
- ☐ By contacting prospective employer
- ☐ Job fair
- ☐ Employer's visit to school
- ☐ Social media (e.g. LinkedIn)

J: How many interview calls you received before accepting a job offer?	0	1-3	4-6	>6

K: How many job offer you received before accepting a job offer?	0	1-3	4-6	>6
L: How many months did it take you after graduation before you accepted a job offer?	_____ Months			

Items	Poor Fair Average Good Excellent
M1: My job is related to my field of study.	☐ ☐ ☐ ☐ ☐
M2: I am utilizing the technical skills I gained at university in my job.	☐ ☐ ☐ ☐ ☐
N1: I often thing about quitting	☐ ☐ ☐ ☐ ☐
N2: I will probably look for a new job in next 6 months	☐ ☐ ☐ ☐ ☐
O1: I am satisfied with my current job	☐ ☐ ☐ ☐ ☐
O2: I can see a career path for myself in my current job	☐ ☐ ☐ ☐ ☐

Following items refer to **social support** i.e., support provided by social circle (family, friends and colleagues) to you in terms of resources, information, empathy and encouragement while you were looking for job. Answer each item on the scale of *1 = Poor to 5 = Excellent*;

Items	Poor Fair Average Good Excellent
P1: The social support I received during job search process was sufficient	☐ ☐ ☐ ☐ ☐
P2: I am satisfied by the support I received from my family and friends while I was looking for job	☐ ☐ ☐ ☐ ☐

Section – C Background Information

For each of the following questions, please **tick one box** that is most appropriate response with regard to yourself.

Y1: Gender

☐ Male ☐ Female

Y2: Father's highest qualification

☐ Less than Grade 12 ☐ Grade 12 ☐ Bachelors' Degree
☐ Masters' Degree ☐ PhD ☐ Post-doctorate

Y3: Mother's highest qualification

☐ Less than Grade 12 ☐ Grade 12 ☐ Bachelors' Degree
☐ Masters' Degree ☐ PhD ☐ Post-doctorate

Y4: Province of residence (where you spent most of your life before entering university)

☐ Azad Jammu & Kashmir ☐ Baluchistan ☐ FATA
☐ Federal Capital Territory ☐ Gilgit-Baltistan ☐ Punjab
☐ Khyber Pakhtunkhwa ☐ Sindh

Y5: Cumulative GPA (at the time of graduation)

☐ Less than 2.5 ☐ 2.51-3.00
☐ 3.01-3.5 ☐ 3.5-4.00

Y6: How many years of work experience did you had at the time of graduation?

☐ None ☐ Less than 1 year
☐ Between 1 and 3 years ☐ More than 3 years

Appendix B - Project Information Sheet

Project Title: Modelling graduate employability: Causative factors for job search outcome in Pakistan

Team of Investigators

Ms Isra Sarfraz (Student Investigator)
Dr Diana Rajendran (Chief Investigator)
Dr Chandana Hewege (Co-investigator)
Dr Mohan Dass Mohan (Co-investigator)

Isra Sarfraz is a doctoral student at the Faculty of Business and Law, Swinburne University of Technology, Melbourne, Australia, studying job search behaviour of university graduates in Pakistan. The purpose of this project is to explore what skills and competencies students develop before their graduation to make their school-to-work transition easier.

We are seeking your assistance to identify the employability attributes (knowledge, skills and competencies) you developed before your graduation, the actual usefulness of these attributes during your job search process and your satisfaction with job search outcome. By providing us the above information, you will be helping us to develop a framework for effective job search outcome in Pakistan.

What you will be asked to do/What we want to know

For the purpose of this study, we want to know about the factors positively impacting job search outcome for university graduates in Pakistan. The employees working in Pakistani organisation who have graduated from Pakistani universities in past 18 months while studying full-time and on-campus are invited to complete an online questionnaire survey. The questions included in the survey relates to employability skills, career development learning, emotional intelligence, self-confidence, self-esteem, self-efficacy, job search clarity, social support, job search outcome and demographics. Survey will take approximately 25-30 minutes to complete.

Your rights and participation

Your participation in this study is completely voluntary. If you feel uncomfortable responding to any of the questions, or providing any information requested by the investigators, you have the right to withdraw from the study at any time during the survey. If you choose to withdraw from the survey, the information you have provided will be deleted and the researchers will not use your information.

By completing this survey, you are giving your consent to the investigator that any information collected through the survey may be used in research publications by SUT as long as I am not identifiable.

How we keep and publish data

Confidentiality: All electronic data and documents will be either stored electronically in a password protected computer/electronic device or in hardcopy format in a locked cabinet, depending upon the format they were received, to be used later in the study. Only the investigators identified in this application will have access to such data during this period. The data collected for this research project may be used for future publications or research that may result from the outcome of this research.

Research outcome: Research publications resulting from my thesis will be published as conference proceedings, journal articles, reports or newspaper articles. Anonymity of the participants will be assured, and data will only be reported collectively after statistical analysis.

The investigators will make available a summary of the thesis to participants at the conclusion of the doctoral thesis and the full thesis and publications that may arise out of this study can be made available to the individual on request.

How do I take part in the study?
If you are interested to participate in this study, kindly follow the link below:

http://opinio.online.swin.edu.au/s?s=18043

Who to contact

If you would like further information about the project, please contact:

Ms Isra Sarfraz (Student Investigator)
Faculty of Business and Law,
Swinburne University of Technology,
PO Box 218, Hawthorn, VIC 3122
Tel: 04 1337 6191
email: isarfraz@swin.edu.au

or

Dr Diana Rajendran (Chief Investigator)
Senior Lecturer in Management,
Faculty of Business and Law,
Swinburne University of Technology,
PO Box 218, Hawthorn, VIC 3122
Tel: 03 9214 4552
email: drajendran@swin.edu.au

For your rights please refer to http://ppd.swinburne.edu.au/humres/Privacy.htm

This project has been approved by or on behalf of Swinburne's Human Research Ethics Committee (SUHREC) in line with the *National Statement on Ethical Conduct in Human Research*. If you have any concerns or complaints about the conduct of this project, you can contact:

Research Ethics Officer, Swinburne Research (H68),
Swinburne University of Technology, P O Box 218, HAWTHORN VIC 3122.
Tel (03) 9214 5218 or +61 3 9214 5218 or resethics@swin.edu.au

Thank you for your time and support.

Ms Isra Sarfarz (Student Investigator), Dr Diana Rajendran (Chief Investigator),
Dr Chandana Hewege (Co-Investigator), Dr Mohan Dass Mohan (Co-Investigator)

Appendix C - Invitation for Participation

Research Participants Needed

Topic: **Graduate Employability: Examining the effect of various factors on job search outcome of graduates in Pakistan**

Researchers from Swinburne University of Technology, Australia would like to invite you to participate in a research study

<u>You are eligible to participate in this study if:</u>

- ✓ **You are a graduate of 2015 or 2016**
- ✓ **You have already found a job relevant to your qualification**
- ✓ **Your major field of study was in Engineering, Management, Information Technology or Social Sciences**

Your contribution will help us to understand the challenges faced by graduates while searching for a job. You can help future graduates to learn from your experience. The survey will take only 25-30 minutes of your time.

If interested in participating in this study, you can find more information at this link:

http://opinio.online.swin.edu.au/s?s=18043

For further questions, please contact Isra at isarfraz@swin.edu.au

Appendix D - Ethics Clearance Letter from SUHREC

Dear Diana,

SHR Project 2016/170 – Modelling graduate employability: Causative factors for job search outcome in Pakistan

Dr Diana Rajendran, Dr Chandana Hewege, Dr Mohan Dass Mohan, Ms Isra Sarfraz (Student) – FBL
Approved duration: 09-08-2016 to 25-11-2018 [Adjusted]

I refer to the ethical review of the above project by a Subcommittee (SHESC1) of Swinburne's Human Research Ethics Committee (SUHREC). Your response to the review as e-mailed on 2 August 2016 was put to the Subcommittee delegates for consideration.

I am pleased to advise that, as submitted to date, ethics clearance has been given for the above project to proceed in line with standard on-going ethics clearance conditions outlined below.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the *National Statement on Ethical Conduct in Human Research* and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project. Information on project monitoring and variations/additions, self-audits and progress reports can be found on the Research Internet pages.

- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact the Research Ethics Office if you have any queries about on-going ethics clearance, citing the Swinburne project number. A copy of this e-mail should be retained as part of project record-keeping.

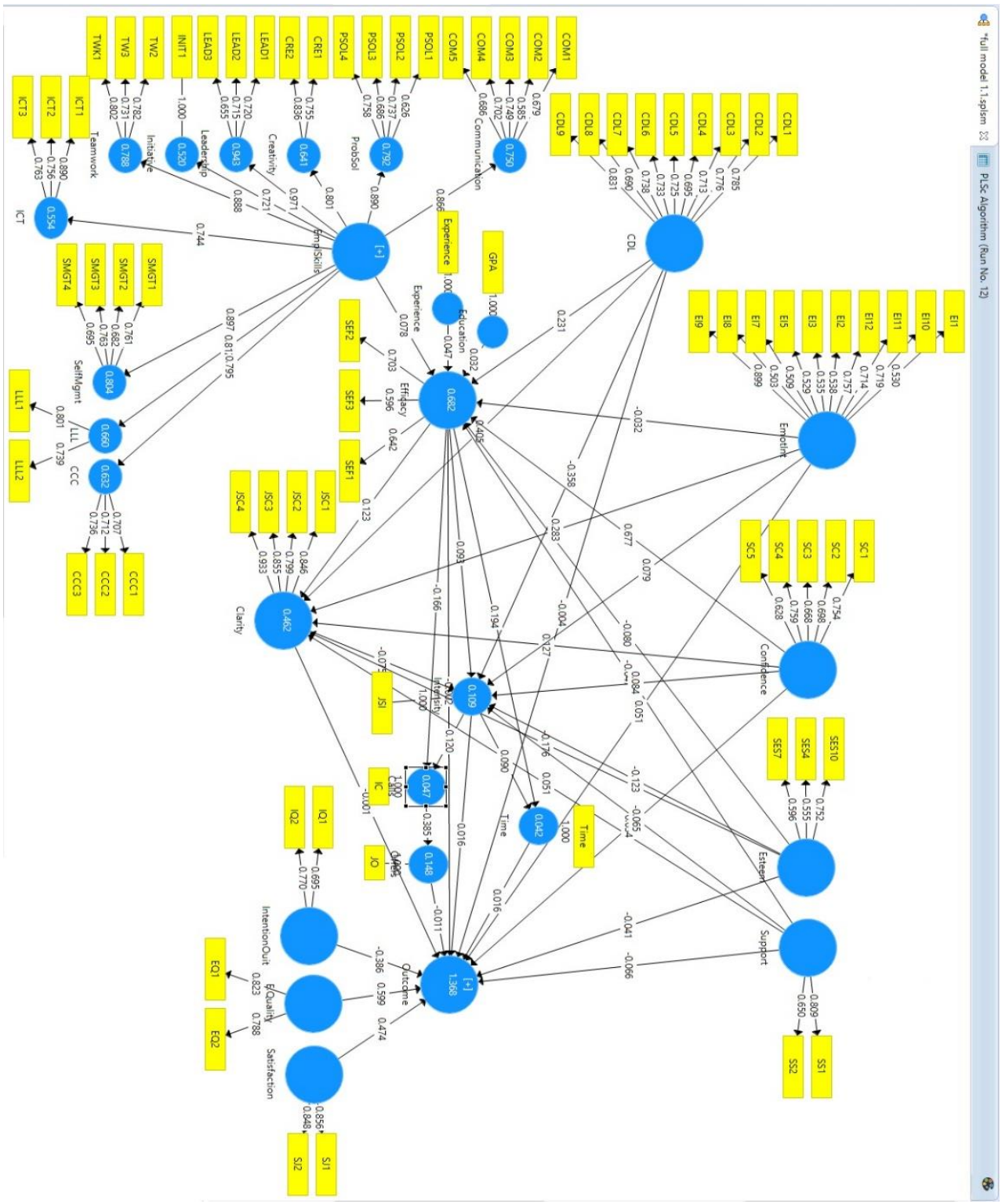
Please also note that the delegates would like it noted that ethics approval should be obtained prior to projects beginning regardless of whether or not data collection has commenced and that the reason why a list of projects weren't required to be submitted was so that the application could be prepared before the project started.

Best wishes for the project.

Yours sincerely,

Sally Fried
Secretary, SHESC1

Appendix E - Results of Assessment of Measurement Model



Appendix F - Results of Assessment of Structural Model