



**Investigating the Antecedents of Employees’
Entrepreneurial Start-Up Intention in Qatar’s
Oil and Gas Sector.**

A thesis submitted for the degree of Doctor of Philosophy

By

Salem Al-Halbadi

Brunel Business School

Brunel University London

December 2019

ABSTRACT

Entrepreneurial start-up intention (ESI) has come to dominate contemporary discourse on new business venture creation and enterprising culture. The purpose of this thesis is to explore the state of entrepreneurial start-up intention in Qatar. Focussing on employees working in the Qatari Oil and Gas industry, the study examines the impact of social norms and entrepreneurial expectancy on entrepreneurial start-up intention.

Employing a quantitative research methodology, a survey instrument was used for data collection. The empirical inquiry involved the testing of a conceptual framework derived from the Theory of Planned Behaviour (TPB) and Vroom's Expectancy Theory (VIE), using Structural Equation Modelling (SEM), based on data from 509 returned questionnaires.

Results from the study show that social norms indirectly influence entrepreneurial start-up intention by positively impacting individual's affective attitude. Further analysis demonstrates that entrepreneurial expectancy has a positive association with entrepreneurial start-up intention, as it has the potential to affect individuals' emotions, their perceived ability, confidence, and commitment to start a new business.

The thesis contributes to extending our understanding of the role of society and entrepreneurial expectation on individuals' propensity to start a new business. Overall, the current research study enhances existing literature in entrepreneurship by integrating TPB and VIE that offers a novel theoretical framework. It provides an enhanced understanding of how individuals are influenced by society and self-perceptions. Also, it provides substantial practical implications to governments, policymakers, and decision-makers by redesigning existing education programmes and training thus ultimately promoting entrepreneurial culture and improving business start-up and economy.

DEDICATION

I dedicate this PhD thesis to my love and beloved wife, for always believing in me and for always supporting me throughout the PhD journey.

ACKNOWLEDGEMENTS

Praise be to Allah the Almighty, the Creator of everything, and prayers and peace be upon the last of the Prophets and Messengers, Our Master Mohammed.

Firstly, I would like to express my deepest appreciation to all academic members especially Professor Raymond Hackney, Dr Wafi Al-Karaghoul, and Dr David Sarpong, who provided me with advice and help during my PhD journey.

Lastly, I would like to thank all my friends and colleagues who provided me with the support, help, and offered me a priceless friendship throughout my PhD journey.

DECLARATION

I hereby declare that this research study thesis represents my own work and produced to fulfil the requirements for the degree of Doctor of Philosophy at Brunel University London, United Kingdom.

In addition, following papers have been presented in the following form of publications:

Conference Papers

Al-Halbadi, S., Omer, A., Weerakkody, V. (2016) Nationalisation of Human Capital: The Impact of Culture on Professional Competencies in GCC Countries. Paper presented at the proceeding of British Academy of Management (BAM) Conference, Newcastle, United Kingdom.

Al-Halbadi, S. (2017) The Multi-Direction Impact of Social Norms on Entrepreneurial Start-up Intention. Paper presented at the proceeding of the Brunel University Conference, London, United Kingdom

Al-Halbadi, S. (2018) Investigating the Impact of Intention's Antecedent on Entrepreneurial Business Start-up Intention. Paper presented at the proceeding of Cognitive Perspective in Entrepreneurship research: Past, Present, and Future, IPAG Conference, Paris, France.

ABBREVIATIONS

RTA	Reasoned Theory of Action
TPB	Theory of Planned Behaviour
VIE	Vroom's Expectancy Theory
SCT	Social Cognitive Theory
SEE	Shapero's Entrepreneurial Event
PBC	Perceived Behavioural Control
ESE	Entrepreneurial Self-Efficacy
ESI	Entrepreneurial Start-up Intention
AA	Affective Attitude
CA	Cognitive Attitude
EI	Effort
SN	Subjective Norms
IN	Injunctive Norms
DN	Descriptive Norms
AGFI	Adjusted Goodness of fit Index
AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
EFA	Exploratory Factor Analysis
GFI	Goodness of fit index
IFI	Incremental Index of Fit
NFI	Normed Fit Index
PNFI	Parsimony Normed Fit Index
RFI	Relative Fit Index
RMSEA	Root Mean Square Approximation
RMR	Root Mean Square Residual
SD	Standard Deviation
SEM	Structural Equation Modeling
SPSS	Statistical Package for Social Sciences
x²	Chi square
x²/df	Normed chi square

TABLE OF CONTENTS

Chapter 1: Introduction	1
1.1 RESEARCH PROBLEM	4
1.2 CONTEXT OF THE STUDY	5
1.3 RESEARCH MOTIVATION	9
1.4 RESEARCH AIM AND OBJECTIVES	11
1.5 RESEARCH APPROACH	12
1.6 RESEARCH CONTRIBUTION.....	13
1.7 THESIS STRUCTURE.....	14
Chapter 2: Literature Review	17
2.1 INTRODUCTION.....	17
2.2 THE CONCEPT OF ENTREPRENEURSHIP.....	20
2.3 CENTRAL COMPONENTS OF ENTREPRENEURSHIP	25
2.3.1 <i>The Entrepreneur</i>	25
2.3.2 <i>Entrepreneurial Activity</i>	27
2.3.3 <i>Entrepreneurial Intention</i>	28
2.4 ENTREPRENEURIAL INTENTION MODELS.....	31
2.4.1 <i>Antecedents of Entrepreneurial Intention</i>	50
2.5 THEORIES OF ENTREPRENEURIAL INTENTION.....	61
2.5.1 <i>Social Cognitive Theory</i>	61
2.5.2 <i>Theory of Reasoned Action and Theory of Planned Behaviour</i>	63

2.5.3	<i>Vroom's Expectancy Theory</i>	66
2.6	CHAPTER SUMMARY	68
Chapter 3: Conceptual Framework and Relevant Theories		70
3.1	INTRODUCTION.....	70
3.2	DEVELOPMENT OF THE CONCEPTUAL FRAMEWORK.....	73
3.3	DEVELOPMENT OF HYPOTHESES	76
3.3.1	<i>Social Norms, Attitudes, PBC, and ESE</i>	76
3.3.2	<i>Entrepreneurial Expectancy, Attitudes, PBC, and ESE</i>	79
3.3.3	<i>Affective Attitude and Entrepreneurial Intention</i>	81
3.3.4	<i>Cognitive Attitude and Entrepreneurial Intention</i>	82
3.3.5	<i>Perceived Behavioural Control (PBC) and Entrepreneurial Intention</i>	83
3.3.6	<i>Entrepreneurial Self-Efficacy (ESE) and Entrepreneurial Intention</i> ...	83
3.3.7	<i>Effort and Entrepreneurial Intention</i>	84
3.3.8	<i>Independent Variables</i>	84
3.3.9	<i>Dependent Variables</i>	87
3.4	THEORIES ADOPTED IN THE CONCEPTUAL FRAMEWORK.....	90
3.4.1	<i>Theory of Planned Behaviour (TPB)</i>	90
3.4.2	<i>Vroom's Expectancy Theory (VIE)</i>	93
3.5	CHAPTER SUMMARY	96
Chapter 4: Research Methodology		98
4.1	RESEARCH PHILOSOPHY	98

4.1.1	<i>Positivism</i>	101
4.1.2	<i>Interpretivism</i>	102
4.1.3	<i>Critical Realism</i>	102
4.1.4	<i>Justification of Positivist Research Philosophy</i>	103
4.2	RESEARCH DESIGN.....	104
4.2.1	<i>Reliability</i>	106
4.2.2	<i>Validity</i>	108
4.3	RESEARCH APPROACH.....	108
4.3.1	<i>Qualitative Approach</i>	109
4.3.2	<i>Quantitative Approach</i>	110
4.4	RESEARCH STRATEGY.....	111
4.4.1	<i>Surveys</i>	112
4.4.2	<i>Pilot Testing</i>	113
4.4.3	<i>Sampling Strategy</i>	114
4.4.4	<i>Sample Size and Selection</i>	116
4.4.5	<i>Instrument Measurement</i>	121
4.5	DATA ANALYSIS.....	124
4.5.1	<i>Structure Equation Modelling (SEM)</i>	124
4.6	ETHICAL CONSIDERATION.....	125
4.7	CHAPTER SUMMARY.....	126
	Chapter 5: Results and Findings	128

5.1	PILOT STUDY RESULTS	128
5.2	THE MAIN STUDY SAMPLE DEMOGRAPHICS	131
5.3	DESCRIPTIVE STATISTICS	137
5.4	PRELIMINARY EXAMINATION.....	146
5.5	STRUCTURAL EQUATION MODELLING RESULTS	154
	5.5.1 <i>Confirmatory Factor Analysis CFA</i>	155
	5.5.2 <i>Structural Model</i>	162
	5.5.3 <i>Hypotheses Testing</i>	166
5.6	FINAL DEVELOPED FRAMEWORK	167
5.7	CHAPTER SUMMARY	169
Chapter 6: Discussion of Results and Findings		171
6.1	OVERVIEW	171
6.2	OUTCOMES OF HYPOTHESES TESTING.....	174
6.3	REVISED AND FINAL CONCEPTUAL FRAMEWORK	189
6.4	CHAPTER SUMMARY	194
Chapter 7: Conclusion		195
7.1	SUMMARY OF THE MAIN FINDINGS	195
7.2	CONTRIBUTION TO THEORY	201
7.3	CONTRIBUTION TO POLICY AND PRACTICE	203
7.4	DIRECTION FOR FUTURE RESEARCH.....	206
7.5	LIMITATION.....	207

References	210
Appendix A	CCXXVII
Appendix B	CCXLIV
Appendix C	CCXLV
Appendix D	CCXLVI

LIST OF TABLES

Table 2-1: Summary of Entrepreneurship Definitions in the Current Literature..	21
Table 2-2: Entrepreneurship Schools of Thoughts	23
Table 2-3: Definitions of Entrepreneurial Intention in the Extant Literature	29
Table 2-4: Summary of Entrepreneurial Intention Studies	40
Table 2-5: A Concept-Centric Summary of Entrepreneurial Intention.....	50
Table 2-6: Summary of Expectancy's Definition in the Extant Literature	59
Table 4-1: Summary of Current Research Choices.....	101
Table 4-2: Quantitative vs. Qualitative	109
Table 4-3: Demographics of Job Level and Company Specialisation	120
Table 4-4: Instrument Measurement	121
Table 5-1: Cronbach's Alpha (α) of Pilot Study Test	130
Table 5-2: Responses by Postal and Online Means vs. locations	132
Table 5-3: Respondent's Gender.....	133
Table 5-4: Respondent's Age.....	133
Table 5-5: Respondent's Work experience	134
Table 5-6: Respondent's Entrepreneurial status	134
Table 5-7: Respondent's Work status	135
Table 5-8: Respondent's Education level	136
Table 5-9: Respondent's Nationality	137
Table 5-10: Mean and Standard Deviation of ESI.....	138

Table 5-11: Mean and Standard Deviation of PBC	139
Table 5-12: Mean and Standard Deviation of AA	139
Table 5-13: Mean and Standard Deviation of CA	140
Table 5-14: Mean and Standard Deviation of EI	141
Table 5-15: Mean and Standard Deviation of EEX	141
Table 5-16: Mean and Standard Deviation of SN	142
Table 5-17: Mean and Standard Deviation of IN	143
Table 5-18: Mean and Standard Deviation of DN	144
Table 5-19: Mean and Standard Deviation of ESE	145
Table 5-20: Mean and Standard Deviation of all constructs	146
Table 5-21: Main Study Reliability Cronbach's Alpha	153
Table 5-22: Initial CFA Model Goodness of Fit Indices	158
Table 5-23: CFA Models Goodness of Fit Indices	160
Table 5-24: Average Variance Extracted and CR Values	161
Table 5-25: Final Structural Model Goodness of Fit Indices	165
Table 5-26: Default Model Goodness of Fit Indices	165
Table 5-27: Hypotheses Testing Results	166

LIST OF FIGURES

Figure 1.1: Map of the State of Qatar	6
Figure 2.1: Emotional Competencies and Cognitive Antecedents Model	32
Figure 2.2: Five-Factors of Personality and Entrepreneurial Intention Model	33
Figure 2.3: Shapero's Entrepreneurial Event Model (SEE).....	34
Figure 2.4: Extended Model of VIE Theory	37
Figure 2.5: Social Cognitive Theory (SCT).....	62
Figure 2.6: Theory of Reasoned Action (TRA)	64
Figure 2.7: Theory of Planned Behaviour (TPB).....	65
Figure 2.8: Vroom's Expectancy Theory (VIE)	67
Figure 3.1: Proposed Conceptual Framework.....	74
Figure 3.2: Theory of Planned Behaviour (TPB).....	91
Figure 3.3: Vroom's Expectancy Theory (VIE)	94
Figure 4.1: The Research Onion	100
Figure 4.2: The Research Design	105
Figure 5.1: Confirmatory Factor Analysis Initial Model	157
Figure 5.2: Confirmatory Factor Analysis Final Model.....	159
Figure 5.3: Hypotheses Testing Model	164
Figure 5.4: Final Developed Framework	168

Chapter 1: Introduction

Central to the entire discipline of economics is the concept of entrepreneurship so understanding the complexity of entrepreneurship is vitally important if a nation is to achieve a healthy, strong economy. Countries make huge efforts to foster economic growth by balancing their revenue, unemployment, and inflation (Leyden, 2016). However, entrepreneurship has become a key dominant factor associated with economy growth for nations and individuals (Renault, 2014). Entrepreneurship acts as a cornerstone that backs the evolution of any nascent economy by exchanging goods and services for revenues and contributes towards reducing the unemployment rate (Meyer, 2014). Globally, one way of measuring a nation's economy is by its gross domestic product (GDP) that refers to the sum of final produced products and services within a country in a year (Shakhovskaya, Ksenia and Klimkova, 2014). GDP is proportionally linked to the established number of firms, and its measurement concerns their contribution to the nation's overall outcome of goods and services (Williams, Bhanugopan and Fish, 2011). Thus, aiming at a healthy growing GDP means sustaining the country's revenue, which is associated with the total number of businesses within the country. In the same vein, nations become proactively interested in safeguarding and enhancing their economy by exploring the possible support for entrepreneurship, businesses, and entrepreneurs to ensure economic growth. This demands an understanding of the country's entrepreneurial environment and the factors that encourage individuals to become entrepreneurs, who play a role in forming businesses. A considerable amount of literature has been published on entrepreneurship. These studies describe the role of entrepreneurship and define it as a value creation process that entails founding a business by exploiting the market gaps to supply either goods or services in order to take advantage of opportunities and generate revenues (Sánchez, 2012; Mishra and Zachary, 2015; Fernández-Pérez *et al.*, 2017).

Although a growing body of literature has associated the entrepreneurship concept with innovation, other studies have deemed entrepreneurship as founding a firm as a consequence of an entrepreneur's behaviour that is driven by motivations, expecting benefits, society's influence, and other influential factors (Sternberg, 2009; Botsaris and Vamvaka, 2016).

Existing research recognises the fundamental role of entrepreneurial behaviour by determining its effect on forming a business, where a growing body of studies have witnessed a trend towards examining the prediction of such behaviour by investigating its predecessors such as the intention or the antecedents of an intention (Sivarajah and Achchuthan, 2013; Tipu and Ryan, 2016). Recent research has shown that the antecedents of intention play a vital role in leveraging the entrepreneurial intention that, in return, predicts entrepreneurial behaviour (Fernández-Pérez *et al.*, 2017). Although the establishment of a business is a result of entrepreneurial behaviour, forming a business is beyond the scope of innovation that is merely a behaviour resulting from a necessity or opportunity drivers (Thorgren *et al.*, 2016; Williams and Shahid, 2016).

Being an entrepreneur by necessity has become common recently due to inflation and the economic crises, such as the real estate bubble in 2007 and oil price fluctuations in 2015, that positioned a large number of individuals in the unemployment pool, and therefore the concept of self-employed "necessity" has gained popularity among individuals aspiring to establish their own secure source of income by forming a business (Barrell and Davis, 2008; Harms *et al.*, 2014; Baumeister and Kilian, 2015). Being an entrepreneur by opportunity, meanwhile, is deemed another matter that motivates individuals to form a business due to the expectation of revenues and rewards that constitute adequate extra income to improve one's living standard in a community. Furthermore, individuals who are already employed and recognise an opportunity and demand regarding products or services by visualising a reward from forming a business may become engaged in entrepreneurial activity partially, parallel to their existing full-time career, and this phenomenon is known as a "hybrid entrepreneur" (Thorgren *et al.*, 2016). This

phenomenon is relatively common in developing countries, where society values a full-time secure wage career. In these societies, employees are attracted to the idea of establishing a business prior to retirement and prefer to be a hybrid entrepreneur, firstly by saving and securing sufficient funds to start a business and aiming to generate an additional source of income, while this source may later become an alternative primary source of livelihood. Whether an entrepreneur by necessity or opportunity, success or failure will be the final destination of these entrepreneurial journeys, depending on a number of influential factors; both formal and informal institutional settings set “the rules of the game”, as do society’s influences, and individuals’ competencies’ capacity (North, 1992; Mandipaka, 2014).

On the other hand, an individual’s aspiration to be a full-time entrepreneur as a career choice in developing countries is still a new and exotic phenomenon that is struggling to earn society’s acceptance and approval (Thorgren *et al.*, 2016). Also, it is noted that these societies exert a considerable amount of public resistance regarding entrepreneurial behaviour due to society’s appreciation of full-time paid professionals, their prestigious role within society, and their constant, stable and secure source of income. In developing countries, society’s influence may advance and promote or even challenge such entrepreneurial behaviour, so it is difficult to disentangle the effects of society on forming a business as entrepreneurship does not operate in segregation. Thus, it is important to understand the positive relationship, the bilateral causal relationship and the mechanisms of the interaction between society and individuals with regard to entrepreneurship. However, investigating the deeper insights and interaction between society and individuals with regard to entrepreneurship has recently attracted the attention of academia and governments, who believe that entrepreneurs are the shapers of the future economy and key contributors to the structuring of the economy by exploiting opportunities and providing creative solutions while generating wealth to affect the broader economic conditions. Therefore, understanding what prevents individuals from becoming entrepreneurs or what are the influential factors that create entrepreneurial intention and support entrepreneurship are vitally important for

nations in order to enable them to implement the means that encourage entrepreneurship.

1.1 Research Problem

Establishing a business has pointed the importance of entrepreneurship for nations as it can secure a revenue stream, employment, and living standards for citizens based on a prestigious measure known as the economy. Particularly, in the case of developing countries, sometimes the economy is limited to and dependent on a single natural resource such as Oil and Gas, thus entrepreneurship represents a significant source of alternate income. According to recent studies on renewable energy, oil and gas do not constitute sustainable sources of energy in the long run (Jefferson, 2016; Jiang *et al.*, 2016), thus nations and individuals need to alternate sources of income for the future aiming to sustain a robust economy at both levels. Considering a significant body of literature in the entrepreneurship field, individuals perceive as risky the act of being an entrepreneur, influenced by several concerns such as acceptance by society, and self-confidence to scale-up a business following a start-up (Kreiser *et al.*, 2010; Ozaralli and Rivenburgh, 2016). Therefore, in the context of developing countries there is an increased amount of attention and interest in exploring and understanding the factors that influence individuals' behaviour towards forming a business as well as how to promote entrepreneurial activities in a society. Doing so, an in-depth understanding of individual's behaviour is essential as well as how the society can support entrepreneurship. However, predicting an entrepreneurial behaviour is influenced by a number of factors; one key factor is associated with the role of society and how it can impact individual's intentions that has not been adequately addressed in recent research in entrepreneurship. Therefore, there is an urgent need to address the factors that influence individuals intention towards starting up a business; in the present research study we focus on employees working in the Qatari Oil and Gas sector in term of their intention to start-up a business, where this sector is associated with a risk of facing unpredicted crises and recession (Jayawarna, Rouse and Macpherson, 2014).

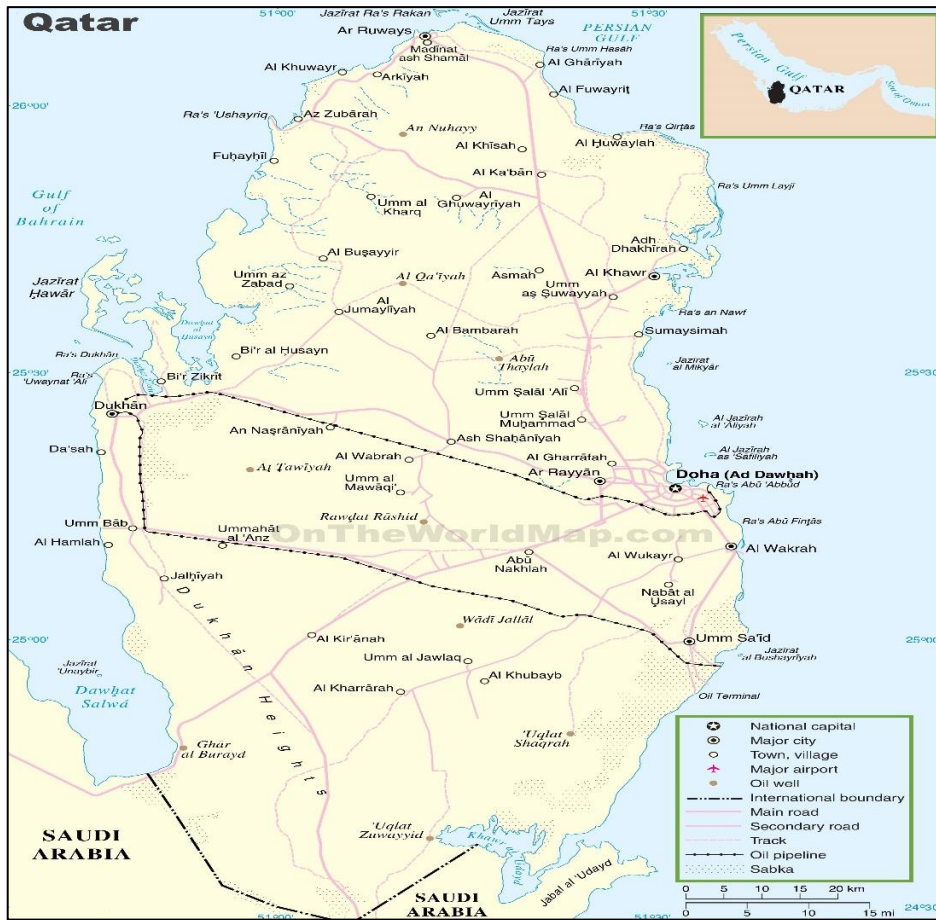
This research study seeks to investigate the antecedents of entrepreneurial intention to establish a business, noting that an individual's intention to start a business is

pressured by society's approval and reaction, and their perception of confidence, commitment, and ability are considered critical in behaving entrepreneurially. Aiming to obtain a better understanding of how individuals are motivated towards entrepreneurial behaviour and what is the role of the society in predicting such behaviour.

1.2 Context of the Study

The research study investigates the influential factors on entrepreneurial intention in a developing country, Qatar which is in the Middle East region. The State of Qatar is labelled as a developing country by the United Nations, and it is a developing country in some aspects such as education but not in gross domestic product (GDP) per citizen (Said *et al.*, 2018). The State of Qatar is a peninsula located on the Arabian Gulf (see figure 1.1), and it is one of the countries of the Gulf Cooperation Council (GCC). Qatar's land area is around 11,437 square kilometres (4,416 square miles). The capital of Qatar is Doha city. The people in Qatar are called Qataris and are considered as having Arab ethnicity. The official language is Arabic, while English is the second official language spoken. Qatar's workforce relies mostly on expatriates, who represent 86% of the total population and 94% of the workforce. In 2017, Qatar's total population was 2.6 million, where Qatari citizens made up 313,000 of the population (12%).

Figure 1.1: Map of the State of Qatar



(Source: On the world map, 2019).

Figure 1.1 shows a map of the state of Qatar with Doha city its capital, where half of the population lives. Qatar is one of the richest countries in the Middle East due to the heavy dependence on hydrocarbon production revenue of the petroleum and natural gas industries and, according to the International Monetary Fund, Qatar is rated the fourth highest GDP per capita.

In 2008, the Qatar National Vision (QNV) 2030 was launched. It provided the foundation for advancing the nation's development for long-term strategic economic growth and aims to leverage the living standards and develop a sustainable economy and environment. QNV 2030 rests on four pillars: human capital, social development, economic development and environment development. The first pillar, human capital, aims to develop locals to enable them to build a

prosperous society, while the second pillar, social development, aims to foster a caring society with high moral standards and maintain the national identity. The third pillar, economic development, seeks to promote a sustainable economy to encourage alternative sources of income for the nation that mainly depend on the hydrocarbon business. It aims to establish a diversified, competitive economy to secure the needs of the nation and its people in both the present and future. One of the challenges related to this is the private sector's development and its essential role within economic development, whereas this sector depends on individuals who play a vital role in contributing to the economy through the private sector by starting a business. Therefore, focusing on the human capital pillar by developing and supporting individuals to become entrepreneurs has been recognised as a critical factor in forming a nation where its entrepreneurs participate in its economy. The last pillar, environmental development, aims to create a sustainable environment based on a harmonious association between environment protection, social development, and economic growth.

Moreover, ensuring harmony between economic growth and social development requires understanding the deeper insights into what makes an economy grow and a society develop. As economy is akin to entrepreneurship, and the latter contributes to the development and growth of the economy, so researching the impacting factor within entrepreneurship becomes a significant engine in order to understand in-depth the details of what may enhance the economy and accelerate its development. From QNV 2030, the economic development pillar fosters a sustainable economy based on alternative sources of wealth and income in which Qatar currently depends heavily on the hydrocarbons industries. Therefore, developing the private sector is an important concern as this sector is ruled by individuals who establish firms that participate in making the economy more sustainable and independent. On the other hand, the human capital pillar is linked to this matter by improving the skills and competencies of individuals who eventually become entrepreneurs. Therefore, it is important to the economy that entrepreneurs perform the expected behaviour through establishing firms that create revenues and income to improve the nation's economy.

In June 2017 the State of Qatar was placed under a political blockade by its neighbouring countries, which situation forced Qatar to move towards being independent in terms of resources. This means that all aspects, such as food and beverage manufacture, have become vital for the nation to survive and fulfil all of its needs. Also, this fostered extra interest in creating entrepreneurs from individuals to drive entrepreneurship towards achieving an independent economy, thus enhancing individuals' living standards. Therefore, this research is considered important to the government of Qatar in order to understand how individuals are influenced by the society and can develop the capability and belief in rewards that shape their entrepreneurial intention.

Therefore, the present research study considers the causes of both social development and economic growth and aims to investigate the influential factors on individuals in order to gain a better understanding of the concept and what can pressure and encourage individuals that ultimately results in economic growth and social development through the private sector's role in establishing new businesses. Thus, the aim of the present research is to contribute to a better understanding of the influential factors and entrepreneurial intention by providing knowledge to academia and the decision makers that will make it possible to direct the development of society and comprehend the essential economic drivers of individuals within the private sector regarding establishing a business.

Moreover, in Qatar, most of the individuals who have started a business have shown that they run it in conjunction with a full-time job, which indicates that being an entrepreneur is not considered a full time-job. This becomes an issue, as it results in a lack of full engagement with owned firms and causes failing and continuity issues within the business. Several causes could be noted in this stream; the main one is the society in Qatar, which is not yet sufficiently developed to accept individuals being full-time entrepreneurs due to the risk associated with this. The other causes are the belief in one's ability and the level of confidence about succeeding, as skills and competencies become vital in term of running a business and managing people within a firm. Therefore, these facts result in a society that

prefers hybrid-entrepreneurs to secure income sources for individuals who will not suffer if establishing a business ends in failure. Despite the career choice of individuals, being a full-time entrepreneur is a new concept within Qatar society.

The idea of individuals establishing a business has become attractive to the government of Qatar, who envision it as a supplementary source of national income. Thus, entrepreneurship and entrepreneurs are empowered to perform effectively to influence the national economy. Therefore, the present research study considers it essential to understand and examine the bilateral causal relationship and the mechanisms of the interaction between an individual's willingness and competencies with their society in a nation.

1.3 Research Motivation

In developing countries, where the income sources are limited, the aim of securing a robust economy become challenging. Therefore, alternative sources of income become a fruitful objective to sustain a nation with a prosperous living standard. However, entrepreneurship is recognised as one of the vehicles that leverage the economy, where entrepreneurs participate in the structuring of the economy by exploiting opportunities and providing innovative and creative solutions in order to generate wealth and positively affect the broader economic conditions (O'Connor, 2013).

On the hand, providing training and funding support to empower entrepreneurs seems to be limited to financial knowledge that equips individuals with an understanding of business performance on the balance sheet, but lacks a focus on developing self-confidence and the ability to consider matters that contribute to starting up a business. One of these matters is what are the critically influences on individuals' self-belief and expectation perceptions, while the other main matter is the society, where individuals operate and envision their entrepreneurial journey. Therefore, investigating this ambiguous gap will help us to understand these critical

factors and their influences on individuals, so that education programmes and awareness campaigns can be designed to fill these gaps.

There is a growing body of literature that recognises the importance of individuals in setting up a business, but limited research has adopted the critical influential factors on individuals (Fernández-Serrano and Francisco, 2014). In the same vein, the research tests the theories, such as the theory of planned behaviour (TPB), Shaper's entrepreneurial event (SEE), and social cognitive theory (SCT) (Krueger, Reilly and Carsrud, 2000). Despite the successful application of the aforementioned theories in several studies, they fail to provide the missing information, such as the full impact of society, whereas a focus on subjective norms that concern the approval of close family members is expressed. Furthermore, a behaviour that is performed within a society may play an influential role on the individuals with in and result in the copying of such behaviour. In the literature, such influence from society is known as a descriptive norm, and most of the studies in entrepreneurship have neglected this norm (Chung and Rimal, 2016). Similar to this descriptive norm, an injunctive norm in a society demonstrates the amount of encouragement and support that the society can give individuals to perform a behaviour in question. Again, this type of norm has been investigated by very limited studies that concern entrepreneurial intention (Cantner, Goethner and Silbereisen, 2016). In addition, a few studies have indicated that the outcome of starting a business, such as revenue, is a vital concept but unfortunately the evidence for adopting such a concept is limited (Kiatkawsin and Han, 2017). Despite the recent consideration of the cognitive aspect within entrepreneurial theory, very few studies have adopted this trend, so cognitive aspects such as cognitive attitude remain new and unclear and arguments among scholars still continue regarding its impact.

Based on the previous two paragraphs, the researcher was motivated to enhance the academia knowledge about the concept of entrepreneurial intention and its influential antecedent factors' impact as well as to cover the gaps identified in the extant literature. Understanding these missing factors will provide a better understanding for the government and decision-makers for redesigning the current

syllabus and education programme to meet the actual current needs in order to help and support the creation of more entrepreneurs within the nation to support its overall economy.

1.4 Research Aim and Objectives

The main aim of this research is to examine the critical main influential factors, such as society's impact and individuals' expectation of rewards, on the entrepreneurial intention to start a business. In fulfilling this aim, it is important to answer the following research question (RQ):

RQ: What are the key influential factors that impact entrepreneurial intention to start-up a business among employees working in the Oil and Gas sector in the state of Qatar?

In addition, to achieve the aim of the research study, the following objective were formed as:

Objective 1, to conduct a comprehensive and to examine critically the literature on entrepreneurial start-up intention to understand in-depth the key impacting factors on individuals' entrepreneurial intention.

Objective 2, to develop a conceptual framework and hypotheses recognising and capturing key impacting antecedents of entrepreneurial start-up intention.

Objective 3, to formulate the methodological approach to guide the research study and the collection of empirical data.

Objective 4, to test the conceptual framework and the proposed hypotheses to empirically validate the research study's findings.

Objective 5, to revise the conceptual framework and formulate a set of theoretical and practical implication and future recommendation for entrepreneurial start-up intention in Qatar.

To achieve the research study's aim, five objectives were set to determine whether the influences and relationships among entrepreneurial intention's antecedents provide a better understanding of creating entrepreneurs.

1.5 Research Approach

The research approach is a quantitative approach using a survey involving an online and postal questionnaire as the data collection method. The research study proceeds in several stages; the first stage will include a systematic literature review on the antecedents of entrepreneurial start-up intention in the existing validated theories used in entrepreneurial studies in order to understand in depth the investigated subject and determine the theoretical lens that will be used in the current study.

In the second stage, a conceptual framework will be developed, outlining the relationships among the selected constructs and defining the hypotheses that will be tested after collecting the data.

In the third stage, a survey will be developed using a questionnaire that will be distributed through e-mail, social media, and post to the target respondents of 850. Before the main survey, a pilot survey will take place to test the instrument, check its validity and reliability, and incorporate the feedback of the respondents by implementing any required changes.

Following the data collection process, the Statistical Package for Social Science (SPSS) version 20 will be used to analyse the data as well as to conform the reliability and validity and so verify the consistency of the collected data. Then, Structural Equation Modelling (SEM) will be used to test the proposed hypotheses regarding the relationship between social norms and expectancy's impact on entrepreneurial start-up intention, thus evaluating the proposed conceptual framework (Figure 3.1).

1.6 Research Contribution

Although there is evidence from the current literature that the antecedents of entrepreneurial intention have been investigated, limited empirical research has examined the critical influential factors on the entrepreneurial intention to start a business (Usaci, 2015; Botsaris and Vamvaka, 2016; Feola *et al.*, 2017). The creation of entrepreneurial intention predicts entrepreneurial behaviour and therefore it is important to understand the relationship that connects society and individuals in order to initiate such behaviour (Fernández-Pérez *et al.*, 2017).

The aim of the research study is to investigate in-depth the antecedents of entrepreneurial intention to uncover factors that have been neglected by the extant literature to date (Van Eerde and Thierry, 1996; Gatewood *et al.*, 2002; Renko, Kroeck and Bullough, 2012). Therefore, the research study aims to contribute to academia by making the first attempt to integrate two well-known theories: the theory of planned behaviour (TPB) and Vroom's expectancy theory (VIE) into a single framework, as well as to uncover the significance of society's influence and individuals' expectation of rewards and define the cognitive factors that influence entrepreneurial intention.

The theoretical contribution of the research study to the current literature will be to identify critical determinants as the antecedents of entrepreneurial intention to enhance the current academic understanding of the entrepreneurial intention concept related to starting a business (Goethner *et al.*, 2012; Cantner, Goethner and Silbereisen, 2016). These critical factors will include society's full perspectives, such as subjective, descriptive, and injunctive, as well as individuals' beliefs and perceptions of outcomes as an entrepreneurial expectancy, where the attitude specificities include: affective and cognitive attitudes. Another contribution will be integrating TPB and VIE to capture the aforementioned factors in a single framework and to clarify the role of entrepreneurial expectancy and society's influences when forming a business.

On the other hand, the research study aims to provide practical implications by uncovering the potential skills that require attention from decision-makers and the government in order to enhance individuals' ability to adopt entrepreneurial behaviour. Thus, redesigning the current education programme and training is required to make them "fit-for-purpose". Also, the research study will clarify the role of society, that is not fully expressed in the literature, in order to provide a better understanding of society's influence and a better interacting technique to benefit from a society within a developing country. Thus, policymakers and decision-makers may sight society in a better detailed understanding that will contribute towards developing an enhanced awareness campaign that encourages entrepreneurship within society.

1.7 Thesis Structure

This research study consists of seven chapters and is structured as follows:

Chapter 1 provides an introduction to the research study field by providing a background of the research study, highlighting the current research problem and outlining the research study's agenda in term of context of the study, motivation, research aim, research objectives, research approach, and research contribution. The aim of chapter 1 is to present the importance of entrepreneurial start-up intention by introducing and identifying the influential factors related to society and individuals regarding establishing a new firm. Moreover, the chapter outlined the research gaps and need to investigate the critical factors in order to add to the current knowledge, as extant research is limited in the field of entrepreneurial intention. The research question is presented to serve the research aims and objectives. Then, the chapter concluded by outlining the research's expected contribution and methodological approach by presenting the thesis' structure and an outline of the ensuing six chapters.

Chapter 2 presents a comprehensive and systematic literature review of the relevant existing research aiming to investigate the research study's concepts of

entrepreneurial start-up intention and recognise the factors that influence such a concept, thus it will accomplish objective 1 and objective 2. At first, chapter 2 provides a better understanding of the concept of entrepreneurship and its benefits to economy, society, and individuals in terms of contributing to the local economy, offering jobs by reducing the unemployment rate, and creating sources of primary and alternative income for individuals. In addition, chapter 2 provides an overview of the existing definitions of the investigated concepts entrepreneurship, entrepreneur, entrepreneurial activity, and the intention to start a business from the extant literature as well as presenting a comprehensive overview of the existing studies on the concepts within the entrepreneurship field. The research study identifies the research gap in the literature review in chapter 2, which demonstrates the lack of a cohesive theoretical model for understanding the importance of a complete presentation of social norms in society and the perception of individuals in expecting rewards when establishing a business

Chapter 3 discusses and presents the research study's initial conceptual framework based on the literature review in chapter 2. Chapter 3 provides the necessary theoretical foundation to build the proposed theoretical framework, aiming to contribute towards a better understanding of individuals' derived influences and motivation with regard to planning to start a business. The proposed framework represents the integration of two theories: the theory of planned behaviour (TPB) and Vroom's expectancy theory (VIE), thus it will accomplish objective 3 and part of objective 4 of this research.

Chapter 4 explains and discusses the entire research process employed for the current research study as well as discussing the justification for the selected method, approach, and the technique for the data collection and data analysis process. It outlines the three different types of philosophies and discusses the justification for selecting the epistemology philosophy while also presenting the research paradigms. The chapter also provides a clear distinction between the research approaches and selects the quantitative approach as the most appropriate one for collecting the data for the current research study targeting a sample size of

850. It explains the use of research approach tools in collecting data and includes the pilot study protocol for the targeted sample size of 50 to check the reliability and validity of the constructs in order to confirm consistency of the measured concepts. The chapter explains the adopted type of sampling technique as non-probability sampling and provides a justification for selecting convenience non-probability sampling. Also, it covers the ethical considerations and acknowledgements that will be considered prior to conducting the research study.

Chapter 5 presents and discusses the results of the data analysis underpinning the empirical enquiry. Firstly, it reveals the findings from the pilot study test. Secondly, it presents the results of the main study that include demographics, preliminary examination, descriptive statistics, and a reliability test. All of the initial tests were conducted using SPSS version 20. The sample demographics represent the target sample as experienced employees in the Oil and Gas industry in Qatar. Thereafter, the result of the structural equation modelling using AMOS version 23 will reveal the figure of goodness of fit (GOF) and construct validity that indicates that the average variance extracted (AVE) of all of the constructs are above the minimum required (0.50). Finally, 14 hypotheses will be tested, thus revealing the final developed framework of the research study, depicting the supported hypotheses. In chapter 5, part of objective 4 of the research study will be accomplished.

Chapter 6 provides a critical discussion of the results and synthesises each hypothesis with the existing literature. This chapter includes a presentation of a revised developed version of the conceptual framework.

Chapter 7 presents a summary of the main findings and provides the substantial theoretical implications and practical implications that emerged from the present research study. Also, it indicates the limitations of the research study and provides avenues for future research.

Chapter 2: Literature Review

This chapter provides a critical and in-depth analysis of the literature review on the concept of entrepreneurship, focusing on entrepreneurial intention and its antecedents. This chapter is divided into six main sections. Section 2.1 provides an overview of entrepreneurship and its benefits. Section 2.2 presents a background to the concept of entrepreneurship. Section 2.3 outlines the central components of entrepreneurship and is subdivided into three subsections: section 2.3.1 the entrepreneur, section 2.3.2 entrepreneurial activity, and section 2.3.3 entrepreneurial intention. Section 2.4 provides an overview of the entrepreneurial intention models adopted in the extant literature, and its subsection 2.4.1 presents the influential factors on intention from the literature. Section 2.5 provides the theories adopted in the field of entrepreneurial intention and is subdivided into four sections; section 2.5.1 social cognitive theory, section 2.5.2 theory of reasoned action and theory of planned behaviour, section 2.5.3 Shapero's entrepreneurial model, and section 2.5.4 Vroom's expectancy theory. Section 2.6 provides the chapter summary.

2.1 Introduction

Over the past three decades, there have been rapid advances in the field of entrepreneurship due to its substantial contribution to the economy, wealth creation and job creation (Renault, 2014; Shakhovskaya, Ksenia and Klimkova, 2014; Doblinger, Dowling and Helm, 2016). Entrepreneurship has received increased interest among scholars in the field of business management and economics aiming to understand the concept as well as the associated factors of entrepreneurship in order to distinguish causes of developing an entrepreneurial activity as entrepreneurship is recognised as a critical source of economy development in most countries (Kuratko, Morris and Schindehutte, 2015). Entrepreneurship is not a new

phenomenon and traditionally at individual-level the term has been used to merely reflect “doing a business” as a career choice to generate income out of an activity associated with trade of products or services; however, recent research studies have advanced the complexity of entrepreneurship into investigating factors that motivate individuals to become an entrepreneur (Iakovleva, Kolvereid and Stephan, 2011; Fernández-Pérez *et al.*, 2017). Despite the importance of entrepreneurship concept that is represented as a vehicle of driving economy at individual-level and country-level, entrepreneurship has several obstacles. One of the main obstacles is the society acceptance on behaving entrepreneurially, where some societies view entrepreneurship as a risky concept, where an individual (entrepreneur) is assumed to have no secured source of income to support his household costs due to risk involvement in uncertain future (Thorgren *et al.*, 2016). Recently, there has been a surge of interest by a number of research studies encouraging to scrutinise components of entrepreneurship such as entrepreneurs and entrepreneurial activity as well as factors that encourage entrepreneurship (Simmons, Wiklund and Levie, 2014; Obschonka, 2016). Whether entrepreneurial activity is motivated by a necessity as a career choice or as an option to create wealth, several research studies conceptualise entrepreneurship as “forming a business” (Mandipaka, 2014; Rueda, Moriano and Liñan, 2015; Shah, 2015).

There is a growing body of literature that recognises the concept of entrepreneurship as a process of launching a business associated with an entrepreneur, innovation and risk (Sauka and Chepurenska, 2017; Turan *et al.*, 2017). Entrepreneurship offers significant benefits, both to society and to individuals, constituting in creating a sustainable economy and alternative income options, reducing the rate of unemployment by creating more jobs and ultimately contributing to a nation’s overall GDP per capita (Hossain *et al.*, 2009; Yousafzai, Saeed and Muffatto, 2015). From the wealth creation perspective, individuals who intentionally choose to become entrepreneurs and intend to start-up a business expect rewards to be gained throughout this activity (Barba-Sanchez and Atienza-Sahuquillo, 2017). These rewards can be seen in alternative income sources, an improvement in their living

standards and welfare as well as career aspirations, such as self-employment (Ojo and Oluwatayo, 2015; Barba-Sanchez and Atienza-Sahuquillo, 2017).

To a large extent, the literature envisages entrepreneurship as a process of business formation, where the central element is the entrepreneur (Feola *et al.*, 2017). In order to address the role of entrepreneurs in this business formation, researchers have focused on an individual's entrepreneurial behaviour, leading them to investigate entrepreneurial intention that predicts an entrepreneurial action, such as starting-up a business. Entrepreneurial intention constitutes a very important concept that requires a deep understanding and investigation along with the factors that affect it (Van Gelderen, Kautonen and Fink, 2015). To date, the literature in the field of entrepreneurship has adopted and discussed different models and approaches, such as entrepreneurship education or institutional settings, for developing more and better entrepreneurs, and these approaches focus mainly on the environment in which entrepreneurship is encouraged and operated (Honig and Samuelsson, 2012; García-Rodríguez *et al.*, 2015). In order to address the behavioural intention at the individual level and the factors that influence individuals to start-up a business, recent research has been directed towards behavioural approaches to identify critically the development of entrepreneurial intention at the individual level (Biraglia and Kadile, 2017). However, the determination to form a business is driven by the individual's expectation of a reward, that will result in either self-employment and independence or extra income to create wealth to support the living standards in society (Thorgren *et al.*, 2016). This research is focused on investigating influential factors from the social and individual aspects that contribute to the development of entrepreneurial intention. This will include reviewing the theories and models related to business management, behavioural and psychological approaches in the entrepreneurship field, which has been used to assess entrepreneurial intention.

As mentioned in chapter 1, this study investigates a specific developing economy, namely the State of Qatar, and the impact of society (social norms) and individual's beliefs of the expected gain from entrepreneurial activity. Furthermore, this study

draws attention to the literature on the entrepreneurship concept, entrepreneur, and entrepreneurial intention, where a review of intention's antecedents, theories and models related to entrepreneurial intention has been conducted.

2.2 The Concept of Entrepreneurship

During the seventeenth century, Richard Cantillon (1755) provided the earliest description of Entrepreneurship and recognised the term 'entrepreneur' as an agent who buys and sells a product at different prices, thereby creating a premium 'profit' (Brouwer, 2002; Bloch, 2012; Aubry, Bonnet and Renou-Maissant, 2015). According to Knight (1921), entrepreneurship is defined as successful future prediction ability. Schumpeter (1936) claims that entrepreneurship involves "carrying out new combinations" by using innovation as a key to introducing new goods or new methods in manufacturing products or new sources of raw materials. As a result, the concept of entrepreneurship seems to be imprecisely defined; as Knight (1921) describes it as a skill and competencies of individuals and does not count the risk factor, where Schumpeter (1934) describes it as a production process aiming to generate profit. Furthermore, according to Cole (1968), entrepreneurship is a state of purposeful activity which is profit-oriented by looking at reward gain as a driver of the whole activity, implying that a reward acts as the main motivation.

More recent definitions have changed the understanding of the concept of entrepreneurship by incorporating also the role of the entrepreneur into the definition. Mishra and Zachary (2015) define entrepreneurship as a process of value creation, driven by entrepreneurs creating value out of an entrepreneurial activity within an unstable environment and thus incorporating the concept of risk in the definition. On the other hand, according to Ruiz et al. (2016, p.1029), entrepreneurship is:

"founding a new business organization, or expanding an existing business. Any attempt at creating a new public initiative ... Any attempt at innovation, such as launching new products or services, new strategic development, new organization of resources, entering new markets, creating new sectors, social development, or any other action that adds economic or social value".

Different definitions exist in the current literature conceptualising the term ‘entrepreneurship’, where some studies tend to define it as the skills and competencies of individuals, such as innovative action, that results in introducing new products or new innovative production processes, while others view it as a process of value creation, recognising the role of the entrepreneur and the risk involved. Furthermore, the following Table 2.1 presents the various definitions of entrepreneurship derived from the existing literature.

Table 2-1: Summary of Entrepreneurship Definitions in the Current Literature

Source	Definition	Focus
Shane and Venkataraman (2000)	The creation of goods or services by discovering opportunities.	Opportunities
Laboratories (2006)	A process of pursuing opportunities to create goods and services	Opportunities
Sánchez (2012)	Creating services or goods for customers	Value Creation
Walker et al. (2013)	Starting up a new firm	Business Start-up
Hamza (2013)	A process that resulted of establishing a venture through a risky environment by management of resources and identifying opportunities.	Opportunities
Schlaegel and Koenig (2014)	The activity involved by individual's planning to start-up a business	Business Start-up
Mishra and Zachary (2015)	Value creation process involves entrepreneur and risk	Value Creation
Turan et al. (2017)	A concept that involve all related activities to an entrepreneur such as risk-taking, recognising opportunities, innovation and effort.	Opportunities
Sauka and Chepureenko (2017)	The process of founding a business	Business Start-up

Eshghiaraghi et al. (2017)	A process of value creation by combining resources in order to take advantage of an opportunity	Opportunities
Fernández-Pérez et al. (2017)	An activity that involve an entrepreneur who forms an entrepreneurial mind to start business	Business Start-up
Tur-Porcar et al. (2018)	A process of creating financial or social rewards by exploiting market gaps	Value Creation

As evident from Table 2.1, it becomes apparent that there is no universal definition of entrepreneurship. Some of the studies view entrepreneurship as forming a business or opportunities-driven process to initiate a business, where others view the concept as a motivation process driven by outcomes expectation, such as financial or social rewards.

Drawing on the concept of entrepreneurship, a number of schools of thoughts have investigated the concept and adopted a different set of beliefs and this is presented with their research focus and respective entrepreneurial activity, see table 2.2 (Zainol *et al.*, 2018). These school of thoughts are; the Great Person School of Entrepreneurship, the Psychological Characteristics School of Entrepreneurship, the Classical School of Entrepreneurship, the Management School of Entrepreneurship, the Leadership School of Entrepreneurship, and the Intrapreneurship School of Entrepreneurship.

The Great Person School of Entrepreneurship considers entrepreneurs as people that are born with specific traits and intuition able to recognise opportunities as well as undertake risk involving decisions. According to the Psychological Characteristics School of Entrepreneurship, an individual's behaviour is a consequence act of his attitudes, beliefs and values such as honesty, responsibility, and risk-taking as well as driven by the need for achievement. These values differentiate entrepreneurs from other people and cannot be developed in a classroom but are gained by interacting with society and business environment.

The Classical School of Entrepreneurship describes entrepreneurship as a process of creating or discovering opportunities encompassing the elements of innovation and creativity that distinguish entrepreneurs from managers. The Management School of Entrepreneurship believes that entrepreneurship is a process that involves technical aspects of management where entrepreneurs are developed through training by enhancing their management capabilities.

The Leadership School of Entrepreneurship believes that an entrepreneur depends on others to achieve his goals; considering them as leaders who can manage, coach and motivate other people to accomplish tasks. At last, the Intrapreneurship School of Entrepreneurship adopts the perspective that entrepreneurship is a process that encourages creativity and innovation among employees in an organisation enabling them to discover opportunities and allow business growth and diversity (Cunningham and Lischeron, 1991; Zainol *et al.*, 2018).

Table 2-2: Entrepreneurship Schools of Thoughts

School of Thoughts	Research Focus	Entrepreneurial Activity
The Great Person School of Entrepreneurship	Personal Qualities (Trait Approach)	Start-up
The Psychological Characteristics School of Entrepreneurship		
The Classical School of Entrepreneurship	Opportunities (Economic Approach)	Start-up & early growth

The Management School of Entrepreneurship	Management competencies (Trait Approach)	Early growth and maturity
The Leadership School of Entrepreneurship		
The Intrapreneurship School of Entrepreneurship	Adapting (Social Identity Approach)	Maturity & change

(Source: Zainol *et al.*, 2018)

It becomes apparent that all schools of thoughts share several similarities, in research focus or activity while also including the entrepreneur as the central element of their definition, but at the same time each school of thought has its own sets of beliefs. Moreover, comparing the six schools of thoughts, each school emphasises on a unique characteristics of the individuals as for instant the inborn quality as the case in the great person school, or risk and innovation as in the classical school, or the ability to manage and management competencies as in the management school, or lead subordinates which is basically managing people effectively to achieve purposes as in leadership school, or react to a certain need of innovation within an organisation as in intrapreneurship school.

In the current study we will follow the psychological characteristics school of entrepreneurship as it merely analyses the behaviour at individuals level. Also, it focuses on needs, values, attitude that predict an entrepreneurial behaviour, while other schools assume the existence of entrepreneur as an influenced agent by either innovation, management skills, leadership skills, or organisation (Owoseni, 2014). Therefore, the research study adopts the psychological characteristics school of entrepreneurship approach as it aims to investigate entrepreneurial intention antecedents of individuals focusing on societal values, attitudes, and individual's

needs that prominently contribute to the development of an entrepreneurial start-up intention over time within socialization process (Owoseni, 2014). In the same vein, the research study involves the psychological aspects of individuals as well as the practical and emotional types of the attitude in order to guide and predict an entrepreneurial behaviour presuming the expected rewards as a need (Cunningham and Lischeron, 1991). Therefore, the psychological characteristics school of entrepreneurship is the most relevant school to the research study that considers individuals' psychological perceptions (beliefs and values) and the society and their impacts on creating an entrepreneurial intention.

2.3 Central Components of Entrepreneurship

The previous section has outlined the concept of entrepreneurship, while this section focuses on the central components of entrepreneurship constituted in entrepreneurial activity, entrepreneurs and entrepreneurial intention. Entrepreneurial activity is the process that involves a key player called an entrepreneur who is an individual who forms an entrepreneurial mindful phase to start a business (Fernández-Pérez *et al.*, 2017). The entrepreneurial mindful phase is a cognitive stage of individuals where an entrepreneurial intention is initiated, and eventually further actions can be observed, as in entrepreneurial behaviour. The outcomes of the entrepreneurial behaviour result in establishing a business that generate rewards in term of financial gain as well as career aspiration options (Holland and Garrett, 2015). Therefore, understanding the entrepreneurs and their intention to start-up a business is important, but every entrepreneurial activity is associated with challenges and risks and entrepreneurs need to overcome these obstacles in order to make a business viable and successful (Khosa and Kalitanyi, 2014).

2.3.1 The Entrepreneur

The question of being an entrepreneur derives either from an opportunity or a necessity. Despite the choice and willingness to be an entrepreneur, many research studies have agreed on the vital role of the entrepreneur in forming a business

(Mitchell *et al.*, 2000), attempting to define the term ‘entrepreneur’ by describing him as an individual who is willing to take risks as well as characterizing him as an innovator, leader, and resources allocator. However, many definitions address the characteristics that are associated with the setting-up of a business in general and fail to provide a definition of the actual attributes that define an entrepreneur (Leyden, 2016). Several definitions of the term ‘entrepreneur’ have been proposed in the existing literature. According to Cantillon (1977), an entrepreneur is recognised as an earner of a non-fixed return on an investment by forecasting the profit that can be generated. A further definition is provided by Carland *et al.* (1984, p.358), who describe an entrepreneur as: “an individual who establishes and manages a business for the principal purpose of profits and growth [...]”. These definitions highlight the fact that entrepreneurs are individuals who establish a venture and are profit-oriented. Another definition describes the entrepreneur as: “someone who is the founder, owner, and manager of a small business and whose principal purpose is growth” (Zhao & Seibert, 2006, p.263). Capturing a number of important features of starting-up a business, this definition introduces an entrepreneur as an individual who behaves in a certain manner, aiming to create a venture, and takes all of the necessary decisions in order to establish and manage the business (Rueda, Moriano and Liñan, 2015; Fernández-Pérez *et al.*, 2017).

Several studies have argued that the underlying motivation that drives individuals to become entrepreneurs is the attainment of the ultimate goal which is becoming self-employed or financial gain (Carsrud and Brännback, 2011). Moreover, a new term was introduced, “hybrid entrepreneur”, describing individuals who already have a full-time job but at the same time decide to start-up a business as a way to gain financial rewards and not as a necessity for self-employment (Thorgren *et al.*, 2016).

The behaviour and motivation of an entrepreneur has attracted considerable attention in the existing research, showing that intention is a major predictor of such behaviour; thus, the next section will present the concepts of intention activity and entrepreneurial intention.

2.3.2 Entrepreneurial Activity

According to the existing literature, entrepreneurship is the process that contributes positively to the development as well as growth of the economy, creating jobs and income sources (Leyden, 2016). Linked to entrepreneurship, entrepreneurial activity has been described as the process of venture creation where an entrepreneur plays a central role in developing this activity using resources essential in creating a business (Wright and Marlow, 2012). To date, entrepreneurial activity remains a poorly-defined concept; few studies present it as a tool for measuring the rate of entrepreneurship within a region or a country (Ahmad and Seymour, 2006) while others consider it as the business formation phase, recognised in stages such as intention forming, early or start-up, growth or scale-up and consolidation (Mair and Marti, 2005).

Many factors have been found to play a significant role in influencing entrepreneurial activity, and recent trends have led studies to investigate the institutional setting in terms of the regulations and policies that facilitate or challenge this activity (Schillo, Persaud and Jin, 2016). The research to date has tended to focus on the institutional setting and differentiate contexts according to whether these studies are carried out as in a developing or a developed country rather than exploring what initiates entrepreneurial activity (Doblinger, Dowling and Helm, 2016). Some of the studies focus on an institutional setting that supports the creation of an atmosphere where entrepreneurial activity can be viable (Yukhanaev *et al.*, 2015). On the other hand, it seems that the entrepreneur's role is underestimated when focusing on only the institutional setting as the entrepreneur's mindset has more creativity, innovation and opportunity creating features, that assist in solving problems and overcome the challenges to gain rewards through founding a business, formally or informally (DeBerry-Spence and Elliot, 2012).

Further scrutinizing entrepreneurial activity shows that entrepreneurs play a vital role in creating the entrepreneurial activity in societies by visualising the created value of forming a business in terms of the reward that can be created and gained (Tipu and Ryan, 2016). Furthermore, individuals who choose to become

entrepreneurs are attracted by the outcomes of the entrepreneurial activity, such as becoming self-employed or an owner of a business that can lead to the development of alternative income sources (Storey and Greene, 2010). However, every entrepreneurial activity encompasses a major challenge that is the amount of risk-involved (Sandri, 2014).

This research study will focus on the business start-up stage of the entrepreneurial activity, referring to the identification of activities signifying the conception of a business where an individual forms an entrepreneurial intention as an early step prior to an action (Gartner, 2004).

2.3.3 Entrepreneurial Intention

Entrepreneurship has been recognised as a good example of planned intentional behaviour and applicable to intention models (Botsaris and Vamvaka, 2016). Recently, research has been directed towards business management and social psychology (Fayolle and Liñán, 2013).

A behaviour is predicted by an intention (Ajzen, 1991; Krueger, 1993; Lau, A.Shaffer and Au, 2016). Intention is an important predecessor of any behaviour and recent developments in the intentional models has led to a renewed interest in intention's antecedents. Several definitions of intention exist in the current literature. According to Ajzen (1991), intention is defined as the willingness to perform a behaviour, while a further definition is provided by Bird (1992), who describes intention as a state of mind guiding a behaviour. In the existing intentional models, intention was examined by adopting several theories, such as the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975). This theory was applied to a wide range of behaviour consisting of two constructs that influence intention; attitude and subjective norms. According to TRA theory, any predicted behaviour is a product of intention that is influenced by social norms and attitudes. Furthermore, TRA was expanded to include one additional construct called "perceived behaviour control" to represent an individual's control of the skills and knowledge forming a subsequent theory, the theory of planned behaviour (TPB) by

Ajzen (1991). In the entrepreneurship research, intention models have been adopted to represent entrepreneurial intention as one of the best predictors of entrepreneurial behaviour (Kautonen, van Gelderen and Fink, 2015; Botsaris and Vamvaka, 2016; Kiatkawsin and Han, 2017). There has been increased interest in studying entrepreneurial intention and its impact in predicting entrepreneurial behaviour (Leeuw *et al.*, 2015; Saeed *et al.*, 2015; Bacq *et al.*, 2016; Ozaralli and Rivenburgh, 2016; Kiatkawsin and Han, 2017). Shaver *et al.* (2001) claim that the creation of new businesses does not happen by chance, so intention is clearly embedded in individual entrepreneurial behaviour. According to Pillis and Reardon (2007, p.383), entrepreneurial intention is defined as: “the intention to start a new business”. Table 2.3 presents the definitions of entrepreneurial intention derived from the extant literature in the entrepreneurship field.

Table 2-3: Definitions of Entrepreneurial Intention in the Extant Literature

Source	Entrepreneurial Intention
Bird (1988, p.442)	“states of mind that direct attention, experience, and action toward a business concept, set the form and direction of organisations at their inception”
Krueger (1993, p.6)	“the specific target behaviour of starting a business”
Mishra and Zachary (2015)	Ambitions in expecting a remuneration
Tipu and Ryan (2016)	Refer to the conscious effort and decisions prior the forming of a business
Ozaralli and Rivenburgh (2016, p.6)	“the conscious decision to become an entrepreneur and create a new business”
Cantner, Goethner and Silbereisen (2016, p.4)	“the cognitive representation of a person’s readiness to engage in entrepreneurship”
Ibrahim and Mas’ud (2016. p.226)	“the mind sets that directs, guide, coordinate and control the basic concept (action) of new business development, implementation and evaluation”

Biraglia and Kadile (2017, p.171)	“Action-oriented and relate to specific venture creation or acquisition plans to form a business”
Fernández-Pérez et al. (2017, p.3)	“the intention to initiate a business or become an entrepreneur”

Table 2.3 shows the specific domain definitions related to entrepreneurial intention from the existing entrepreneurship literature. While a variety of definitions of the term ‘entrepreneurial intention’ have been suggested, most agree that it predicts the starting-up of a business, compared to others who differentiate how the cognitive “state of mind” operates and is accommodated in order to result in entrepreneurial behaviour.

The study of entrepreneurial intention has grown significantly since the introduction of the Theory of Planned Behaviour (TPB), suggesting that any planned entrepreneurial behaviour is an outcome of an entrepreneurial intention (Ajzen, 1991). A number of studies have suggested that there is an association between entrepreneurial intention and entrepreneurial behaviour (Awais *et al.*, 2011; Urban, 2013; Moghavvemi *et al.*, 2015; Volery, Mueller and von Siemens, 2015). Few studies adopting the intentional and behavioural approaches have examined the intention towards entrepreneurial behaviour, justifying that this intention is generated due to an expected specific goal, such as self-employment or starting-up a business (Kolvereid and Isaksen, 2006), but a study by Iakovleva and Kolvereid (2009) indicated that the specific targeted outcome in term of self-employed or start a business have the same impact on entrepreneurial intention, as both outcomes contribute towards forming a business and they recommend further investigation in this regard.

Other studies have investigated the impact of an individual’s role and personality traits on entrepreneurial intention. More specifically, it has been empirically demonstrated that entrepreneurs differ from others in terms of their personality variables, such as conscientiousness and an openness to experience, that positively influence entrepreneurial start-up intention (Zhao and Seibert, 2006). Several research studies have adopted different perspectives in order to investigate the

factors impacting on entrepreneurial intention and some of these researches emphasise innovation and the opportunities that influence the intention, viewing innovation and opportunities as a vehicle for entrepreneurship development (Drejer, 2004). Other researchers view these factors as a set of competencies, such as the recognition of opportunities that influence the intention to start-up a business (Baum and Locke, 2004). Furthermore, most of these studies view intention as a phenomenon that refers to the individual's cognitive state that is influenced by social factors to engage in a particular behaviour (Simmons, Wiklund and Levie, 2014). Therefore, studying intentional models has changed the understanding of why individuals become entrepreneurs and what motivates the intention to engage in entrepreneurial actions (Botsaris and Vamvaka, 2016; Barba-Sanchez and Atienza-Sahuquillo, 2017).

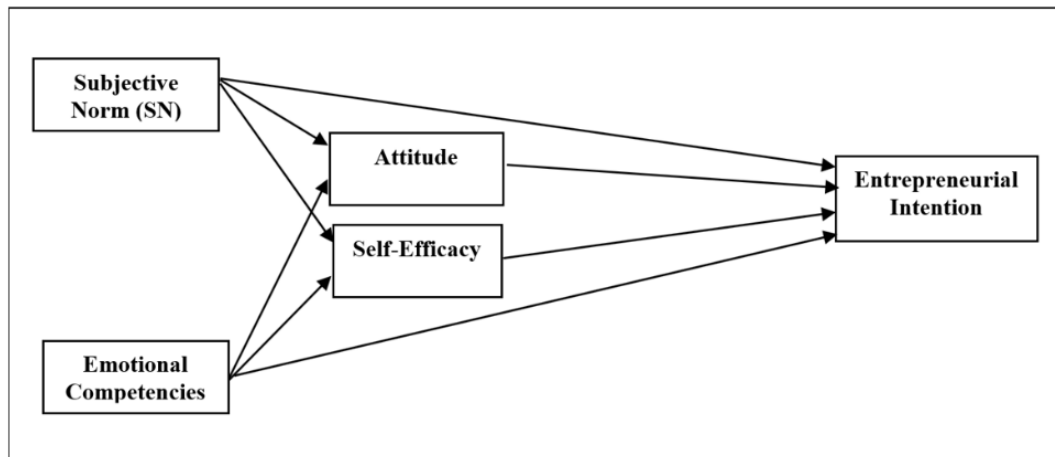
Several theories have been adopted by existing studies investigating intention regarding entrepreneurship, including Social Cognitive Theory (SCT), the Theory of Planned Behaviour (TPB), the Shapero Entrepreneurial Event Model (SEE) and Vroom's Expectancy Theory (VIE) (Alvarez and Busenitz, 2001; Teh and Ahmed, 2011; Ngugi *et al.*, 2012; Renko, Kroeck and Bullough, 2012; Beville *et al.*, 2014; Leeuw *et al.*, 2015). Moreover, there is a considerable amount of research studies that have attempted to validate, compare and integrate already existing intentional models, aiming to identify the influential factors that drive entrepreneurial activity as well as explore the critical factors that influence such behaviour (Krueger, 1993; Hui-Chen, Kuen-Hung and Chen-Yi, 2014). These studies will be explored further in this research in the entrepreneurial intention models section 2.4. However a well-established model still remains to be defined (Liñán and Chen, 2009; Schlaegel and Koenig, 2014; Cantner, Goethner and Silbereisen, 2016; Fernández-Pérez *et al.*, 2017).

2.4 Entrepreneurial Intention Models

In entrepreneurship studies, the relationship between intention and behaviour has been widely investigated, has contributed significantly towards the understanding of any predicted behaviour and, more specifically, revealed the role of

entrepreneurial intention as a predictor of entrepreneurial behaviour. Various models have been developed in order to identify the factors that influence intention as illustrated in figure 2.1; the most widely recognised as well as dominant theory is TPB Theory, which outlines these factors as attitude, subjective norms (social norms) and perceived behavioural control (self-efficacy) (Ajzen, 1991).

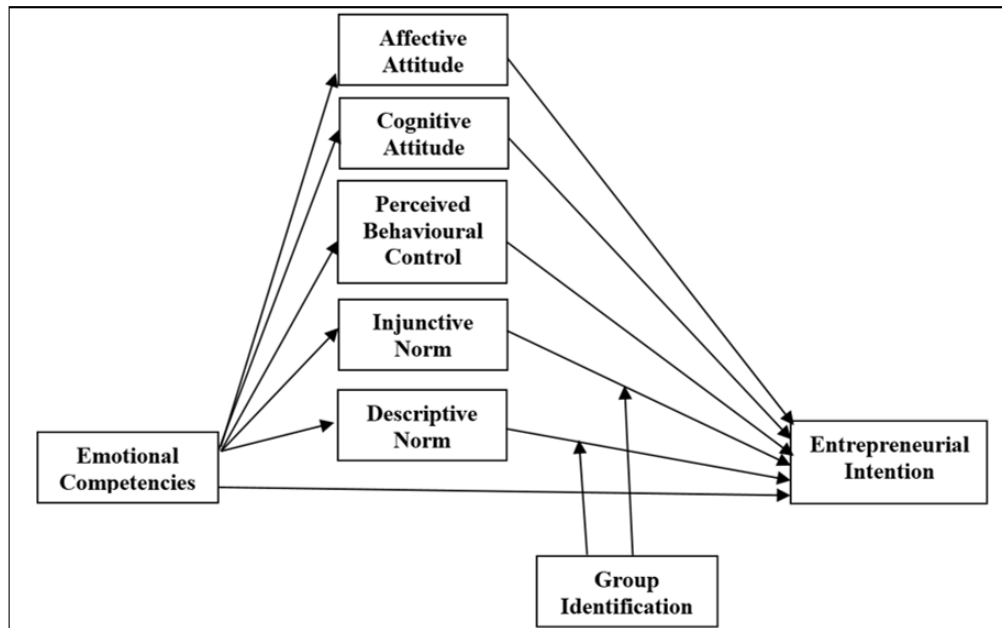
Figure 2.1: Emotional Competencies and Cognitive Antecedents Model



(Source: Fernández-Pérez *et al.* 2017)

A study by Fernández-Pérez *et al.* (2017) demonstrating social norms' relationship to entrepreneurial intention, see figure 2.1, found that social norms' impact on entrepreneurial intention was not significant, where the social norms indicate a better impact value on entrepreneurial intention through other constructs such as attitude and self-efficacy, which shows that an indirect link exists between social norms and entrepreneurial intention. Their model presented in figure 2.1, is based on integrating TPB and Emotional Competencies. In their study, the construct self-efficacy constitutes perceived behavioural control, and indicates that self-efficacy represents more specific control features of personal cognitive skills and competencies. Their study found that emotional competence has no significant impact on intention, but indirectly has a better impact where it influences the attitude and self-efficacy constructs. Their study results show that entrepreneurial intention is influenced by attitude and self-efficacy.

Figure 2.2: Five-Factors of Personality and Entrepreneurial Intention Model



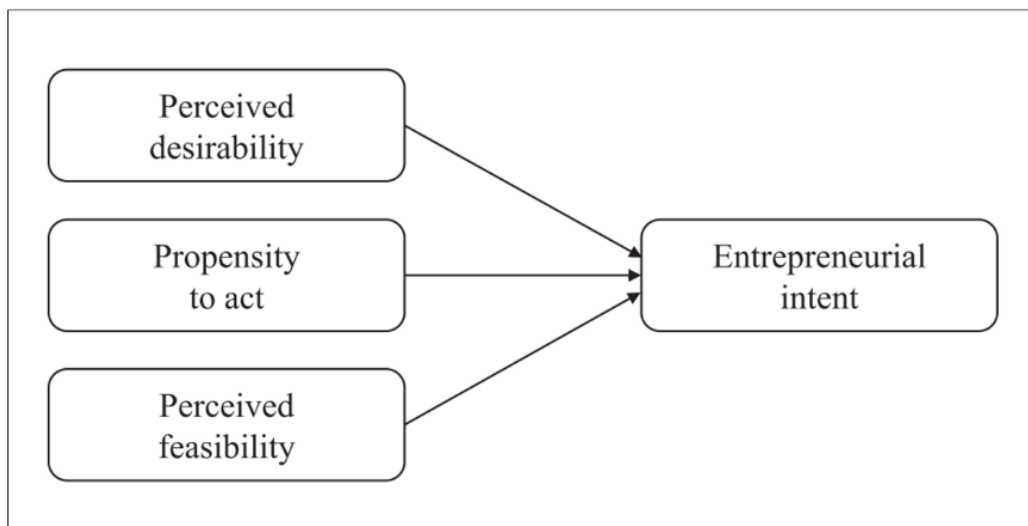
(Source: Cantner, Goethner and Silbereisen, 2016)

Another study by Cantner, Goethner and Silbereisen (2016), see figure 2.2, demonstrates a model that represent social norms and attitude specificities and shows that TPB constructs have more important values within their components that provide a better understanding of each construct and its influential value regarding its contribution to entrepreneurial intention. Their findings report that affective attitude has a positive relationship with entrepreneurial intention whereas, for cognitive attitude, this relationship was insignificant. In addition, their study introduced the relationship between social norms, such the injunctive and descriptive, with entrepreneurial intention. Their study results reported that injunctive norms have a positive relationship with entrepreneurial intention whereas, for descriptive norms, this relationship was insignificant. These findings are relevant to another study by Botsaris and Vamvaka (2016), which indicates inconsistency that affective attitude has twice the impact of cognitive attitude on entrepreneurial intention, but they argue that cognitive attitude's relationship with entrepreneurial intention does exist with less impact. Furthermore, it is apparent that affective and cognitive attitudes have a relationship with entrepreneurial intention, but limited researches have been carried out in this regard. Therefore,

these findings require a further step towards developing a better understanding of the role of the attitude specificity and social norms specificity.

Another popular model that has been recognised in the entrepreneurial intention literature is Shapero's entrepreneurial event model (SEE), which suggests that the action of starting-up a business is a consequent event of an entrepreneur's behaviour. It is a widely used model in existing literature that has attracted substantial attention identifying the factors that influence an individual's entrepreneurial intention as perceived desirability, a propensity to act and perceived feasibility as shown in figure 2.3.

Figure 2.3: Shapero's Entrepreneurial Event Model (SEE)



(Source: Schlaegel and Koenig, 2014)

As illustrated in figure 2.3, Shapero (1982) developed the Entrepreneurial Event Model (SEE) to classify the factors that impact on entrepreneurial intention. The SEE is one of the intentional models that predict behaviour better than adopting personality traits or employment status. The SEE model views the creation of entrepreneurial activity as a result of an entrepreneurial event that is formed by an entrepreneurial intention. SEE was developed and relatively poorly tested in the field of entrepreneurship and identifies three variables in creating an entrepreneurial intention that predict entrepreneurial behaviour; in this case, starting-up a business. These variables are perceived desirability, perceived feasibility and propensity to act. Perceived feasibility refers to the level of personal capability to start-up a

business, while perceived desirability refers to the attractiveness of starting-up a business from personal perspectives, and propensity to act refers to the choice of actions (Krueger, 1993; Krueger, Reilly and Carsrud, 2000; Iakovleva and Kolvereid, 2009).

The first seminal study on entrepreneurial intention was conducted by Krueger et al. (2000), which compared two intention-based model and theory, namely SEE and TPB respectively, demonstrating that intentional models have a stronger predictive power on entrepreneurial behaviour than situational or individual factors. In their study findings, SEE was more favourable than TPB in explaining entrepreneurial intention as social norms in TPB had no impact on entrepreneurial intention. These findings are somewhat surprising given the fact that other research studies corroborate contradiction to these finding adopting the well validated TPB theory (Shah, 2015; Karimi *et al.*, 2016; Ozaralli and Rivenburgh, 2016). This provides an exciting opportunity to advance our knowledge of existing relationship between construct and entrepreneurial intention.

Previous studies indicate the inconsistency of the relationship among the SEE constructs and entrepreneurial intention, such as perceived feasibility (Zhang, Duysters and Cloudt, 2014). A few studies show that this relationship is positive and significant (Krueger, Reilly and Carsrud, 2000; Ngugi *et al.*, 2012; Schlaegel and Koenig, 2014), while a recent study by Zhang, Duysters and Cloudt (2014) indicated that this relationship is negative. However, it is debated whether SEE or TPB provide a robust model in explaining entrepreneurial intention, so further research is required here. In summary, SEE focuses on an entrepreneurial event from an opportunistic prospective rather than the entrepreneur's behaviour, as in TPB (Krueger, Reilly and Carsrud, 2000). SEE is a competing model to TPB and limited studies have examined the impact of both models on entrepreneurial intention. Researchers distinguish these models depending on the nature of the behaviour observed; SEE's focus is on the availability of opportunities and how attractive they are in order to create a behaviour, where TPB is viewed as a general theory of behaviour (Krueger, Reilly and Carsrud, 2000).

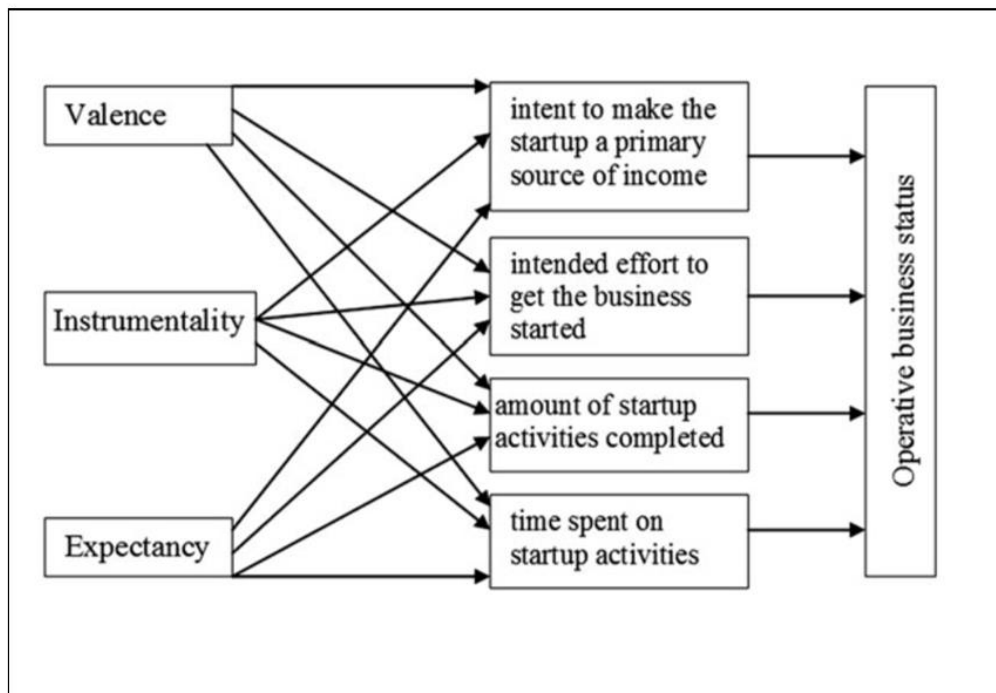
The majority of studies investigating start-up intention have adopted TPB and SEE as their theoretical lenses, while few studies have focused on identifying other entrepreneurial intention models (Hayton and Cacciotti, 2013; Iakovleva *et al.*, 2014; Leeuw *et al.*, 2015). TPB and SEE are recognised as the most important as well as valid theories for predicting intention regarding entrepreneurial behaviour. Furthermore, studies related to TPB and SEE have developed an integrated model to provide a more comprehensive understanding of each theory's contribution towards introducing a very robust model (Krueger, Reilly and Carsrud, 2000; Iakovleva and Kolvereid, 2009).

Later, several studies followed, mostly focused on investigating the factors that can influence entrepreneurial intention and thus the behaviour of an entrepreneur (Elenurm, 2011; Roxas and Azmat, 2014; Usaci, 2015; Karimi *et al.*, 2016). In previous studies of entrepreneurial behaviour, different variables have been found to be related to entrepreneurial start-up intention as well as to describe the link between entrepreneurial intention and its antecedents, such as social norms (Sánchez, 2012; Panagopoulos, Larimer and Condon, 2014), attitude (Botsaris and Vamvaka, 2016), expectancy (Shakhovskaya and Akimova, 2013), entrepreneurial self-efficacy (Goh, Ritchie and Wang, 2017), perceived behavioural control (Rhodes and Courneya, 2003), and effort (Van Eerde and Thierry, 1996) by adopting various theories, such as Social Cognitive Theory (SCT), the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB), and Vroom's Expectancy Theory (VIE).

According to the existing literature, there are two dominant themes exemplifying the entrepreneurial benefits deriving from starting-up a business; namely, self-employment or wealth creation. Iakovleva *et al.* (2014) have argued that the intention to adopt entrepreneurial behaviour differs depending on whether the purpose of the entrepreneurial activity outcome is necessity or opportunity-driven. Many studies have posited that either of these benefits encourages individuals to become entrepreneurs. Therefore, existing intentional studies have been divided into two streams, drawing a fine distinction between the entrepreneurial intention to start-up a business and the intention to become self-employed. To date, few

research studies have investigated the relationship between the two valued entrepreneurial benefits by tending to adopt Vroom's Expectancy Theory (VIE). In a study investigating behavioural approaches, Brooks and Betz (1990) have shown that an individual's expectancy predicts his occupational choice (i.e. self-employment), but a more comprehensive understanding can be achieved by including the individual's beliefs about the expected outcome of the entrepreneurial activity (Botsaris and Vamvaka, 2016).

Figure 2.4: Extended Model of VIE Theory



(Source: Renko, Kroeck and Bullough, 2012)

As shown in figure 2.4, key aspect of initiating entrepreneurial intention is the motivation behind individuals forming a business. Several researches have provided evidence with respect to motivation, such as financial gain, reputation gain or career options (Goethner *et al.*, 2012). As regards motivation, the expectancy of rewards becomes an attractive topic of research, and a study by Renko, Kroeck and Bullough (2012), see figure 1.4, reported that expectancy and intended effort share a positive relationship. Their findings report that expectancy's relationship to the intention to start-up a business is positive. Additional constructs, such as valence and instrumentality, were tested and indicate a positive relationship with intended effort as well as intention to start-up a business. Valence refers to the values that

can be created from setting up a business, where instrumentality refers to the business as an instrument. This finding is consistent with a previous study carried out by Manolova, Brush and Edelman (2007), that reported that men are motivated by the expectancy of financial gain, whereas women are motivated by autonomy and self-realization. Conversely, Goethner *et al.* (2012) reported that expectancy of gained benefits represents expected financial gain and reputation gain, where both are indirectly related to entrepreneurial intention. These expected gains influence the attitude and perceived behavioural control regarding the intention to start-up a business.

To date, research adopting Vroom's Expectancy Model has been limited and had selected various approaches in adopting its constructs. A study by Kiatkawsin and Han (2017) shows that the valence and instrumentality constructs influence expectancy and expectancy impacts on intention, where the intended effort was neglected. On the other hand, a study by Hayton and Cholakova (2011) reported that the effort related to intention to perform in VIE is equivalent to the concept of self-efficacy in the Theory of Planned Behaviour. These findings provide insights into the potential usefulness of expectancy in the field of entrepreneurship, but more research on this topic needs to be undertaken before the association between expected rewards and entrepreneurial intention is more clearly understood (Renko, Kroeck and Bullough, 2012).

A considerable amount of research has examined entrepreneurial intention by adopting other lenses than the behavioural approach such as institutional theory by examining the effect of the national system on entrepreneurship (NSE). NSE represents the institutional settings and includes dimensions such as regulative, normative, cognitive and conductive. These dimensions represent the country-level while, for the individual-level, the construct of entrepreneurial readiness (ER) was developed. Entrepreneurial readiness refers to an individual's willingness and capability. Several studies have shown that entrepreneurial readiness positively relates to start-up intention while this relationship is influenced by the institutional setting dimensions (Schillo, Persaud and Jin, 2016). Entrepreneurial readiness is one of the concepts that has been introduced to measure an individual's capability

and willingness' impact on entrepreneurship. Lau *et al.* (2012, p.148) define the concept as: "an individual's cognitive attributes of capability and willingness to direct behaviour in an entrepreneurial context". Entrepreneurial readiness represents an individual-level characteristic and consists of two main parts; willingness and capability, where each part consists of several factors. Willingness consists of motivation, commitment, attitude readiness, learning readiness, and spiritual readiness. Capability consists of competencies, social network, fear of failing, individual's skills, risk-taking, entrepreneurial thinking, entrepreneurial vocational abilities, internal environment, and opportunity perception.

Moreover, a study by Suresh and Ramraj (2012) reported that an individual's characteristics alone cannot determine entrepreneurial intention. Several studies have reported that these factors influence entrepreneurship, but in a different context such as scaling up a business, that results in business growth. To date, there have been very few empirically published accounts of entrepreneurial readiness' impact on entrepreneurial intention. A study conducted by Schillo, Persaud and Jin (2016) demonstrated that entrepreneurial readiness has a positive effect on entrepreneurial intention, but limited studies have adopted this approach and researches in this field require more investigation.

Another subject that has received substantial attention in the existing intention literature is entrepreneurial orientation and its relationship with entrepreneurial intention. Entrepreneurial orientation is a concept that represents the practices and decision-making activities in entrepreneurship. It represents the corporate-level and consists of three main components; proactiveness, innovativeness, and risk-taking. Proactiveness represents opportunities' identification to support the business life-cycle of a firm, while innovativeness refers to creativity in developing new ideas in terms of new products and new processes that add value. Risk-taking refers to the risk involved in resource allocation and management, where a failure probability rate for a business results from the innovativeness and proactiveness practices (Su, Xie and Wang, 2015). It is beneficial to measure firms' entrepreneurial orientation as it helps them to survive in a competitive marketplace, but many studies have shown that entrepreneurial orientation varies between developed and developing countries where its institutions play a vital role in

creating the entrepreneurial atmosphere for businesses by regulating the policies and procedures that can challenge or support such business (Ibrahim and Mas’ud, 2016). Previous studies have explored how entrepreneurial orientation is influenced by the institutional setting’s dimensions in order to determine the entrepreneurial intention to scale-up a business (Doblinger, Dowling and Helm, 2016). In a study investigating entrepreneurial orientation’s impact on entrepreneurial intention, Su, Xie and Wang (2015) reported that a positive influence on entrepreneurial intention exists, but that further research is needed in order to gain a better understanding of the concept. Overall, entrepreneurial readiness and entrepreneurial orientation constitute recently developed concepts and under-developed research areas; thus, further research is needed in order to gain a better understanding of these concepts as well as examine their influence on entrepreneurial intention (Su, Xie and Wang, 2015).

The causes of entrepreneurial intention have been widely investigated, adopting theories such as TPB, SEE, SCT, VIE, where extended models have been developed to represent emotional competences, social influences, and reward expectancy (Krueger, Reilly and Carsrud, 2000; Goethner *et al.*, 2012; Schillo, Persaud and Jin, 2016; Fernández-Pérez *et al.*, 2017). A considerable amount of literature has been published on this regard, and the following table 2.4 shows a summary of the extant literature that adopts various theories and models, with aim, key findings, methodology and theory adopted.

Table 2-4: Summary of Entrepreneurial Intention Studies

Source	Aim	Key Findings	Methodology	Theory
Krueger et al. (2000)	To compare two intention-based models namely TPB and SEE in predicting entrepreneurial intention.	This is the first study comparing two intentional theories named TPB & SEE. Results show that social norms do not predict intention.	Quantitative	TPB & SEE

Manolova et al. (2007)	To examine the motivation in starting a business among gender differences.	Motivation differs with gender.	Quantitative	VIE
Iakovleva and Kolvereid (2009)	To integrate TPB and SEE to examine entrepreneurial intention.	Expected outcomes as self-employed or starting-up a business loads the same component.	Quantitative	TPB & SEE
Iakovleva et al. (2011)	To investigate the differences in predicting entrepreneurial intention in developed and developing countries.	Developing countries have a stronger entrepreneurial intention than developed countries. Support TPB in both developed and developing countries.	Quantitative	TPB
Goethner et al. (2012)	To investigate entrepreneurial intention among academic scientist by integrating economic and psychological perspectives.	Attitude and perceived behavioural control (PBC) predicted Entrepreneurial intention. Expectation of benefits (i.e. financial) has an indirect effect on intention via attitude and PBC.	Quantitative	TPB
Hayton and Cholakova (2012)	To develop a cognitive aspects framework and test its impact on entrepreneurial intention.	Expectancy is associated with self-efficacy.	Qualitative	TPB & VIE
Renko et al. (2012)	To examine the impact of VIE constructs on entrepreneurial intention and effort to start-up a business.	Identified a lack of theory-based help for understanding start-up motivation. Literature lacks direct tests of VIE model on entrepreneurial intention. Attitude to behaviour similar to the valence construct. Expectancy (perception of effort) similar to self-efficacy.	Quantitative	VIE

Fretschner and Weber (2013)	To investigate the impact of entrepreneurial education on entrepreneurial intention among university students.	Entrepreneurship education influences attitude and PBC. Corruption effect and locus of control affect students' belief systems.	Mixed	TPB
Zhang et al. (2013)	To examine the relationship between entrepreneurship education, entrepreneurship awareness and entrepreneurial intention.	Perceived desirability has an impact on entrepreneurial intention. Perceived feasibility has no impact on entrepreneurial intention. Education impacts on entrepreneurial intention. Males has higher entrepreneurial intention than females.	Quantitative	TPB & SEE & ECT
Braun and Yingling (2013)	To examine social norms impact on intention.	Affective and cognitive attitude and perceived control did not predict intention.	Quantitative	IBM
Schlaegel and Koenig (2014)	To meta-analytically test and integrate TPB and SEE.	Social norms have more impact than entrepreneurial self-efficacy on intention. Perceived behavioural control (PBC) has the strongest impact on intention.	Quantitative	TPB & SEE
Hui-Chen et al. (2014)	To examine entrepreneurial intention by integrating TPB and motivation-opportunity-ability (MOA).	Motivation affects entrepreneurial intention indirectly through attitude and PBC. Attitude and PBC have a direct effect on intention. Subjective norms affect intention indirectly through attitude and PBC.	Quantitative	TPB & MOA
Tsai et al. (2014)	To examine the relationship between entrepreneurial	Entrepreneurial Self-efficacy (ESE) directly and indirectly affects intention through	Quantitative	TPB

	self-efficacy and entrepreneurial intention.	attitude and planned entrepreneurial control. ESE's effect on intention is influenced by social norms. Social norms, attitude towards entrepreneurship, ESE and perceived entrepreneurial control have a positive effect on entrepreneurial intention.		
Beville et al. (2014)	To investigate social norms (descriptive and injunctive) and self-efficacy impact on entrepreneurial intention by examining gender differences.	Subjective norms made up of injunctive and descriptive norms. Subjective norms were insignificant for males.	Quantitative	TPB
Tolentino (2014)	To examine resources and entrepreneurial self-efficacy impact on entrepreneurial intention.	Resources and entrepreneurial self-efficacy form entrepreneurial intention. Career adaptability is positively related to entrepreneurial intention. Entrepreneurial self-efficacy mediates the relationship between career adaptability and entrepreneurial intention.	Quantitative	CCT
Shah and Soomro (2015)	To explore individual's attitude and intention towards entrepreneurship behaviour.	Attitude, social norms, and PBC have a significant impact on intention.	Quantitative	TBP & PT
Leeuw et al. (2015)	To asses TPB to predict intention by including social norms specificities.	Subjective and descriptive are significant but injunctive was not.	Quantitative	TPB
Saeed et al. (2015)	To examine entrepreneurship education and support in	Perceived educational support influences entrepreneurial self-efficacy.	Quantitative	PUS & IS

	forming entrepreneurial intention.	Self-efficacy affects entrepreneurial intention.		
Cantner et al. (2016)	To examine motivational and contextual predictors of entrepreneurial intention among scientists.	Affective attitude is significant and cognitive is not significant in the relationship with intention.	Quantitative	TPB & FFM
Botsaris and Vamvaka (2016)	To investigate motivational beliefs' dimensions towards entrepreneurial intention.	Intrinsic reward is a strong prediction of entrepreneurial attitude. Affective attitude has a stronger effect than cognitive attitude on entrepreneurial intention. Attitude towards entrepreneurship is predicted on the expectation of outcomes and reward.	Quantitative	TPB & VIE
Tipu and Tyan (2016)	To examine multidimensional work ethics impact on entrepreneurial intention.	Values can direct and support choices in entrepreneurship. Work ethics positively predict entrepreneurial intention.	Quantitative	TPB & MWEF
Bacq et al. (2016)	To examine factors influencing entrepreneurial intention by adopting cognitive factors.	No significant positive relationship between entrepreneurial self-efficacy and entrepreneurial intention. Personal characteristics i.e. cultural background influences entrepreneurial activity.	Quantitative	SCT
Ibrahim and Mas'ud (2016)	To examine the impact of entrepreneurial skills and environmental factors on entrepreneurial intention.	Entrepreneurial skills, environmental factors and entrepreneurial orientation have a positive influence on entrepreneurial intention. Entrepreneurial orientation moderates the relationship	Quantitative	TPB

		between entrepreneurial skills and entrepreneurial intention.		
Wang et al. (2016)	To examine five-factors model impact on entrepreneurial intention and to test the mediating effect of self-efficacy.	Personality traits affect entrepreneurial intention.	Quantitative	PT
Karimi et al. (2016)	To assess the impact of education programs on student's entrepreneurial intention.	Entrepreneurship education influences subjective norms and PBC. Entrepreneurship education increases entrepreneurial intention.	Quantitative	TPB
Schillo et al. (2016)	To investigate the impact of national system (INST) of entrepreneurship on individuals to form entrepreneurial intention.	Entrepreneurial readiness and national environment influence entrepreneurial intention.	Quantitative	INST
Kiatkawsin and Han (2017)	To examine the impact of Vroom's expectancy theory (VIE) and value-belief-norm theory (VBN) on intention.	Variables of VIE theory influence the intention. Vale-belief-norm theory failed to measure effort.	Quantitative	VIE & VBN
Fernández et al. (2017)	To investigate the impact of emotional competencies (EC) on entrepreneurial intention.	Social norms have a weak impact on entrepreneurial intention. Entrepreneurial intention is influenced by attitude and self-efficacy.	Quantitative	TPB & EC
Biraglia and Kadile (2017)	To investigate the role of entrepreneurial passion and creativity on entrepreneurial intention by social cognitive theory (SCT).	Entrepreneurial passion influences entrepreneurial intention. The role of creativity contributes towards shaping entrepreneurial intention.	Quantitative	SCT

Feola et al. (2017)	To examine the impact of triple helix model (THM) and TPB on entrepreneurial intention.	TPB variables are relevant in predicting academic entrepreneurial intention. The government, in terms of industrial/financial support, influences academic entrepreneurial intention.	Quantitative	TPB & THM
---------------------	---	---	--------------	-----------

As shown table 2.4 presents a summary of relevant research studies that investigate the impact on entrepreneurial intention and most studies have adopted the Theory of Planned Behaviour (TPB) (Leeuw *et al.*, 2015; Botsaris and Vamvaka, 2016; Cantner, Goethner and Silbereisen, 2016; Feola *et al.*, 2017). Other studies have demonstrated the applicability of other theories, such as Shapero’s Entrepreneurial Event Model (SEE) (Schlaegel and Koenig, 2014), Social Cognitive Theory (SCT) (Biraglia and Kadile, 2017), the Multidimensional Work Ethic Profile (MWEP) (Tipu and Ryan, 2016), Entrepreneurial Cognition Theory (ECT) (Zhang, Duysters and Cloudt, 2014), Motivation-Opportunity-Ability model (MOA) (Hui-Chen, Kuen-Hung and Chen-Yi, 2014), Perceived University Support (PUS) (Saeed *et al.*, 2015), the Triple Helix Model (THM) (Feola *et al.*, 2017), the Value-Belief-Norm Theory, the Five-Factor Model FFM (Cantner, Goethner and Silbereisen, 2016), Institutional Support (IS) (Yousafzai, Saeed and Muffatto, 2015), Personality Theory (PET) (Shah, 2015), Institutional Theory (INST) (Schillo, Persaud and Jin, 2016a), Personal Traits (PT) (Wang *et al.*, 2016), and the Integrated Behavioural Model (IBM), (Braun and Yingling, 2013), Career Construction Theory (CCT) (Tolentino *et al.*, 2014), Vroom’s Expectancy Theory (VIE) (Kiatkawsin and Han, 2017). According to one of the first studies that attempted to integrate TPB with other models, Krueger, Reilly and Carsrud (2000) have indicated that the Theory of Planned Behaviour is well validated. In their research, social norms have indicated no impact on entrepreneurial intention, which is inconsistent with previous studies. Contradictory to this, other studies indicate that social norms have a direct relationship with entrepreneurial intention and add that the expected outcomes do not differ between self-employed or starting a business, and developing countries have a stronger entrepreneurial intention tendency than

developed ones (Iakovleva and Kolvereid, 2009; Iakovleva, Kolvereid and Stephan, 2011).

It has been argued whether social norms have a significant or non-significant impact on entrepreneurial intention. A few studies have indicated a significant impact (Fretschner and Weber, 2013; Shah, 2015; Fernández-Pérez *et al.*, 2017), where other several studies have indicated a non-significant or negative impact on entrepreneurial intention (Goethner *et al.*, 2012; Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Tsai, Chang and Peng, 2014). In further study by Beville *et al.* (2014), the subjective norms consisted of injunctive and descriptive norms, where subjective norms was not significant for males, and the researchers recommend a further measure of descriptive norms. A further study by Leeuw *et al.* (2015) is considered as one of the few studies that included social norms produced different results. In their findings, subjective and descriptive norms have an impact on entrepreneurial intention, where injunctive shows a non-significant relationship with entrepreneurial intention.

A study by Schlaegel and Koenig (2014) shows that social norms have a better impact than self-efficacy on entrepreneurial intention, as Perceived Behavioural Control (PBC) had the strongest impact on entrepreneurial intention. They used constructs representing personal confidence level control, known as Personal Agency, such as entrepreneurial self-efficacy and perceived behavioural control, and their recommendation was to identify other determinants to explore the impact on entrepreneurial intention beyond TPB and SEE (Beville *et al.*, 2014).

In addition, studies that demonstrated the non-significant impact of social norms have implemented an indirect relationship to entrepreneurial intention, which indicates that the relationship is valid, but this requires further investigation to verify the role of social norms within TPB to unify the model with a better understanding. According to a follow-up study conducted by Beville *et al.* (2014), social norms impact on intention, and there is a need for more reliable and valid measure of descriptive norms within the TPB model to confirm its impact on entrepreneurial intention.

In term of motivation that contributes towards entrepreneurial intention, a study by Hui-Chen, Kuen-Hung and Chen-Yi (2014) assesses the integration of TPB with the Motivation-Opportunity-Ability Model. Their study findings indicate that motivation impacts on attitude and PBC as well as indirectly influencing entrepreneurial intention. They added that social norms affect attitude and PBC directly, but the effect on entrepreneurial intention is indirect. Using evidence from this study, another study carried out by Botsaris and Vamvaka (2016) indicates that intrinsic reward plays a motivational role in the expected rewards and outcomes of entrepreneurship activity, such as starting-up a business. The intrinsic reward affects attitude where attitude influences entrepreneurial intention.

In term of integrating the models, a study by Hayton and Cholakova (2011) is recognised as one of the first attempts to integrate TPB and VIE (Figure 2.7 and Figure 2.8 respectively). In their study, the expectancy construct demonstrates an association with self-efficacy, and they outlined the importance of cognitive aspects in creating entrepreneurial intention. This provides an insight into whether TPB and VIE can be integrated, as the affective perspective is related to the psychology of entrepreneurship.

Recognising attitude specificity, a study by Cantner, Goethner and Silbereisen (2016) shows that affective attitude has an impact on entrepreneurial intention, whereas cognitive attitude has no impact, but another study by Botsaris and Vamvaka (2016) indicates that affective and cognitive attitudes both have a relationship with entrepreneurial intention, but their variation in impact suggests that affective attitude is stronger than cognitive attitude. Furthermore, it has been suggested that various factors, such as entrepreneurial skills, entrepreneurial education, and entrepreneurial orientation, have an impact on entrepreneurial intention (Ibrahim and Mas'ud, 2016; Karimi *et al.*, 2016; Fernández-Pérez *et al.*, 2017). The findings of these studies highlight that further investigation is needed to examine the role of social norms' specificity and its relationship with entrepreneurial intention as well as attitude specificity.

Also, as it can be seen from the table 4, VIE theory has been adopted in the field of entrepreneurship, where entrepreneurial intention was the outcome of these studies.

One of the attempts to validate VIE in entrepreneurship was made by Manolova, Brush and Edelman (2007), who found that motivation varies by gender, where males are encouraged by financial gain, but females are motivated by autonomy and self-realization. They recommend further research adopting VIE with finer perspectives by including cognitive aspects. A key study that represents the first attempt to integrate TPB and VIE is that of Hayton and Cholakova, (2011), whose findings provide evidence of a relationship between expectancy and self-efficacy. They recommend that integration can be implemented, but a complete view of the cognitive aspects is required. On the other hand, another study by Renko, Kroeck and Bullough (2012) examined VIE constructs in the field of entrepreneurship. Their study concluded that the expectancy construct, similar to the self-efficacy and valence construct, is similar to attitude to expected value. They added that a lack of theory-based model in the literature in regard to understand start-up motivation. Therefore, they recommend that more research using VIE is needed in the field of entrepreneurship.

A recent study by Botsaris and Vamvaka (2016) involved TPB with VIE and found that intrinsic reward plays a motivational role that influences attitude, and therefore attitude is predicted by the expectancy of outcomes and reward. In their study, affective attitude has twice the impact of cognitive attitude on entrepreneurial intention. They suggest that, in order to be used as an effective entrepreneurial intention measure, attitude specificity, such as affective and cognitive, must be differentiated and included in any further study.

Another study by Kiatkawsin and Han (2017) attempts to integrate two theories: Vroom's expectancy theory and VBN theory. They claim that this is the first study to integrate VIE and VBN, and found that VIE constructs impact on intention, where the VBN constructs failed to provide the same. These studies contribute to a better understanding of VIE and integrate VIE with other theories and models. Furthermore, the findings of these studies represent a further step towards developing a better model that can accommodate VIE constructs in the field of entrepreneurship.

Most researchers investigating entrepreneurial intention have utilised TPB, where other theories have been tested and validated, such as SCT (Biraglia and Kadile, 2017). In a study by Bacq *et al.* (2016) that adopted SCT, it was reported that there is no significant relationship between self-efficacy and entrepreneurial intention. In their study a recommendation of more quantitative research to investigate variables, such as self-efficacy, attitude and cognitive skills, have been suggested.

2.4.1 Antecedents of Entrepreneurial Intention

Several factors have been found in the existing literature to influence entrepreneurial intention, constituting; Attitude (Tsai, Chang and Peng, 2014; Shah, 2015; Botsaris and Vamvaka, 2016; Ozaralli and Rivenburgh, 2016), Social Norms (Tsai, Chang and Peng, 2014; Ozaralli and Rivenburgh, 2016; Fernández-Pérez *et al.*, 2017), Perceived Behavioural Control (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Iakovleva *et al.*, 2014; Tsai, Chang and Peng, 2014), Self-Efficacy (Krueger, Reilly and Carsrud, 2000; Wang *et al.*, 2016; Fernández-Pérez *et al.*, 2017), Entrepreneurial Self-Efficacy (Tsai, Chang and Peng, 2014; Saeed *et al.*, 2015; Bacq *et al.*, 2016; Biraglia and Kadile, 2017), Perceived Feasibility (Ngugi *et al.*, 2012; Schlaegel and Koenig, 2014; Zhang, Duysters and Cloudt, 2014), Perceived Desirability (Krueger, Reilly and Carsrud, 2000; Schlaegel and Koenig, 2014; Zhang, Duysters and Cloudt, 2014), Propensity to Act (Krueger, Reilly and Carsrud, 2000; Ngugi *et al.*, 2012; Schlaegel and Koenig, 2014), Effort (Renko, Kroeck and Bullough, 2012), Expectancy (Manolova, Brush and Edelman, 2007), and Gender (Zhang, Duysters and Cloudt, 2014; Ozaralli and Rivenburgh, 2016). Table 2.5 shows the factors that influence entrepreneurial intention according to the existing literature.

Table 2-5: A Concept-Centric Summary of Entrepreneurial Intention

Factors	References
Attitude	(Fini <i>et al.</i> , 2012; Iakovleva <i>et al.</i> , 2014; Tsai, Chang and Peng, 2014; Shah, 2015; Botsaris and Vamvaka, 2016; Ozaralli and Rivenburgh, 2016)

Social Norms	(Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Iakovleva <i>et al.</i> , 2014; Tsai, Chang and Peng, 2014; Ozaralli and Rivenburgh, 2016; Fernández-Pérez <i>et al.</i> , 2017)
Perceived Behavioural Control	(Fini <i>et al.</i> , 2012; Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Tsai, Chang and Peng, 2014; Ozaralli and Rivenburgh, 2016)
Self-Efficacy	(Krueger, Reilly and Carsrud, 2000; Wang <i>et al.</i> , 2016; Fernández-Pérez <i>et al.</i> , 2017)
Entrepreneurial Self-Efficacy	(Tsai, Chang and Peng, 2014; Saeed <i>et al.</i> , 2015; Bacq <i>et al.</i> , 2016; Biraglia and Kadile, 2017)
Perceived Feasibility	(Krueger, Reilly and Carsrud, 2000; Ngugi <i>et al.</i> , 2012; Schlaegel and Koenig, 2014; Zhang, Duysters and Cloudt, 2014)
Perceived Desirability	(Krueger, Reilly and Carsrud, 2000; Ngugi <i>et al.</i> , 2012; Schlaegel and Koenig, 2014; Zhang, Duysters and Cloudt, 2014)
Propensity to Act	(Krueger, Reilly and Carsrud, 2000; Ngugi <i>et al.</i> , 2012; Schlaegel and Koenig, 2014)
Effort	(Manolova, Brush and Edelman, 2007; Renko, Kroeck and Bullough, 2012)
Expectancy	(Manolova, Brush and Edelman, 2007; Renko, Kroeck and Bullough, 2012)
Gender	(Zampetakis <i>et al.</i> , 2009; Shinnar, Giacomini and Janssen, 2012; Zhang, Duysters and Cloudt, 2014; Ozaralli and Rivenburgh, 2016)

It is apparent from table 2.5 that several influential factors (e.g. attitude, social norms, perceived behaviour control, self-efficacy, entrepreneurial self-efficacy, perceived feasibility, perceived desirability, propensity to act, effort, expectancy, and gender) related to entrepreneurial intention exist in the current literature, but what remains unclear is the direct and indirect relationship between some of these constructs and their specificities with entrepreneurial intention. More specifically, it has been demonstrated that attitude positively influences individuals'

entrepreneurial intention, showing that a more favourable attitude can increase the intention to perform an intended behaviour (Botsaris and Vamvaka, 2016). Moreover, perceived behavioural control has been shown to have a positive impact on starting-up a business (Karimi *et al.*, 2016; Ozaralli and Rivenburgh, 2016). Moreover, recent research findings have indicated that social norms have a positive impact on entrepreneurial start-up intention, while previous studies have shown that a negative relationship exists between these two constructs (Karimi *et al.*, 2016; Fernández-Pérez *et al.*, 2017). As a result, it becomes apparent that the results are inconsistent for the relationship between social norms and entrepreneurial intention and so further investigation is required. Furthermore, previous studies have revealed that self-efficacy and, more specifically, entrepreneurial self-efficacy positively influences individuals who intend to establish a venture, while it has also been revealed that perceived feasibility, perceived desirability and a propensity to act have a positive impact on starting a business. Moreover, previous studies have empirically shown that gender has a positive impact on individuals' entrepreneurial intention, revealing that males have a higher tendency towards business creation than females (Zhang, Duysters and Cloudt, 2014). In addition, it has been empirically shown that a more positive expectancy towards starting-up a business can significantly influence the required effort to engage in start-up behaviour, revealing that both expectancy and effort have a significant impact on starting-up a business.

During the past two decades, a considerable number of studies have focused on providing a deeper understanding of the factors influencing intention; by investigating their underlying sub-components such as social norms specificities; subjective, injunctive and descriptive, as well as attitude specificities; affective and cognitive, while also attempting to identify the strongest predictors of entrepreneurial intention by exploring both the direct as well as indirect relationships of the constructs with intention. These constructs will now be discussed in more detail.

• Social Norms

The construct of social norms was articulated by Ajzen (1985) and popularised in his Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB). An early definition of social norms was stated by Sumner (1906), that refers to social norms as social standards that involve values, customs and traditions. Most intentional and behavioural studies have focused only on the impact of social norms from a subjective perspective that “maintain interpersonal harmony” representing the approval of a behaviour by society (Chung and Rimal, 2016, p.7). Social norms as a topic have received significant attention from researchers in multiple disciplines (Meek, Pacheco and York, 2010; Chung and Rimal, 2016). Some of the major current theoretical issues that have been dominating the academic literature constitute the power of the influence of social norms on individuals in different contexts as well as which factors frame social norms and how the construct is practically adopted. Previous studies have reported evidence on the direct influence of social norms on entrepreneurial intention while also demonstrating their direct influence on attitude and perceived behavioural control (Liñán and Chen, 2009). However, there is a notable paucity of empirical research focusing on investigating the indirect relationship of social norms with entrepreneurial intention (Krueger, Reilly and Carsrud, 2000; Fini *et al.*, 2012; Goethner *et al.*, 2012). To date, several studies have demonstrated limitations regarding how social norms impact on entrepreneurial intention. In a study conducted by Fernández-Pérez *et al.* (2017), the link between social norms (subjective norm) and entrepreneurial intention was significant only in the indirect relationship. Their studies used a quantitative survey approach with a control group consisting of 111 university students in Spain who were registered to attend a course on entrepreneurship. Their study aimed to measure entrepreneurial intention before and after attending this course and the findings were consistent with other previous research of social norms indirect link provide a positive and significant relationship with entrepreneurial intention (Fini *et al.*, 2012; Goethner *et al.*, 2012; Hui-Chen, Kuen-Hung and Chen-Yi, 2014). Unlike Fernández-Pérez *et al.* (2017), Karimi *et al.* (2016) reported a different result by conducting a similar study in another cultural context and pointed out that social

norms have a direct powerful impact on entrepreneurial intention. Their study used a quantitative survey approach with students from six Iranian universities. Conversely, Karimi *et al.* (2016) concluded that a positive link exists between social norms and entrepreneurial intention, (Tsai, Chang and Peng, 2014) reported a negative impact of social norms on entrepreneurial intention. They pointed out that this can vary between cultures and their study was limited to people with work experience in Taiwan, whereas most studies selected university students for their research participants.

Recent researches have investigated the direct and indirect influence of social norms on entrepreneurial intention while, at the same time, there is very little published research on the impact of social norms on attitude and perceived behavioural control and self-efficacy. Moreover, the existing studies have focused on investigating social norms by adopting only subjective norms, with only few studies including its specificities. Most of the previous studies place a limited focus on social norms depicted as a single construct, rather than considering norms specificity, as subjective, injunctive and descriptive norms. As a result, further research is considered essential for investigating and measuring how different social norms affect entrepreneurial intention (Fernández-Pérez *et al.*, 2017). The next part of this research will cover social norms specificities as outlined in the existing literature, such as subjective norms, injunctive norms and descriptive norms.

- *Subjective Norms*

Subjective norms have been subscribed to a belief as a “perception about what important others expect one to do” (Chung and Rimal, 2016, p.7). Several studies that investigated subjective norms as a construct have demonstrated a direct positive link with intention (Tan, 2013; Schlaegel and Koenig, 2014; Shah, 2015). However, other studies have argued that subjective norms do not have a direct influential relationship with intention but, instead, an indirect association (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Karimi *et al.*, 2016), with limited evidence to date that empirically confirms this argument (Esposito and Baranowski, 2016; Karimi *et al.*, 2016). As a result, it becomes apparent that there are inconclusive

results on whether subjective norms have a direct or indirect impact on intention, thus further research is essential in order to confirm the direct and indirect role of subjective norms on the intention to start-up a business.

- *Injunctive Norms and Descriptive Norms*

Injunctive norms are defined as “perceived pressure to conform to avoid social sanctions” (Chung and Rimal, 2016, p.7) and “whether one believes their social network wants them to perform the behaviour” (Rhodes and Courneya, 2003, p.131). Injunctive norms represent a pressure to provide a fit within peers in a workplace or social interaction that accepts and encourages behaviour. Existing research encourages further investigation of social norms in order to recognise their types and impact on individuals’ attitude and intention; one of these types is injunctive norms, which refer to gaining social support behaviour prior to behaving. Descriptive norms refer to the recognition of a behaviour in a society of “providing social information”, indicating that such behaviour is accepted by society and, in terms of entrepreneurial behaviour, starting-up a business is accepted within a society or workplace (Chung and Rimal, 2016, p.7). The research to date has been able to show a direct link among injunctive and descriptive norms and intention, but further research is deemed essential in the field of entrepreneurship (Cantner, Goethner and Silbereisen, 2016).

- **Attitude**

Attitude was defined by Ajzen (1975, p.6) as a “learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object”. Later, Eagly and Chaiken (1993) defined attitude as the psychological aspects of individuals that create a tendency towards a behaviour, while Souitaris, Zerbinati and Al-Laham (2007, p.570) have suggested that, from an entrepreneurial perspective, it is defined as the “attitude towards self-employment is the difference between perception of personal desirability in becoming self-employed and organizationally employed”. Recently, Fini *et al.* (2012, p.390) suggested that attitude refers to ‘the degree to which a person has a favourable or unfavourable appraisal of the behaviour under scrutiny’. However, attitude is a multidimensional

construct that represents individuals' continuous evaluation of engagement in a specific action or behaviour, and it could be either positive or negative towards behaviour (Cantner, Goethner and Silbereisen, 2016; Kiwanuka *et al.*, 2016). Recent studies have shown that attitudes consist of two sub-components and constitute an affective attitude and cognitive attitude. Therefore, in this research, each type will be defined and explained.

- **Affective Attitude and Cognitive Attitude**

Recently, a considerable amount of literature has recognised the two dimensions of attitude that represent different perceptions, with a number of studies arguing that it should not be treated as a one-dimensional construct but rather as a multi-dimensional one (Rhodes and Courneya, 2003). Affective or experiential attitude is one type of attitude specificity that refers to positive or negative emotions towards an act, whereas cognitive or instrumental attitude refers to beliefs regarding an act (Botsaris and Vamvaka, 2016). Several studies have included both components of attitude but disagreement exists regarding which component has a stronger influence on intention (Trafimow *et al.*, 2004). In behavioural intentional studies, it has been argued that cognitive attitude is more important than affective attitude, especially in predicting a behaviour showing that cognitive influences have greater motivational power in predicting behaviour (Boso, Story and Cadogan, 2013). However, other studies have argued that start-up intention is influenced by affective attitude (Eagly, Mlading and Otto, 1992; Rhodes and Courneya, 2003; Trafimow *et al.*, 2004; Urban, 2013; Cantner, Goethner and Silbereisen, 2016), showing that affective attitude is a stronger predictor (Trafimow *et al.*, 2004; Botsaris and Vamvaka, 2016). Therefore, it becomes apparent that there are inconsistent findings on the influence of each type of attitude on entrepreneurial intention (Esposito and Baranowski, 2016). As the impact of attitudes specificities on entrepreneurial start-up intention has received limited critical attention, further research is essential in order to facilitate a better understanding of the complexity of the construct as well as distinguish the influence of its sub-components on entrepreneurial action and thus behaviour regarding starting-up a business.

- **Perceived Behavioural Control**

Perceived Behavioural Control is defined by Ajzen (1991, p.188) as “the perceived ease or difficulty of performing the behaviour and it assumed to reflect past experience as well as anticipated impediments and obstacles, referring to personal beliefs and confidence about a behaviour that can be executed by an individual. It represents “the individual’s control beliefs regarding the behaviour in question” (Nabi *et al.*, 2011, p356). In intentional models, this construct has been the differentiating element between TPB and TRA. Perceived behavioural control represents the non-volitional behaviour that predicts intention and behaviour (Conner and McMillan, 1999). Most of the existing research has noted that perceived behavioural control and self-efficacy may be related, highlighting also the ambiguity that exists in the existing entrepreneurial literature, where these two constructs are employed interchangeably (Schlaegel and Koenig, 2014). As a result, further research is considered essential.

- **Self-Efficacy and Entrepreneurial Self-efficacy**

According to the seminal study of Bandura (1977), defining self-efficacy as one’s belief in his/her own ability to undertake a task, the action of performing activities is influenced by self-efficacy (SE), which is associated with an individual’s behaviour. Previous studies have reported that a link between self-efficacy and intention exists, identifying it as a predecessor to behaviour (Krueger, Reilly and Carsrud, 2000; Schlaegel and Koenig, 2014). Recent evidence suggests that SE can be included in TPB, replacing perceived behavioural control, although a number of studies have included both constructs (self-efficacy and perceived behavioural control) in order to measure the different impact of each construct on intention (Rhodes and Courneya, 2003). In the field of entrepreneurship, researchers have adapted the concept of self-efficacy and linked it to entrepreneurial behaviour, calling it Entrepreneurial Self-efficacy (ESE), which represents the effect of self-efficacy on start-up intention as the belief in one’s self-ability to start-up a business. Entrepreneurial self-efficacy has been defined as an individual’s confidence in his/her ability and skills to establish an entrepreneurial venture based on his/her

self-perception of his/her competencies (Saeed *et al.*, 2015). In further entrepreneurship studies, entrepreneurial self-efficacy has been found to be a significant contributor to the prediction of entrepreneurial intention and considered one of the most important factors that influence entrepreneurial initiatives (Chen, Greene and Crick, 1998; Krueger, Reilly and Carsrud, 2000; Bullough, Renko and Myatt, 2014). To date, there has been little published research that has adopted the construct of entrepreneurial self-efficacy, replacing perceived behavioural control, in intentional models, and further research has been suggested as essential within the entrepreneurship domain (Tsai, Chang and Peng, 2014).

- **Expectancy**

The earliest definition of expectancy was introduced by Vroom (1964, p.17), who described it as “a momentary belief concerning the likelihood that a particular act will be followed by a particular outcome”. Recently, another definition of expectancy has been added by Kiatkawsin and Han (2017, p.79), who describe it as “the belief that action will lead to desired outcomes or valence”. Table 2.6 lists the existing definitions of expectancy. The extant literature on expectancy delineates its relationship with an individual’s cognitive recognition of expected future rewards as explicating its central role in explaining human motivation (Gatewood *et al.*, 2002). Expectancy has received considerable critical attention from various studies in the fields of Psychology and Social Sciences that investigate the factors affecting employees’ performance in the workplace (Brooks and Betz, 1990). Existing research suggests that expectancy is one of the factors that can contribute significantly to employees’ performance, where the expectancy of a reward “value” is linked to individuals’ motivation to exert the required effort in order to perform and achieve the targeted objectives.

Table 2-6: Summary of Expectancy's Definition in the Extant Literature

Source	Definition
Vroom (1964)	"a momentary belief concerning the likelihood that a particular act will be followed by a particular outcome"
Bandura (1977, p.194)	"a person's estimate that a given behaviour will lead to certain outcomes"
Gatewood <i>et al.</i> (2002, p.189)	"beliefs about a future state of affairs"
Kiatkawsin and Han (2017, p.79)	"the belief that action will lead to desired outcomes or valence"

It is apparent from table 2.6 that expectancy refers to the belief that an act will lead to an outcome or value. Therefore, expectancy represents that beliefs about starting-up a business will create a financial gain as an outcome, that could lead to decision to become self-employed or to enhance one's living standards and create wealth (Barba-Sanchez and Atienza-Sahuquillo, 2017). Recent evidence has shown that motivation regarding starting-up a business is related to expectancy (Brooks and Betz, 1990; Van Eerde and Thierry, 1996; Holland and Garrett, 2015). In the entrepreneurship behaviour research, expectancy represents the cognitive perception of individuals concerning the link between start-up business ideas and the perceived action required (Hayton and Cholakova, 2011). In a recent study, the concept of expectancy was adopted as an independent construct that influences, both directly and indirectly, the intention to start-up a business as a primary source of income (Renko, Shrader and Simon, 2012). However, there is a surprising paucity of research providing robust evidence on the link between expectancy and the intention to start-up a business (Gatewood *et al.*, 2002). Numerous studies have attempted to investigate the relationship between expectancy and entrepreneurial behaviour by adopting various themes, but different perspectives exist. Few studies have depicted that expectancy, as a construct from VIE theory, has already been determined in other theories, such as SEE and TPB. Therefore, more research is

needed in order to gain a deeper understanding of this construct as well as its impact and role on entrepreneurial start-up intention.

- **Effort**

Over the past two decades, several studies have provided substantial knowledge on the allocation of entrepreneurial effort and its role in entrepreneurial activity (Hui-Chen, Kuen-Hung and Chen-Yi, 2014). Surprisingly, this construct has been widely ignored in the entrepreneurship research (Clercq and Bowen, 2008). The majority of studies have considered this construct by adopting VIE theory, linking effort to performance, while very few studies have used it alongside TPB theory, arguing that effort is already included in the definition of intention as effort that is influenced by willingness and motivation (Ajzen, 1991; Harris *et al.*, 2017). It has been recognised that dedication and goal commitment create perceptions of expectancy and effort in individuals, which are required in order to attain this goal. In terms of starting-up a business, these perceptions are related to entrepreneurial intention, that leads to the creation of a business (Van Eerde and Thierry, 1996; Renko, Kroeck and Bullough, 2012). Moreover, research is considered essential to explore whether or not the allocation of entrepreneurial effort is influenced by an individual's expectancy of a reward as well as the ability to exert the required effort based on past experience (Clercq and Bowen, 2008). Further empirical examinations are needed in order to verify the relationship between effort and an individual's expectancy and entrepreneurial intention.

- **Gender**

Gender is referred to the state of a human being as male or female. Current studies in the entrepreneurship field suggest that gender is a factor that can influence entrepreneurial intention. A few studies have indicated that gender has no significant relationship with entrepreneurial intention (Zampetakis *et al.*, 2009), while others have empirically demonstrated that gender positively influences the intention of an entrepreneur to start-up a business (Barba-Sanchez and Atienza-Sahuquillo, 2017). Gender behaviour may vary in different cultures and further

investigation is needed to examine its role in intentional models (Tsai, Chang and Peng, 2014).

2.5 Theories of Entrepreneurial Intention

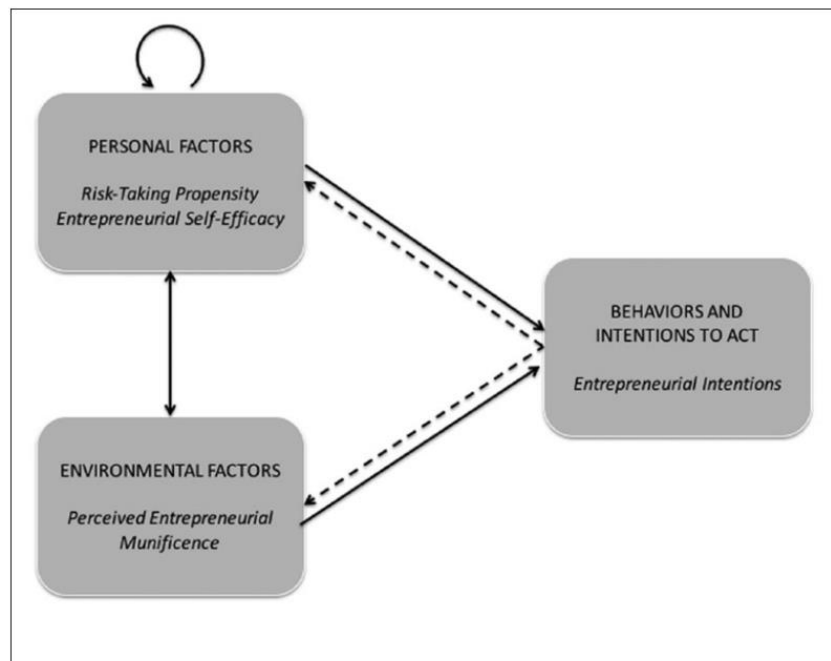
During the past few decades, there has been a rapid development in entrepreneurship literature that implements various approaches, models, and theories. An interesting topic that has attracted considerable attention is the idea of starting-up a business, which is argued to be either a result of an entrepreneurial event or an outcome of a behaviour (Krueger, Reilly and Carsrud, 2000). Previous studies have adopted Theory of reasoned action (TRA) and theory of planned behaviour (TPB) to understand and clarify the factors that influence intention to predict a behaviour. Comparing TRA and TPB, TPB was preferred in the behavioural intention studies because of its conceptual clarity and ability to represent different behaviour domains (Botsaris and Vamvaka, 2016). However, other theories have been used to investigate start-up intention, such as SCT, that pinpoints the essential role of self-efficacy, but few studies acknowledge this construct as being imbedded within the construct of perceived behavioural control in TPB. Furthermore, few behavioural studies have adopted the construct ‘personal agent’, that consists of self-efficacy and perceived behavioural control, and this researches is mainly in the health behaviour field (Braun and Yingling, 2013). In addition, there is a little published research that has adopted Vroom’s expectancy theory (VIE) and, surprisingly, the effect of individuals’ expectancy in performing actions, particularly related to the rewards generated from setting-up a business, requires further investigation. In the following sections, we will outline the various theories and models in the field of entrepreneurship, exploring the entrepreneurial intention as a theme of research (Teh and Ahmed, 2011; Braun and Yingling, 2013; Bacq *et al.*, 2016; Kiatkawsin and Han, 2017).

2.5.1 Social Cognitive Theory

SCT is one of the theories that represent human behaviour, and has been adopted in a number of researches in various disciplines and domains as well as contributing

towards founding new models, such as the Unified Theory of Acceptance and the Use of Technology UTAUT (Tan, 2013). SCT recognises a behaviour as an outcome of an interaction between environmental factors, cognitive factors and the intention to act (Bandura, 1977, 1999).

Figure 2.5: Social Cognitive Theory (SCT)



(Source: Bandura, 1986)

As illustrated in figure 2.5, cognitive factors represent personal competencies; risk-taking in undertaking a decision related to an uncertain consequence “outcome” and self-efficacy as the belief in executing a competency. In SCT, environmental factors represent critical resources that influence the cognitive factors, such as required experience or being in a start-up incubation environment to gain the essential resources to influence intention (Bacq *et al.*, 2016). In the entrepreneurship field, a few studies have substituted self-efficacy for perceived behavioural control interchangeably, as both constructs represent the confidence level to control accomplishing tasks (Liñán, 2008; Biraglia and Kadile, 2017).

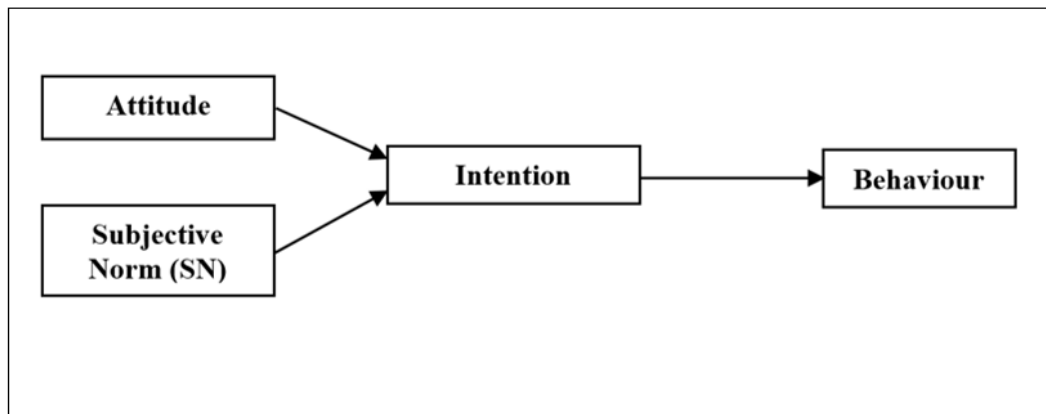
A number of studies have indicated that self-efficacy is a significant predictor of intention to start-up a business (Krueger, Reilly and Carsrud, 2000; Biraglia and Kadile, 2017; Fernández-Pérez *et al.*, 2017). But a study by Bacq *et al.* (2016)

reveals inconsistency among these findings, indicating that entrepreneurial self-efficacy's relationship with entrepreneurial intention is not significant. Furthermore, a study by Tsai, Chang and Peng (2016) found that entrepreneurial self-efficacy impacts on the intention through attitude and specifically perceived behavioural control, called planned entrepreneurial control. They adopted the term 'entrepreneurial self-efficacy' to refer to confidence in one's ability to complete the start-up process of a business. They differentiate between self-efficacy and perceived behavioural control where both represent different control levels regarding accomplishing tasks. Therefore, the relationship exists, although it has been questioned whether self-efficacy has a direct or indirect impact on entrepreneurial intention. There remains a paucity of evidence on general self-efficacy and entrepreneurial self-efficacy's impact on entrepreneurial intention. Therefore, further investigation is required to recognise the role of self-efficacy in forming entrepreneurial intention.

2.5.2 Theory of Reasoned Action and Theory of Planned Behaviour

Having been developed by Fishbein and Ajzen (1975), the Theory of Reasoned Action (TRA) has been recognised as one of the best-established models in predicting general behaviour in the field of intention. TRA was created to facilitate the study of conscious intentional behavioural (Tan, 2013), and has been applied to a wide range of domains of general behaviour. It consists of two factors that impact on intention; attitude towards behaviour and social norms associated with behaviour.

Figure 2.6: Theory of Reasoned Action (TRA)

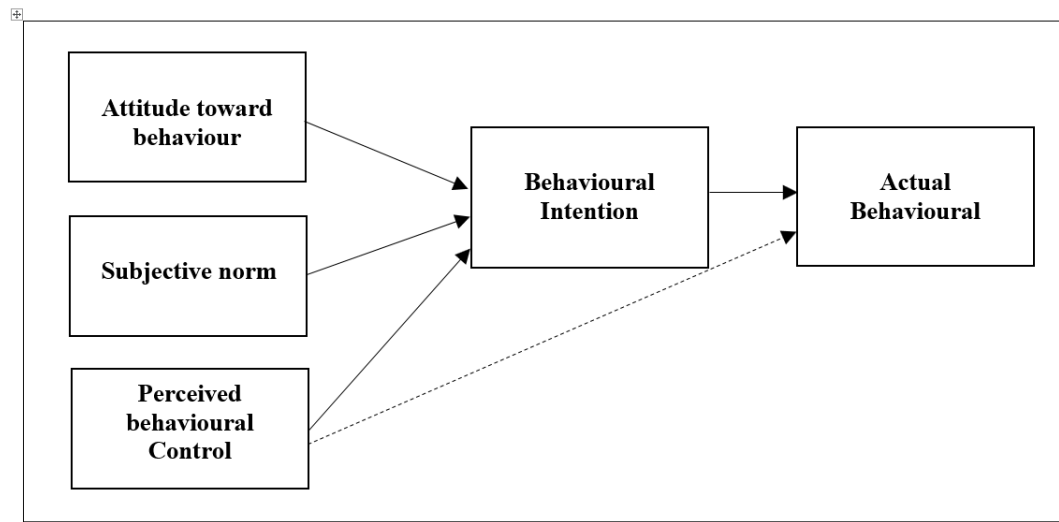


(Source: Fishbein and Ajzen, 1975)

As illustrated in figure 2.6, attitude refers to the positive or negative emotional attributes of a performance while social norms refer to subjective norms that describe the approval gained from society (Ajzen, 1991). TRA is a theory that has been deployed in general research intention studies, aiming to explain and predict human behaviour (Ajzen, 1991; Tan, 2013). According to Braun and Yingling (2013), it is mainly used by researchers in order to investigate the determinants of intention and behaviour, as most of the extant literature related to intention and behaviour is focused on studies that have adopted TRA.

The Theory of Planned Behaviour (TPB) was developed by the social psychologist, Ajzen (1985), and is an extended version of TRA, including the construct of perceived behaviour control as shown in figure 2.7. TPB explains human behaviour as predicted by the formation of intention influenced by individual attitude, subjective norms, and perceived behavioural control.

Figure 2.7: Theory of Planned Behaviour (TPB)



(Source: Ajzen, 1991)

As illustrated in figure 2.7, the first construct is attitude, which reflects a multidimensional construct representing individuals' continuous evaluation of engagement in a specific act or behaviour, and it may be either a positive or negative attitude (Cantner, Goethner and Silbereisen, 2016; Kiwanuka *et al.*, 2016). Attitude was firstly defined by Ajzen (1975, p.6) as a "learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object". A second construct in the model is subjective norms, that are determined by a normative belief regarding whether a society or individuals believe an intended behaviour to be acceptable or not, and it widely used to represent the subjective norms (Ajzen, 1991; Conner and McMillan, 1999). The third construct is perceived behavioural control (PBC) which, according to Ajzen (1991), refers to the control feature of individual in regard to beliefs and thoughts regarding controlling action in the presence of an evaluation of the surrounding conditions. This construct was determined by the individual's belief in the expectancy of the existence or absence of resources and opportunities, where PBC represent the ease or difficulty associated with performing a task (Ajzen, 1991). The PBC construct has improved the prediction of behaviour in intention-based models. In previous studies, the TPB approach was empirically adopted extensively. TPB became one of most widely-deployed theories in the existing intentional literature, mainly in behavioural

approaches studies (Leeuw *et al.*, 2015; Shah, 2015; Cantner, Goethner and Silbereisen, 2016).

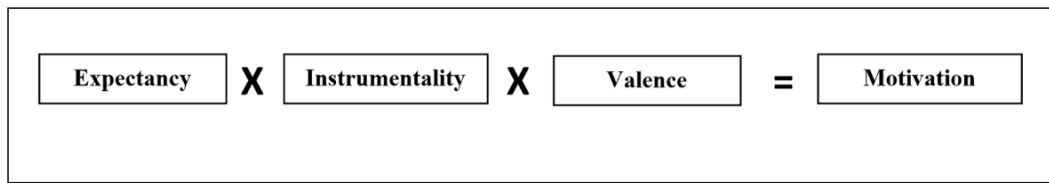
In the entrepreneurship field, the Theory of Planned Behaviour (TPB) has been adopted extensively to determine its validity and applicability regarding entrepreneurial intention, so the widely-debated question is whether its constructs, such as social norms, impact on entrepreneurial intention directly or indirectly through other TPB constructs as well as the deeper components of social norms and attitude that have a relationship with entrepreneurial intention.

Previous studies have based their investigation and findings on adopting TPB constructs, according to Ajzen's (1991) model. Recent advances in TPB constructs have facilitated the investigation of the deeper measures of attitude and social norms, along with their relationship to entrepreneurial intention, such as attitude specificity; affective and cognitive and social norms' specificity; subjective, injunctive, and descriptive. TPB has been studied by many researchers using the original model or by integrating the model's constructs with other theories and models.

2.5.3 Vroom's Expectancy Theory

In organisational behavioural studies, expectancy theory (VIE) was introduced by Vroom in 1964, representing a mathematical equation that consists of a motivation force that drives individuals' behaviour and performance. A number of studies have adopted VIE as an underlying theory of their research models, mainly in the performance management field and, more specifically, in the employees' performance-evaluation domain. The focus was on the motivation that encourages individuals "employees" to achieve the targeted performance in order to be eligible for end-year rewards and bonuses (Renko, Kroeck and Bullough, 2012; Kiatkawsin and Han, 2017).

Figure 2.8: Vroom's Expectancy Theory (VIE)



(Source: Vroom, 1964)

As illustrated in figure 2.8, VIE is represented as the motivation force that is defined as the mathematical model of a product that results from valence, instrumentality, and expectancy, but Vroom himself expressed a concern about the multiplicative function (Vroom, 1964, Van, et al. 1996; Renko, et al. 2012). According to Vroom (1964), valence is defined as all possible affective orientations towards the outcomes, while expectancy is defined as a subjective probability of an action or effort leading to an outcome or performance, and expectancy represents the personal belief that an action based on past experience, planning effort, and ability that will lead to the attainment of the action. To date, there has been little agreement on what the VIE constructs represent in the field of entrepreneurship, and recent research outlines that Expectancy Theory has not yet been adequately explained (Gatewood et al. 2002).

A few published studies have explored VIE within the field of entrepreneurship and indicated that VIE constructs add value if adopted differently than using the mathematical approach of Vroom. A study by Gatewood et al. (2002) defined expectancy as a belief that influences a person's effort to act and perform to achieve a goal and receive a reward. Understanding VIE's constructs is vital and researchers define these constructs from different perspectives. Renko, Kroeck and Bullough (2012), for example, define the VIE constructs as expectancy that represents the belief that an effort will lead to an outcome, valence represents the importance and value of an outcome, and instrumentality represents the relationship between two outcomes where the first is a predecessor of attaining the second. In simplifying these definitions, expectancy will represent the personal beliefs that an action based on past experience, planning effort, and ability will lead to the attainment of a goal, and effort represent the amount of individual's dedicated commitment and focus to attain that outcome. Instrumentality is the starting-up of the business, where the

business is considered as the instrument in attaining the reward or outcome. Several attempts have been made to adopt VIE in the field of entrepreneurship by substituting its constructs or integrating VIE with other existing theories and models.

To date, entrepreneurship research adopting Vroom's Expectancy Model has been limited and few research studies have discussed its constructs in depth. Most of these research studies have substituted VIE constructs with relevant constructs derived from other theories such as effort with self-efficacy in TPB, and instrumentality with start-up a business and neglected the remaining constructs such as valence (Hayton and Cholakova, 2011). Other studies have considered the existence of VIE constructs within TBP such as valence replacing attitude (Krueger, Reilly and Carsrud, 2000; Kiatkawsin and Han, 2017). These findings provide insights into the potential usefulness of VIE in contributing towards entrepreneurial start-up intention, but more research on VIE constructs is needed to clarify its association with entrepreneurial intention and its impact which to be clearly understood (Renko, Kroeck and Bullough, 2012).

In this chapter, theories that has been adopted in the extant literature have been presented. However, the selection and justification of theories adopted for this research study will be demonstrated in chapter 3 section 3.4.

2.6 Chapter Summary

This chapter has provided a focused analysis of the relevant literature to entrepreneurship field in recent years, where there has been increasing interest in entrepreneurship and its positive impact on developing and driving the economy towards wealth creation via alternative income sources. Both developed and developing countries have recognised the impact of entrepreneurship as well as the role of individuals who drive entrepreneurial activities and support economies. Several measures have been implemented to cultivate and enhance the entrepreneurship culture and awareness of entrepreneurship benefits, aiming to encourage entrepreneurial behaviour among citizens. These methods include a

focus on education as well as on behavioural approaches in order to support entrepreneurship in societies. Behavioural approaches are able to provide a better understanding of the factors that influence individuals to become entrepreneurs as well as why individuals choose to become entrepreneurs. Entrepreneurship involves forming a venture that creates value for both individuals and society, which cannot be accomplished without individuals who engage in entrepreneurial behaviour. For this reason, the current research investigates the causes of entrepreneurs' behaviour (entrepreneurial behaviour), arguing that entrepreneurial intention is associated with such behaviour.

The present literature review has revealed that several studies have adopted a variety of theories aimed at predicting general behaviour, but further investigation is essential in the form of examining intention through an entrepreneurial lens. Several approaches regarding start-up intention have been presented, depicting the most commonly-examined valid theories, such as the Theory of Reasoned Action (TRA) the Theory of Planned Behaviour (TPB), Entrepreneurial Event Theory (SEE), Vroom's Expectancy Theory (VIE), and Social Cognitive Theory (SCT). In the recent years TPB theory has been vigorously challenged by a number of writers who recommended rethinking of social norms impact on entrepreneurial intention (García-Rodríguez *et al.*, 2015; Fernández-Pérez *et al.*, 2017). Another important factor is motivation of individuals to start-up a business that encouraged by the expected reward of forming a firm, and VIE theory provides a base for understanding such motivation as individual's expectancy that has been assumed in many research studies but not adequately investigated. Therefore, for the research study two theories are adopted; TPB and VIE to follow the existing evidence that suggests cognitive aspects and social norms play a critical role at the individual level, but very few studies have been implemented in this area. Therefore, the present research contributes towards the growing body of knowledge by providing a better understanding of entrepreneurial start-up intention and its antecedents. Aiming to investigate the role of the key impact factors in entrepreneurial start-up intention, in the next chapter, the current study will present the development of a theoretical model that captures the effects of entrepreneurial start-up intention's antecedents in entrepreneurship on individuals.

Chapter 3: Conceptual Framework and Relevant Theories

This chapter is divided into five sections. Section 3.1 provides an introduction to the theme of entrepreneurial intention to start-up a business. Section 3.2 presents the development of the conceptual framework based on the theory of planned behaviour (TPB) and Vroom's expectancy theory (VIE). Section 3.3 outlines the developed research hypotheses and this section describes the independent and dependent variables. Section 3.4 highlights the theoretical background of the current research and then the chapter concludes with a chapter summary in section 3.5.

The primary aim of this chapter is to develop a conceptual theoretical framework based on a thorough literature review that identified variables that are significant for entrepreneurial intention formation. The proposed conceptual framework adopts extended models from key behavioural validated theories in the existing literature: the theory of planned behaviour (TPB) (Ajzen, 1991) and Vroom's expectancy theory (VIE) (Vroom, 1964). To our knowledge, the current research constitutes one of the few attempts in the existing literature to consolidate a contextual prediction of entrepreneurial intention by incorporating an individual's expectancy and social norms specificities that influence the prediction of entrepreneurial behaviour within a single framework.

3.1 Introduction

The literature review chapter has outlined the existing relevant research studies within the field of entrepreneurship and described in detail several theories and models that have been used in order to examine the factors that can predict

entrepreneurial behaviour, see sections 2.4 and 2.5 in chapter 2. The selection and investigation of these factors have been shown in several extended models by adopting various theories to indicate its impact on entrepreneurial intention. Since the 1990s, a renewed interest has been raised in entrepreneurship research studies attempting to develop a robust model to represent factors impacting entrepreneurial intention; several of these research studies have been primarily focused on the economic attributes or education of individuals neglecting the cognitive attributes and cultural influences on shaping individuals' attitude and expectancy. Furthermore, research has shown that many individuals have failed to join the entrepreneurship world and start the journey due to social norms pressure and confidence in self-competencies rather than access to funds. Due to the disappointing results of ignoring cognitive and culture set (social norms), recent studies have emerged to highlight the significance of entrepreneurship from a deeper view of individual's cognitive and social norms to understand the broader outcome of entrepreneurship. However, it becomes evident that there is a need for further research in entrepreneurial intention antecedents and their relationship. These studies have acknowledged a limitation of the existing models and raised a call for further investigation of VIE theory and TPB statistically.

In this chapter, the development of the proposed conceptual framework is outlined to examine entrepreneurial intention antecedents. Also, theories underpinning the conceptual framework are identified with a justification for the theoretical background. The development of the conceptual framework is achieved through the adoption of two theories; the theory of planned behaviour (TPB) and Vroom's expectancy theory (VIE), where hypotheses are formulated in order to test the proposed theoretical framework of the current research, see section 3.4. The evidence suggests that entrepreneurial intention is among the most important antecedents for predicting entrepreneurial behaviour towards forming a business (Alqubaisi *et al.*, 2016; Fernández-Pérez *et al.*, 2017). Hence, the constructs of TPB and VIE are adopted as predictors of entrepreneurial intention to start-up a business. The relationships are then formed between these constructs: Social Norms, Expectancy, Affective Attitude, Cognitive Attitude, Perceived Behaviour Control,

Entrepreneurial Self-Efficacy, and Effort. Furthermore, potential antecedents, such as social norms specificities and attitude specificities, are included in this conceptual framework by assessing the current literature on business entrepreneurship and other fields relevant to entrepreneurial intention (Cantner, Goethner and Silbereisen, 2016). Finally, the developed proposed conceptual framework of entrepreneurial intention is presented.

The main aim of the current chapter is to conceptualize the conceptual framework of the current thesis by adopting Ajzen's theory of planned behaviour (TPB) (Ajzen, 1991), and Vroom's expectancy theory (VIE) (Vroom, 1964), as a foundation for this study with the aim of uncovering the potential impact of social norms specificity, attitude specificity, and individual's expectancy on entrepreneurial intention. Although both of these theories have been dominant in the field for a long time, previous studies identified a weak link between social norms and intention in TBP and suggested that an indirect link may provide a better understanding of the association. Moreover, the precise mechanism of social norms specificities, such as subjective, injunctive, and descriptive norms, is yet to be understood in order to indicate which of the social specificities has the greater influence compared with the others (Goethner *et al.*, 2012; Cantner, Goethner and Silbereisen, 2016). Previous research on this subject has tended to be restricted to limited comparisons of intention's antecedents, and the evidence has shown that there is inconsistency in the results on the relationship between social norms and intention, so further research is required involving the remodelling of the TPB elements differently (Sommer and Haug, 2011). In addition, many previous attempts have been made to demonstrate the impact of the cognitive aspects of individuals on business creation or growth but, surprisingly, the effects of these cognitive factors, such as cognitive attitude, have not been closely examined (Busenitz and Lau, 1996; Mitchell *et al.*, 2000; Lau *et al.*, 2012).

Previous studies have tended to investigate entrepreneurial intention models by adopting TPB, including constructs such as social norms, attitude, and perceived behavioural control (Shah, 2015; Fernández-Pérez *et al.*, 2017). Recently, there has

been renewed interest in entrepreneurship literature aiming to identify the additional critical and effective factors that trigger an individual's intention to establish a business by focusing on the cognitive predictors of entrepreneurial behaviour. For example, there are limited studies showing that an individual's expectancy of rewards, such as financial benefits or reputation, due to launching a business can act as motivation to form an entrepreneurial intention (Goethner *et al.*, 2012). As a result, the absence of a fine model that can explain meaningful related factors such as an individual's expectation towards business formation makes further research imperative in order to explore the additional predictors of entrepreneurial intention (Kibler, 2012; Shah, 2015; Ozaralli and Rivenburgh, 2016)

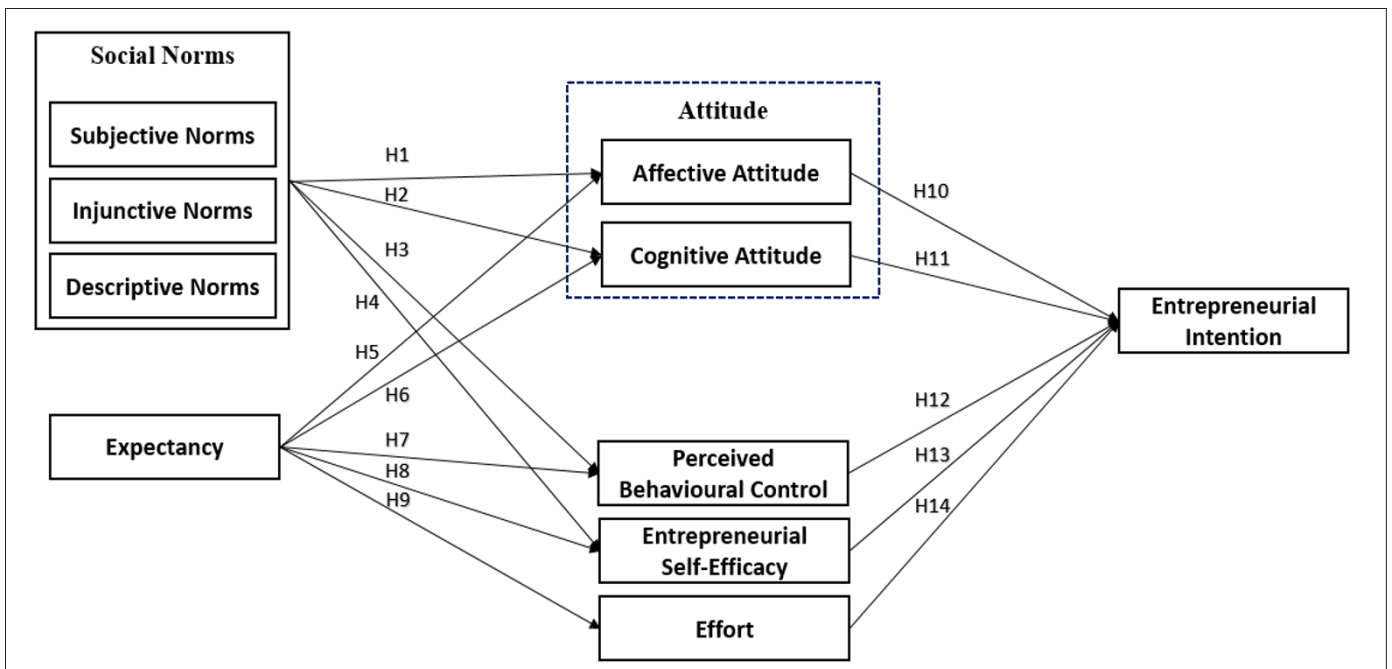
Limited studies have adopted Vroom's expectancy model (VIE) to examine the precise effect of its constructs on entrepreneurial start-up intention, and this is a much-debated topic, where the interaction between its constructs lacks empirical evidence (Manolova, Brush and Edelman, 2007; Renko, Kroeck and Bullough, 2012). TPB is closely related to VIE (Krueger, Reilly and Carsrud, 2000), but no empirical evidence to support this view exists in the existing literature (Renko, Kroeck and Bullough, 2012). Therefore, the primary aim of this chapter is to propose a conceptual theoretical framework based on the theory of planned behaviour (TPB) (Ajzen, 1991) and Vroom's expectancy theory (VIE) (Vroom, 1964) to introduce a unified model that contributes to the research knowledge of entrepreneurial start-up intention.

3.2 Development of the Conceptual Framework

Based on the literature review discussed earlier, a close connection between TPB and VIE has been identified to offer the basis for proposing the conceptual framework for mapping the TPB and VIE constructs with entrepreneurial intention in Figure 3.1. The literature review identified eight critical variables that closely affect the entrepreneurial intention to start-up a business. These variables consist of two independent variables (social norms and expectancy), and six dependent

variables: affective attitude, cognitive attitude, perceived behavioural control, entrepreneurial self-efficacy, effort, and entrepreneurial intention. Although each one of these variables have been examined in the extant literature, this research constitutes one of the few attempts to consolidate a contextual prediction of entrepreneurial intention by individual's expectancy and social norms specificities that influence the prediction of entrepreneurial behaviour in a single framework (Cantner, Goethner and Silbereisen, 2016; Fernández-Pérez *et al.*, 2017).

Figure 3.1: Proposed Conceptual Framework



The conceptual framework presented in Figure 3.1 aims to provide new insights into fostering entrepreneurial behaviour by contributing the factors that impact on entrepreneurial intention and reflect on many of the findings related to the influential constructs (Krueger, Reilly and Carsrud, 2000; Tsai, Chang and Peng, 2014; Botsaris and Vamvaka, 2016). The conceptual framework unifies two theories (TPB and Vroom) by presenting the influence of social norms and expectancy on entrepreneurial intention indirectly via attitude, PBC, ESE, and effort. Social norms are expected positively to influence affective attitude, cognitive attitude, PBC and ESE. Expectancy is expected to influence affective attitude,

cognitive attitude, PBC, ESE, and effort. Entrepreneurial intention is expected to be positively influenced by affective attitude and cognitive attitude, PBC, ESE, and effort. The following section 3.3. will provide the fourteen research hypotheses that have been developed to examine the relationship between the identified constructs in the conceptual framework and these hypotheses are:

H1: Social norms positively influence Affective attitude

H2: Social norms positively influence Cognitive attitude

H3: Social norms positively influence PBC

H4: Social norms positively influence ESE

H5: Entrepreneurial Expectancy positively influences Affective attitude

H6: Entrepreneurial Expectancy positively influences Cognitive attitude

H7: Entrepreneurial Expectancy positively influences PBC

H8: Entrepreneurial Expectancy positively influences ESE

H9: Entrepreneurial Expectancy positively influences Effort

H10: Affective attitude positively influences Entrepreneurial intention

H11: Cognitive attitude positively influences Entrepreneurial intention

H12: PBC positively influences Entrepreneurial intention

H13: ESE positively influences Entrepreneurial intention

H14: Effort positively influences Entrepreneurial intention

The extant literature tends to examine a limited number of constructs, which ignores the complexity of certain constructs and their impact, such as social norms' specificities and attitude specificities (Krueger, Reilly and Carsrud, 2000; Goethner *et al.*, 2012; Tsai, Chang and Peng, 2014; Fernández-Pérez *et al.*, 2017). The proposed conceptual framework provides a better understanding of the motivation and influences that encourage new venture establishment by capturing the expectancy construct as a single construct (Renko, Kroeck and Bullough, 2012). This proposed conceptual framework makes a major contribution to the research on entrepreneurial intention by demonstrating a better understanding and differentiating constructs, such as perceived behavioural control, entrepreneurial self-efficacy, and effort, as well as following the research call to incorporate

expectancy and social norms' indirect impact on entrepreneurial intention, that has not been investigated in previous researches (Liñán and Chen, 2009; Obschonka, Silbereisen and Schmitt-Rodermund, 2010; Tsai, Chang and Peng, 2014; Leeuw *et al.*, 2015; Rueda, Moriano and Liñan, 2015; Bacq *et al.*, 2016).

3.3 Development of Hypotheses

Based on the literature review in chapter two and the foundation of the deployed theoretical models presented previously, 14 hypotheses are developed. These hypotheses demonstrate the relationship between entrepreneurial intention and its antecedents, discussing along with the findings from the extant literature the adoption of the theory of planned behaviour and Vroom's expectancy theory.

3.3.1 Social Norms, Attitudes, PBC, and ESE

Social norms are defined as the perceptions of normative pressure in terms of what reference people (i.e. family, friend, peers) or a society think (i.e. family, friends, work colleagues), if a person intends to behave entrepreneurially, such as establishing a business (Beck, L. & Ajzen, 1991; Krueger and Brazeal, 1994). Social norms consist of three elements (specificities): subjective, injunctive, and descriptive. Subjective norms represent the approval gained by society in order to start-up a business, injunctive norms refer to the support and encouragement that can be received from society to motivate entrepreneurial behaviour, and descriptive norms refer to the demonstration of entrepreneurial behaviour in a society, indicating that such behaviour is acceptable and exists within a society (Cantner, Goethner and Silbereisen, 2016; Chung and Rimal, 2016).

There is evidence that social norms play a crucial role in shaping a planned behaviour, where they act as a societal pressure regarding what is favoured or not favoured behaviour in a society (Hui-Chen, Kuen-Hung and Chen-Yi, 2014). Recent research shows that social norms have a substantial impact on attitude, where they are represented as subjective norms (Shah, 2015). Although extensive

research has been carried out on social norms, limited research has adopted social norms' specificities: subjective norms, injunctive norms, and descriptive norms (Cantner, Goethner and Silbereisen, 2016). Previous studies suggest that individuals feel pressure regarding their beliefs (cognitive attitude) and feelings (affective attitude) regarding becoming an entrepreneur and starting-up a business, but only if individuals sense that such behaviour is favoured, acceptable, approved and supported by the reference people, then they are more likely to form the attitude of setting-up a venture (Beville *et al.*, 2014). In addition, the existence of established businesses provides knowledge and evidence of such entrepreneurial behaviour within society, and individuals will be more likely to form beliefs and emotions that reflect their affective and cognitive attitudes (Leeuw *et al.*, 2015). Furthermore, most of the existing research shows that social norms have a significant impact on attitude, considering attitude as a single construct that represents the beliefs and feelings of individuals (Fretschner and Weber, 2013; Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Fernández-Pérez *et al.*, 2017). Limited research has investigated attitude as a multi-dimensional construct, affective attitude and cognitive attitude, in this subject area (Botsaris and Vamvaka, 2016; Cantner, Goethner and Silbereisen, 2016), and to date no studies have examined the impact of social norms on attitude specificities within entrepreneurship.

In line with the previous evidence and also TPB studies (Cantner, Goethner and Silbereisen, 2016; Fernández-Pérez *et al.*, 2017), in this research, we consider three components of social norms (subjective, injunctive, and descriptive) that influence individuals' attitudes to become entrepreneurs and start-up a business: first, subjective norms, that represent individuals' perceptions about gaining approval from society to become an entrepreneur; second, injunctive norms, which represent encouragement that the individual's perception receives to support entrepreneurial behaviour; and, third, descriptive norms, that reflect society's engagement in an entrepreneurial activity. Therefore, the first two hypotheses of the current research can be formed as:

Hypothesis 1: Social norms positively influence Affective attitude

Hypothesis 2: Social norms positively influence Cognitive attitude

The research to date has demonstrated a link between social norms and perceived behavioural control (PBC) (Hui-Chen, Kuen-Hung and Chen-Yi, 2014). PBC represents an individual's perception of how easy or difficult it is to perform an entrepreneurial task. Previous studies suggest that individuals who believe in their ability to control their skills required for an entrepreneurial task are more likely to perform accordingly, if the societal pressure from the reference people encourages and approves these beliefs. This social pressure is produced by social norms that contribute and influence an individual's perception, where the reference people approve (subjective), encourage (injunctive), or acknowledge similar behaviour in a society (descriptive) in establishing a business (Fretschner and Weber, 2013; Tsai, Chang and Peng, 2014). Therefore, in line with the above and TPB studies, we hypothesize that:

Hypothesis 3: Social norms positively influence PBC

To date, a number of studies have reported that social norms have an impact on entrepreneurial self-efficacy (ESE) (Hayton and Cacciotti, 2013; Fernández-Pérez *et al.*, 2017). ESE refers to an individual's confidence in his beliefs about his ability to accomplish an entrepreneurial task (Mcgee *et al.*, 2009). Recent developments in ESE show that reference people in society (i.e. family member, friends, colleagues) have a social influence that affects individuals' beliefs and results in upgrading their confidence level in regards to establishing a business (Schlaegel and Koenig, 2014; Fernández-Pérez *et al.*, 2017). Therefore, when individuals believe and acknowledge their confidence in their ability to form a business with perceived confirmation by their reference people, they are more likely to form entrepreneurial self-efficacy regarding an entrepreneurial action. This supports the hypothesis that:

Hypothesis 4: Social norms positively influence ESE

3.3.2 Entrepreneurial Expectancy, Attitudes, PBC, and ESE

Expectancy is defined as the belief that the application of particular effort will lead to the desired outcomes and expected gains (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Kiatkawsin and Han, 2017). Expectancy drives a mechanism of motivational force by expected reward gain that influences individuals' emotions and efforts regarding creating a business to generate values or benefits (Manolova, Brush and Edelman, 2007). Limited studies have demonstrated that expectancy positively affects attitude (Goethner *et al.*, 2012), and argued that expectancy predicts "attitudinal variables", such as entrepreneurial intention (Renko, Kroeck and Bullough, 2012, p.670). The research to date has not yet differentiated attitude specificities (emotions and thoughts) and their relationship with expectancy, where the determination of attitudes has been assumed to represent both affective attitude (emotions) and cognitive attitude (beliefs) regarding an entrepreneurial behaviour (Renko, Kroeck and Bullough, 2012). Recent research suggests that individuals who believe that the formation of a business will generate benefits as expected outcomes are more likely to form emotions and beliefs that are motivated by these expected outcomes (Hui-Chen, Kuen-Hung and Chen-Yi, 2014). In a similar vein, emotions represent affective attitude while beliefs refer to cognitive attitude, and therefore the hypotheses can be formed as:

Hypothesis 5:

Entrepreneurial Expectancy positively influences Affective attitude

Hypothesis 6:

Entrepreneurial Expectancy positively influences Cognitive attitude

The existing literature recognises the critical role played by expectancy, and reports that expectancy influences perceived behavioural control (PBC), where PBC is built on salient beliefs, and has been linked to beliefs regarding expected financial gain and reputation gain (Goethner *et al.*, 2012). Several studies have highlighted the

importance of the expected outcomes from starting-up a business and have shown that motivation envisages the expected benefits and outcomes if such behaviour is conducted (Goethner *et al.*, 2012). Recent studies suggest that creating a business is influenced by an individual's ability, where individuals who believe in controlling their skills to start-up a business are more likely to be motivated by the expected outcomes (Hui-Chen, Kuen-Hung and Chen-Yi, 2014). Based on these findings, this research proposes the following hypothesis:

Hypothesis 7: Entrepreneurial Expectancy positively influences PBC

Collectively, most TPB studies play a critical role in entrepreneurial self-efficacy (ESE) and, surprisingly, these studies have used PBC interchangeably with ESE (Rueda, Moriano and Liñan, 2015; Saeed *et al.*, 2015). Most of the empirical studies that investigate entrepreneurial intention have suggested the inclusion of either ESE or PBC in the intentional models (Schlaegel and Koenig, 2014). ESE refers to a person's self-confidence regarding his ability to accomplish an entrepreneurial task (Krueger, Reilly and Carsrud, 2000; Iakovleva and Kolvereid, 2009; Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Fernández-Pérez *et al.*, 2017). In VIE studies, expectancy represents the confidence level of effort that leads to the conducting of a behaviour, a concept that is very similar to entrepreneurial self-efficacy (Renko, Kroeck and Bullough, 2012). Individuals who feel confident and capable of exerting the required effort, such as recognising risk, managing money or identifying opportunities, and expect to obtain rewards from starting a business, are more likely to have higher entrepreneurial self-efficacy (Gatewood, 1993; Renko, Kroeck and Bullough, 2012). Based on the above, we propose the following:

Hypothesis 8: Entrepreneurial Expectancy positively influences ESE

Studies adopting VIE have shown that the expected benefits of forming a business play a vital motivating role in encouraging individuals to adopt entrepreneurial behaviour (Gielnik *et al.*, 2014; Harris *et al.*, 2017). These motivations influence an individual's effort and degree of commitment regarding entrepreneurial behaviour,

where effort refers to the perceived amount of dedication, commitment and focus to engage in entrepreneurial activity (Manolova, Brush and Edelman, 2007). Several studies have reported that expectancy has a significant impact on effort, as individuals believe that making the essential effort to establish a business will lead to benefits and rewards, and these beliefs are influenced by the expected values of a business (Harris *et al.*, 2017). Several studies have suggested that individuals who expect to reap benefits from forming a business are more likely to display the commitment and effort required to do so (Manolova, Brush and Edelman, 2007). In this case, the expectation of an individual regarding starting-up a business is favourable provided that the benefits are attractive and motivating. Based on these findings and VIE studies, we propose the following:

Hypothesis 9: Entrepreneurial Expectancy positively influences Effort

3.3.3 Affective Attitude and Entrepreneurial Intention

Affective attitude reflects the extent of a person's feelings and emotions towards a specific behaviour. Most of the studies that have investigated the factors that predict entrepreneurial behaviour have adopted intentional models, where affective attitude forms a part of the attitude construct (Cantner, Goethner and Silbereisen, 2016). Previous studies have considered attitude as a multi-dimensional construct that consists of two components (affective attitude and cognitive attitude), and have empirically demonstrated that affective attitude has a positive influence on entrepreneurial intention (Trafimow *et al.*, 2004; Botsaris and Vamvaka, 2016; Cantner, Goethner and Silbereisen, 2016). More specifically, in their study, Trafimow *et al.* (2004) indicate that affective attitude influences intention, but its impact can vary depending on the individual's capacity for an affective and cognitive attitude. Further investigation has been suggested in order to consider both components of attitude. Moreover, in their detailed examination of attitude, Cantner, Goethner and Silbereisen (2016) revealed that affective attitude has a significant impact on entrepreneurial intention, while Botsaris and Vamvaka (2016) have shown that affective attitude has twice the impact of cognitive attitude on

entrepreneurial intention. Recent studies have suggested that individuals who feel and are emotionally linked to the expected benefits resulting from being an entrepreneur will favour behaviour linked to starting-up a business, and so form an entrepreneurial intention (Goethner *et al.*, 2012; Botsaris and Vamvaka, 2016). Thus, affective attitude drives individuals to have a tendency towards entrepreneurial intention and, therefore, we propose the following:

Hypothesis 10:

Affective attitude positively influences Entrepreneurial intention

3.3.4 Cognitive Attitude and Entrepreneurial Intention

Cognitive attitude refers to part of the attitude that represents a person's beliefs and thoughts regarding specific behaviour. Previous empirical studies have argued that attitude is a one-dimensional variable, and posited that the evaluation of attitude should include affective and cognitive aspects in order to distinguish the unique contribution of each attitude to the prediction of entrepreneurial behaviour (Trafimow *et al.*, 2004; Botsaris and Vamvaka, 2016; Cantner, Goethner and Silbereisen, 2016). Further researches in this regard have been conducted in order to assess the precise impact of each attitude's components on entrepreneurial intention; In their study, Cantner, Goethner and Silbereisen (2016) argue that cognitive attitude has an insignificant relationship with entrepreneurial intention, whereas Botsaris and Vamvaka (2016) have shown that cognitive attitude has less impact on entrepreneurial intention than does affective attitude. Recent studies have shown that individuals who believe and think that being an entrepreneur is a favourable behaviour regarding starting-up a business, that is essential for generating benefits, are more likely to form an entrepreneurial intention (Goethner *et al.*, 2012; Botsaris and Vamvaka, 2016). As a result, the next hypothesis can be formed as:

Hypothesis 11:

Cognitive attitude positively influences Entrepreneurial intention

3.3.5 Perceived Behavioural Control (PBC) and Entrepreneurial Intention

Perceived behavioural control (PBC) refers to how easy or difficult it is to accomplish a task and represents the ability and skills of a person (Beck, L. & Ajzen, 1991; Krueger, Reilly and Carsrud, 2000). The empirical evidence has shown that PBC has a positive relationship with entrepreneurial intention (Tsai, Chang and Peng, 2014; Saeed *et al.*, 2015; Karimi *et al.*, 2016; Ozaralli and Rivenburgh, 2016). Moreover, in their interesting analysis on PBC's influences, Tsai, Chang and Peng (2016) argued that PBC has a positive relationship with entrepreneurial intention. However, these findings conflict with those of more recent studies, that report that PBC does not have a significant impact on intention (Goh, Ritchie and Wang, 2017). Recent research suggests that individuals who believe in controlling their skills and abilities regarding entrepreneurial behaviour are more likely to form an entrepreneurial intention to start-up a business (Kibler, 2012; Leeuw *et al.*, 2015; Shah, 2015). It is therefore likely that such a connection exists between PBC and entrepreneurial intention, as PBC contributes towards starting-up a business. Hence, it can be hypothesized that:

Hypothesis 12: PBC positively influences Entrepreneurial intention

3.3.6 Entrepreneurial Self-Efficacy (ESE) and Entrepreneurial Intention

Entrepreneurial self-efficacy (ESE) is defined as a person's confidence in his ability to execute a task (Biraglia and Kadile, 2017). Limited studies have adopted ESE to examine its impact on entrepreneurial intention, with the majority of existing studies using PBC and ESE interchangeably in order to reflect control or confidence regarding a task (Schlaegel and Koenig, 2014; Ozaralli and Rivenburgh, 2016; Fernández-Pérez *et al.*, 2017). Empirical evidence has shown that ESE has a positive relationship with entrepreneurial intention (Tsai, Chang and Peng, 2014; Yousafzai, Saeed and Muffatto, 2015; Biraglia and Kadile, 2017). Recent research

findings have indicated that individuals who are confident in their skills and abilities to demonstrate entrepreneurial behaviour are more likely to form an entrepreneurial intention (Tsai, Chang and Peng, 2014; Saeed *et al.*, 2015; Biraglia and Kadile, 2017). However, there is inconsistency, with other studies positing that ESE has an insignificant relationship with entrepreneurial intention (Bacq *et al.* (2016). Therefore, it can be argued that:

Hypothesis 13: ESE positively influences Entrepreneurial intention

3.3.7 Effort and Entrepreneurial Intention

Effort is defined as the amount of intended exertion and expenditure on a task, such as commitment, the work needed, the intended effort, and the time spent (Van Eerde and Thierry, 1996). Previous studies have shown that there is a relationship between effort and entrepreneurial intention (Manolova, Brush and Edelman, 2007; Barba-Sanchez and Atienza-Sahuquillo, 2017). Limited studies have shown that effort has a significant influence on entrepreneurial intention, as individuals expend the necessary effort to form a business depending on the expected desired outcomes (Manolova, Brush and Edelman, 2007; Renko, Kroeck and Bullough, 2012). Furthermore, studies evaluating effort have observed inconsistent results regarding the question of whether or not effort influences intention (Gatewood *et al.*, 2002). Similarly, studies have shown that individuals who believe in their exertion of the essential amount of effort to establish a business are more likely to form an entrepreneurial intention (Gatewood *et al.*, 2002; Sivarajah and Achchuthan, 2013). Hence, it can be hypothesized that:

Hypothesis 14: Effort positively influences Entrepreneurial intention

3.3.8 Independent Variables

The independent variables of the proposed theoretical model are expectancy and social norms' specificities. Social norms have been categorised into two streams; the individual level and the societal level (Schott and Sedaghat, 2014). At the

societal level, they represent collective norms whereas, at the individual level, they are referred to as perceived norms; in this research, the individual level of social norms is adopted. The social norms at the individual level consist of three types of norm (subjective, injunctive, and descriptive) (Chung and Rimal, 2016). Each of these will be explained in the following subsections.

Subjective Norms

Subjective norms (SN) refer to the approval and acceptance of a specific behaviour within a society by a close network of people, such as relatives and colleagues, which reflect on an individual's actions in determining perceived social pressure (Ibrahim and Mas'ud, 2016). Subjective norms are one of the factors of the theory of planned behaviour (TPB) that directly impact on entrepreneurial intention (Krueger, Reilly and Carsrud, 2000). Surprisingly, the precise effect of subjective norms is a much-debated topic and it is unclear to what extent the construct impacts entrepreneurial intention (Fernández-Pérez *et al.*, 2017). This issue has attracted very little attention and recommendations to investigate further the indirect impact on intention have been made by previous researchers (Fini *et al.*, 2012; Hui-Chen, Kuen-Hung and Chen-Yi, 2014).

Injunctive Norms

Injunctive norms refer to people's understanding and beliefs that are in conformity with what others do and support the performing of a specific behaviour in society. Injunctive norms measure the influence of a group of people in a society, unlike informative norms, that represent the pressure to accept the information provided in the absence of a group of people. Injunctive norms consist of informal rules, such as cultural or religious doctrine (Chung and Rimal, 2016). The importance of injunctive norms is debated (Goethner *et al.*, 2012), and a stream of literature has emerged that offers contradictory findings on the injunctive norms relationship with subjective norms. Overall, previous studies have highlighted the need to include injunctive norms in further research in order to identify the impact of reference

people's support and encouragement (i.e. family, friend, peers) (Tsai, Chang and Peng, 2014; Karimi *et al.*, 2016).

Descriptive Norms

Descriptive norms refer to the perception of a behaviour diffusion, representing a behaviour that already exists and is accepted within a given society (Beville *et al.*, 2014). The construct demonstrates an individual's perception of adopting a specific behaviour after observing similar behaviour in a society. There are inconsistent results, however, regarding whether or not descriptive norms or subjective norms impact on entrepreneurial intention (Fernández-Pérez *et al.*, 2017). A few studies have indicated that descriptive norms are influenced by injunctive norms and outcome expectation, where observation of a specific behaviour in a society provides information about the acceptance of that behaviour, adding that it received support from people (injunctive norms) encouraging individuals to intend to behave in a similar manner (Chung and Rimal, 2016). However, how descriptive or subjective norms affect entrepreneurial intention remains poorly explained in the existing entrepreneurship studies, so further research is considered essential (Fretschner and Weber, 2013; Iakovleva *et al.*, 2014; Fernández-Pérez *et al.*, 2017).

Expectancy

The construct of expectancy was firstly articulated by Vroom (1964), referring to the beliefs and perception that a particular course of action will lead to a certain outcome (Vroom, 1964). These beliefs include the intended effort and commitment to perform the required action in order to attain the outcomes (Manolova, Brush and Edelman, 2007). Prior to the work of Vroom (1964), the role of expectancy was largely unknown and, in recent years, there has been an increasing amount of literature investigating the role of expectancy in influencing intention (Van Eerde and Thierry, 1996; Kiatkawsin and Han, 2017). To date, there has been little agreement on the role of expectancy in the field of entrepreneurship and recent researches have highlighted that this phenomenon has not yet been adequately explained (Gatewood *et al.*, 2002; Barba-Sanchez and Atienza-Sahuquillo, 2017).

Previous studies have argued that expectancy is already embedded in the intentional models represented by other constructs, such as attitude beliefs in the theory of planned behaviour (Krueger, Reilly and Carsrud, 2000), but few research studies have identified expectancy as an independent construct that can influence attitude as well as a perceived behaviour control, adopting the theory of behaviour theory (Goethner *et al.*, 2012).

3.3.9 Dependent Variables

The dependent variables in this section were adopted from the extant literature on the entrepreneurial intention to start-up a business. These dependent variables are: affective attitude, cognitive attitude, perceived behavioural control, entrepreneurial self-efficacy, effort, and entrepreneurial intention. All of these variables are adopted from the theory of planned behaviour apart from effort, that is adopted from Vroom's expectancy theory (Manolova, Brush and Edelman, 2007; Fernández-Pérez *et al.*, 2017).

Entrepreneurial Intention

Entrepreneurial intention is a leading cause of the behaviour of starting-up a business (Krueger, Reilly and Carsrud, 2000) and the extant literature has shown that it is now well-established that entrepreneurial intention is the best predictor of entrepreneurial behaviour (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Shah, 2015; Wang *et al.*, 2016). Entrepreneurial intention is defined as the intention to start-up a business or to become an entrepreneur (Fernández-Pérez *et al.*, 2017).

Recently, the academic literature has focused on investigating the factors impacting on entrepreneurial intention. A few researches have shown the models and theories that can be adopted to represent the factors influencing entrepreneurial intention, such as the theory of planned behaviour (TPB), where entrepreneurial intention is influenced by attitude, social norms, and perceived behavioural control (Ajzen, 1991). Another theory has been identified in literature that shows the factors influencing entrepreneurial intention, such as Vroom's expectancy theory

(VIE), where entrepreneurial intention is influenced by a multiplication function of the motivation force consisting of expectancy, instrumentality, and valence (Renko, Kroeck and Bullough, 2012). In VIE, the interaction between these variables has directed researchers to investigate how these constructs influence each other and it has been found that expectancy influences entrepreneurial intention indirectly through attitude and perceived behavioural control (Goethner *et al.*, 2012).

The majority of the existing literature on entrepreneurial intention has focused on differentiating between the values of the outcomes generated by forming a business i.e. self-employment or profits. However, previous findings have indicated that any expected outcome has the same impact on entrepreneurial behaviour (Iakovleva and Kolvereid, 2009)

Affective Attitude

Affective attitude (or ‘experimental attitude’) refers to emotions and feelings (Botsaris and Vamvaka, 2016). Recent studies show that affective attitude has a significant relationship with entrepreneurial intention (Trafimow *et al.*, 2004; Cantner, Goethner and Silbereisen, 2016; French *et al.*, 2005; Kraft *et al.*, 2005). A few studies have indicated that affective attitude has twice the impact of cognitive attitude on entrepreneurial intention, suggesting that further investigation is essential in order to distinguish the attitude components (affective or cognitive) to make a unique contribution to predicting entrepreneurial intention (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Botsaris and Vamvaka, 2016; Ozaralli and Rivenburgh, 2016).

Cognitive Attitude

Cognitive attitude refers to an individual’s thoughts, beliefs and rational arguments (Botsaris and Vamvaka, 2016). Numerous studies have shown that the influence of attitude, as a one-dimensional construct on intention, is well-established (Krueger, 1993; Iakovleva *et al.*, 2014; Tsai, Chang and Peng, 2014). However, there is

empirical evidence showing that attitude is a multi-dimensional variable including affective and cognitive attitude, so further research should be conducted to reveal its impact on predicting an intention. Recent research has grown around this subject, aiming to distinguish the variance within the impact of attitude components on entrepreneurial intention; previous studies have empirically demonstrated that cognitive attitude has less impact on entrepreneurial intention than does affective attitude (Botsaris and Vamvaka, 2016). More recently, literature has emerged that offers contradictory findings about the impact of cognitive attitude, empirically showing that cognitive attitude is unrelated to entrepreneurial intention (Cantner, Goethner and Silbereisen (2016). As a result, it is still uncertain whether cognitive attitude contributes towards forming entrepreneurial intention, so further work is required that employs both attitude components in order to investigate these relationships.

Perceived Behavioural Control

Perceived behavioural control (PBC) refers to the individual's perception of how easy or difficult is to perform a behaviour, which differs from the concept of the perceived locus of control referring to how to control a behaviour (Ajzen, 1991). Several studies in the existing entrepreneurship literature have substituted in their intentional models PBC with self-efficacy, using the terms interchangeably (Tsai, Chang and Peng, 2014; Fernández-Pérez *et al.*, 2017). Recent studies have shown that PCB is positively associated with entrepreneurial intention (Kibler, 2012; Walker, Jeger and Kopecki, 2013; Shah, 2015; Goh, Ritchie and Wang, 2017).

Entrepreneurial Self-Efficacy

Entrepreneurial self-efficacy (ESE) refers to individuals' beliefs and confidence in their ability and capability to launch a business (Mcgee *et al.*, 2009). Recent studies have shown that ESE is an important antecedent of start-up intention, as most studies confirm that the construct has a significant and positive impact on entrepreneurial intention (Yousafzai, Saeed and Muffatto, 2015; Wang *et al.*, 2016). However, recently, studies have emerged showing that ESE is unrelated to

entrepreneurial intention (Bacq *et al.*, 2016). Therefore, additional research is needed to investigate this matter further and establish the validity of the previous findings.

Effort

Effort is a multi-dimensional construct that refers to the belief that intended effort in terms of commitment to a behaviour will lead to a desired goal, such as founding a business (Manolova, Brush and Edelman, 2007). Previous studies of entrepreneurial intention have excluded the construct of effort, arguing that PBC and ESE already accounted for its role (Douglas and Shepherd, 1999; Krueger, Reilly and Carsrud, 2000; Manolova, Brush and Edelman, 2007). A few studies have shown that effort is influenced by expectancy regarding forming the intention to start-up a business (Renko, Shrader and Simon, 2012). However, the evidence for the influence of effort on entrepreneurial intention remains inconsistent, as little is known in the extant literature. Therefore, effort is included in the current research, aiming to investigate its relationship with entrepreneurial intention and provide more generalized results.

3.4 Theories Adopted in the Conceptual Framework

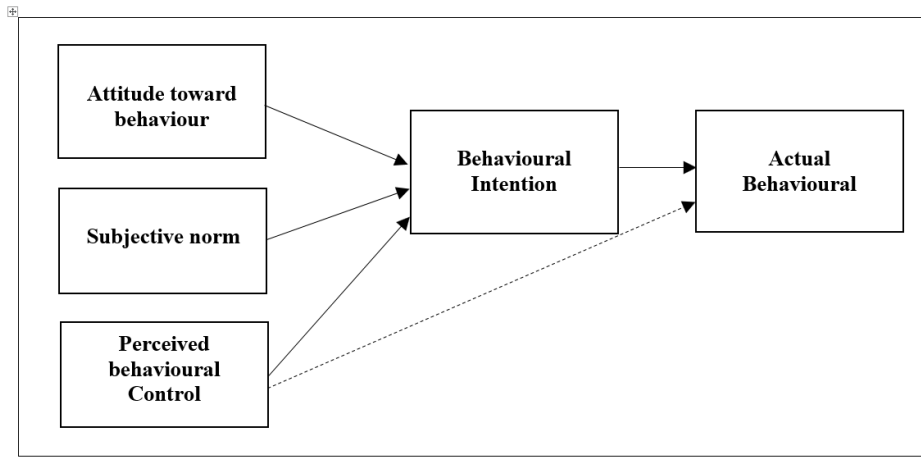
This section describes briefly and highlights the theories that have been selected to contribute to the development of conceptual framework. These theories are the theory of planned behaviour (TPB) and Vroom's expectancy theory (VIE). It is also worth noting that this research adopts extended models of both aforementioned theories to develop the proposed conceptual framework.

3.4.1 Theory of Planned Behaviour (TPB)

Introduced by Ajzen (1991), the theory of planned behaviour (TPB) was designed with the aim of predicting behaviour. TPB consists of three constructs: attitude,

social norms, and perceived behavioural control as illustrated in figure 3.2. TPB has been used to demonstrate a wide range of intentions and behaviour (Krueger, Reilly and Carsrud, 2000; Tsai, Chang and Peng, 2014).

Figure 3.2: Theory of Planned Behaviour (TPB)



(Source: Ajzen, 1991)

In the field of entrepreneurship, TPB has demonstrated validity and applicability to explain the influential factors that impact on entrepreneurial intention, but inconsistency has been observed with regard to one of its constructs, named social norms. TPB has been challenged in recent years by several scholars, who found that social norms' relationship to entrepreneurial intention is invalid (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Tsai, Chang and Peng, 2014; Fernández-Pérez *et al.*, 2017). Alternative suggestions regarding adopting an indirect relationship with entrepreneurial intention through its constructs, such as attitude and perceived behavioural control, have been noted in the existing literature, where limited studies have reported that the indirect relationship with entrepreneurial intention indicates significant support for TPB's validity (Krueger, Reilly and Carsrud, 2000; Fini *et al.*, 2012; Goethner *et al.*, 2012; Cantner, Goethner and Silbereisen, 2016).

Another significant aspect of TPB is the awareness of social norms' specificities, as most of the previous studies represented social norms as a one-dimensional construct, including only subjective norms. Limited studies have examined social

norms as a multi-faceted construct, reporting that these specificities provide a better understanding of the construct of social norms (Goethner *et al.*, 2012; Cantner, Goethner and Silbereisen, 2016).

Another important construct in TPB is attitude, that has been adopted as a one dimensional construct in several previous researches (Leeuw *et al.*, 2015; Shah, 2015). However, limited research has uncovered the deeper content of the attitude construct, reporting that it should be represented as a multi-dimensional construct consisting of two important sub-components, affective attitude and cognitive attitude, that could provide a better understanding of the overall construct and its impact on entrepreneurial intention (Botsaris and Vamvaka, 2016). Little progress has been made in adopting attitude specificities in the entrepreneurship literature, as most previous studies have paid little attention to attitude specificities (Krueger, Reilly and Carsrud, 2000; Shah, 2015). However, there is an inconsistency in the existing published research regarding investigating attitude specificities; in their study, Cantner, Goethner and Silbereisen (2016) have empirically shown that affective attitude has a positive impact on entrepreneurial intention but that the relationship between cognitive attitude and intention was found to be insignificant. Furthermore, another study reports that both affective attitude and cognitive attitude have a positive impact on entrepreneurial intention, demonstrating that the former has twice the impact of the latter (Botsaris and Vamvaka, 2016). Overall, the findings from previous studies reveal insights into the investigated subject but demand further investigation to provide a more refined framework, that includes the underlying constructs of social norms' specificities and attitude specificities as well as social norms' indirect relationship with entrepreneurial intention in planned behaviour theory (Krueger, Reilly and Carsrud, 2000; Fernández-Pérez *et al.*, 2017).

Based on the conceptualisation explained earlier, this research adopts two extended models. One of these models adopts the theory of planned behaviour, that was developed by Fernández-Pérez *et al.* (2017), see figure 2.1 in chapter 2. In this research, we expand two constructs to reflect their specificities; social norms and

attitude. As for social norms, three specificities are included; subjective norms, injunctive norms, and descriptive norms. As for attitude, two specificities are included to represent affective attitude and cognitive attitude. In addition, social norms are referred to as an independent construct that are linked to attitudes, entrepreneurial self-efficacy, and perceived behavioural control both directly and indirectly through the aforementioned constructs of entrepreneurial intention. Key findings from the empirical study of Fernández-Pérez *et al.* (2017) demonstrate that the direct link of social norms to entrepreneurial intention is insignificant thus supporting previous studies findings (Liñán and Chen, 2009; Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Tsai, Chang and Peng, 2014).

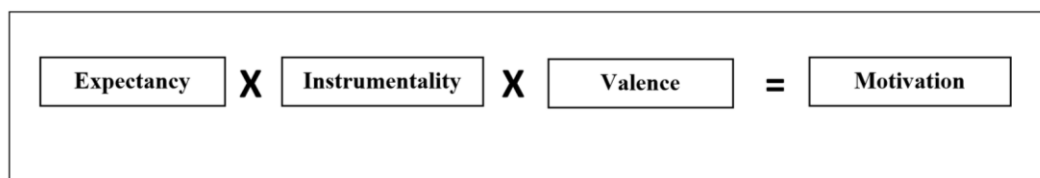
Moreover, another research study demonstrates an extended model of TPB that shows the social norms specificities; injunctive norm and descriptive norm, and attitude specificities; affective attitude and cognitive attitude, see figure 2.2 in chapter 2. This model has been developed by Cantner, Goethner and Silbereisen (2016), that represents the framework foster entrepreneurship among professionals (scientists), and reports that scientists feel a social pressure to commercialise their research knowledge into an entrepreneurial activity, and they are more likely to become entrepreneurs, if they sense that their workplace peers encourage such behaviour. In their study findings, scientists who develop an affective attitude, influenced by injunctive norms, and perceive their control on an entrepreneurial behaviour, are more likely to form the entrepreneurial intention to start-up a business. Their study concluded that descriptive norms and cognitive attitude has no impact on entrepreneurial intention unlike another study that report that cognitive attitude has an impact on entrepreneurial intention and indirect effect of social norms to entrepreneurial intention shows a better adoption of the social norms (Botsaris and Vamvaka, 2016; Ozaralli and Rivenburgh, 2016).

3.4.2 Vroom's Expectancy Theory (VIE)

Introduced by Vroom (1964), Vroom's expectancy theory (VIE) has received considerable attention in the field of organisational behaviour i.e. work-motivation

(Kiatkawsin and Han, 2017). VIE consists of three components: expectancy, instrumentality, and valence, that form a motivation force (MF) that encourages an individual's behaviour and performance within organisations, see figure 3.3 (Van Eerde and Thierry, 1996; Harris *et al.*, 2017). This force has been operationalised in term of constructs such as effort, valence, instrumentality, and expectancy, where effort refers to an individual's degree of commitment to focusing on attaining an outcome (Van Eerde and Thierry, 1996). The valence construct refers to the value creation of starting-up a business i.e. how important the outcome is, and represents all affective orientations towards a goal (Van Eerde and Thierry, 1996). The instrumentality construct refers to the belief that achieving value leads to a greater reward and it represents an outcome-outcome association, i.e. starting up a business creates a reward; self-employment, financial gain or reputation gain (Gatewood *et al.*, 2002). The expectancy construct refers to: "the probability (belief) that one's effort will result in the attainment of desired goals", based on the past experience and values of an individual (Renko, Kroeck and Bullough, 2012, p.669).

Figure 3.3: Vroom's Expectancy Theory (VIE)



(Source: Vroom, 1964)

As illustrated in figure 3.3, VIE is represented as the motivation force that is defined as the mathematical model of a product that results from valence, instrumentality, and expectancy, but Vroom himself expressed a concern about the multiplicative function (Vroom, 1964, Van, et al. 1996; Renko, et al. 2012). To date, there has been little agreement on what the VIE constructs represent in the field of entrepreneurship, and recent research outlines that Expectancy Theory has not yet been adequately explained (Gatewood et al. 2002).

Previous research has argued that there exists disagreement regarding the established validity of the multiplication function of the motivation force equation

in VIE (Renko, Kroeck and Bullough, 2012). Moreover, recent studies have posited the lack of explicitness in VIE for determining the interaction between its constructs, directing researchers to investigate how these constructs influence each other and the validity of each construct (Kiatkawsin and Han, 2017).

In the entrepreneurship business field, a limited number of studies have examined VIE constructs to show their impact on entrepreneurial intention, where VIE constructs have been measured in a variety of ways (Manolova, Brush and Edelman, 2007; Goethner *et al.*, 2012; Renko, Kroeck and Bullough, 2012), but the adoptability of these constructs remains unclear; Krueger, Reilly and Carsrud (2000) have suggested that the expected values are embedded in TPB theory, where attitude depends on the beliefs about expected outcomes. Another study by Hayton and Cholakova (2011) claims that the driver of expectancy of an individual's effort to start-up a business has been identified as being equivalent to the concept of self-efficacy in the theory of planned behaviour. Similarly, Goethner *et al.* (2012) reported that the expectancy of financial gain and reputation gain is an independent construct that impacts on attitude and perceived behaviour control in TPB. Several studies have revealed that VIE constructs are embedded in TPB theory, but no single study has clearly demonstrated the VIE constructs within the TPB model (Cantner, Goethner and Silbereisen, 2016). Little progress has been made in investigating the potential impact of VIE alone on entrepreneurial intention (Manolova, Brush and Edelman, 2007; Hayton and Cholakova, 2011; Sperber and Linder, 2018).

Moreover, a research study by Renko, Kroeck and Bullough (2012), represents the relationship between expectancy and effort to start-up a business in an extended model of VIE that shows VIE constructs as influential factors on business start-up and its status, see figure 2.4 in chapter 2. This extended model of VIE has been developed by Renko, Kroeck and Bullough (2012), as their study reports that expectancy has a positive impact on start-up by allocating the effort perceptions, where expectancy provides a motivation for entrepreneurial behaviour, and in their study suggestion of further research on VIE constructs in entrepreneurship is stated.

This adopted extended model is one of the rare models that shows the impact of expectancy on the effort to start-up a business.

In accordance with previous studies that argue for the similarities between TPB and VIE (Gatewood *et al.* 2002), in the current research, the other constructs of VIE, such as instrumentality and valence, will be considered as being embedded in the TPB constructs. Instrumentality and valence are included as the valence is the value that is generated from expectancy and is associated with effort contribution (i.e. the establishment of a business), while instrumentality is the creation of value that will lead to further value (i.e. founding a business will create a self-employed status) (Renko, Kroeck and Bullough, 2012; Holland and Garrett, 2015).

Based on the conceptualisation explained earlier, this research adopts two extended models. One of these two models adopts TPB and the other is an extended model based on Vroom's expectancy theory that was developed by Renko, Kroeck and Bullough (2012). Collectively, these studies highlight the need for a clearer model that shows the expectancy construct within the TPB model and, therefore, further in-depth knowledge on this context requires more investigation of the variability of VIE variables (Holland and Garrett, 2015; Barba-Sanchez and Atienza-Sahuquillo, 2017; Kiatkawsin and Han, 2017).

3.5 Chapter Summary

This chapter has assessed the limitation in the current literature and the call for further research in order to develop a conceptual framework. The proposed framework is based on the existing literature and adopts two theories: the theory of planned behaviour and Vroom's expectancy theory. The conceptual framework has been designed to uncover the potential relationships among the constructs that impact on entrepreneurial start-up intention. The concept of entrepreneurial start-up intention has recently been challenged by a number of studies that have detected several conceptual and methodological weaknesses. However, the conceptual model has captured previous studies' suggestions to investigate the indirect

relationship between entrepreneurial expectancy, social norms' specificities and entrepreneurial start-up intention. The proposed conceptual model will investigate the impact of expectancy and social norms on individuals' attitudes, self-efficacy, effort and perceived behavioural control, in regard to entrepreneurial business start-up intention.

Based on the extended theory of planned behaviour (TPB) by Ajzen (1991) as well as Vroom's expectancy theory (Van Eerde and Thierry, 1996), the proposed conceptual framework provides a modified model, unifying both theories reflecting entrepreneurial start-up intention's antecedents from the social norms and expectancy perspectives. The development of the proposed framework constitutes a novel approach in the entrepreneurship field, as no previous researches have investigated the factors influencing entrepreneurial start-up intention employing through integrating the TPB and VIE theories into one unified model.

The proposed model will direct decision-makers to understand and learn more about the potential role of social norms and individual's expectancy, and its impact in creating an entrepreneurial start-up intention that will result in more businesses being launched in the future, aiming to support the economy and accelerate economic growth in a given context. In addition to that, this proposed framework can be used as a reference for researchers who seek to study entrepreneurship in light of individuals' cognitive attributes, motivation, and social norms' strength, and the role of these factors in entrepreneurship.

The next chapter will discuss and outline the most suitable methodology for examining and validating the aforementioned hypotheses.

Chapter 4: Research Methodology

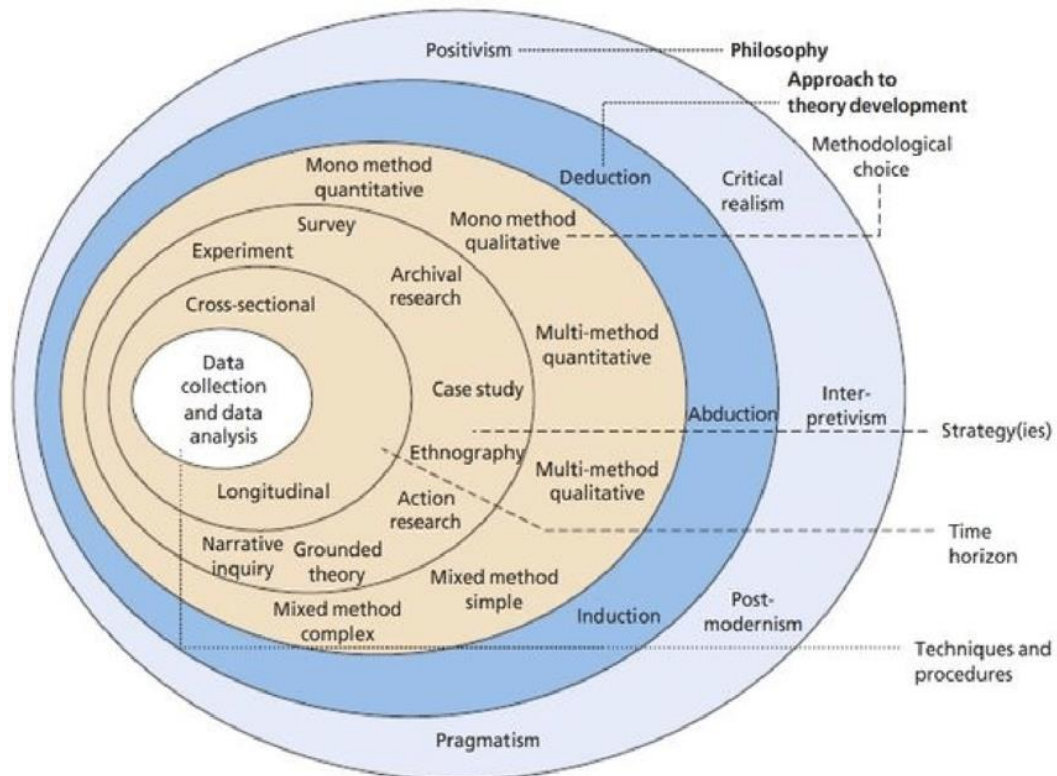
This chapter presents the research methodology, methods, and data underpinning the empirical inquiry. It is divided into seven main sections; section 4.1 begins with the research philosophies and goes on to the selected philosophy for the current research supported by a justification. Section 4.2 presents the research design followed by the research approach in section 4.3 that consist of two subsections that highlight qualitative approach in subsection 4.3.1 and quantitative approach in subsection 4.3.2. Then, research strategy is discussed in section 4.4 that draws the data collection techniques and it is divided into five subsections; section 4.4.1 describes the survey, section 4.4.2 gives a brief of pilot testing, subsection 4.4.3 discusses the sampling strategy, subsection 4.4.4 identifies the sample size and selection, and subsection 4.4.5 explains the instrument measurement that used in the research study. After that, data collection is expounded in section 4.5 and this section is divided into two subsections; subsection 4.5.1 elucidates reliability and validity, and 4.5.2 highlights the use of structure equation modelling, SEM. The penultimate section 4.6 provides a brief of ethical consideration for the research study, where the chapter conclude with a chapter summary in section 4.7.

4.1 Research Philosophy

Research philosophy refers to assumptions and beliefs about the development of knowledge (Saunders, Lewis and Thornhill, 2016). The state of knowledge exists on reality, assumptions, and beliefs by human evaluation system to view a nature, where developing knowledge in academia contributes to form a new theory or an extension of an existing theory that interpret knowledge within a particular context (Rahi, 2017). Understanding the philosophical stance elucidates the nature of knowledge in reality and represents suitable information that forms assumptions for

further examination of the knowledge. However, research entails a search of knowledge by applying a procedure that consists of techniques and tools aiming to answer research questions (Leitch, Hill and Harrison, 2010). Also, conducting a research requires a thorough understanding of the philosophical stance that is suitable for comprehending the reality and knowledge in each domain, where applying the relevant research philosophy becomes a choice for the researcher in order to enhance the body of knowledge (Saunders, Lewis and Thornhill, 2016). Furthermore, a research philosophy is concerned with the ideas and beliefs that are related to the development of knowledge that assists research viewing such knowledge in a specific context to contribute to a theory modification or solving a problem. In research studies, the research philosophy provides a guideline to structure the process of viewing of a phenomenon, data gathered, data analysed, and it shapes research's assumption of what is knowledge and how it is treated in order to assist research studies in dealing with a knowledge (Orlikowski and Baroudi, 1991). Prior to explaining the deeper insights of the research study philosophy and approaches, it is worth noting that the research onion in studies according to Saunders, Lewis and Thornhill (2016) emerges a classification of research underlying choices (see figure 4.1). As shown in figure 4.1, the research onion provides assortment of selection that consists of philosophy, approaches, methodology, strategy, time horizon, and techniques. In the field of research study, each layer of the research onion is important and represents research options in each stage, helping to identify the options available to the researcher so that research is carried out appropriately supported by appropriate justification.

Figure 4.1: The Research Onion



(Source: Saunders, Lewis and Thornhill, 2016)

In the current research study, each layer of the onion (see figure 4.1) within the philosophy stance is expounded and selected choice is made with a justification explained in next subsections. As for the current research, a summary of selected choice of each stage is as; research assumptions “epistemology”, research philosophy “positivism”, research approach “deductive”, research choice “mono method quantitative”, research strategy “survey”, research time horizons “cross-sectional”, research technique and procedure, see table 4.1. All aforementioned selected choices are explained next in order to provide insights of the underlying academic research options for the current research study and to justify the selected choices. However, in business and management research, three assumptions of the knowledge are known; ontology, epistemology, and axiology. Ontology refers to the nature of reality assumption as the nature of being, while epistemology refers to the acceptable and valid assumptions about a knowledge that distinguishes opinion from justified belief, while axiology refers to the values as ethics that recognises

that things are valuable in a research process (Orlikowski and Baroudi, 1991; Scotland, 2012).

Table 4-1: Summary of Current Research Choices

Research design	Choice
Research Assumptions	Epistemology
Philosophy	Positivism
Strategy	Deductive
Approach	Quantitative
Method	Survey “Questionnaire”
Time horizons	Cross-sectional

In management research and particularly in entrepreneurship research, most research calls for more positivist research due to the beliefs of its rationality and objectivity (Leitch, Hill and Harrison, 2010). However, epistemology has been widely preferred as it is concerned with the nature of knowledge logic or the theory of knowledge, which distinguishes justified belief from opinion that is reflected in methods and validity of conducting and building a research strategy and planned methods in collecting empirical evidence (Saunders, Lewis and Thornhill, 2016). Also, it provides how the social world must be studied by entailing a scientific approach in forming hypotheses that will be tested using specific measurement techniques (Stories and Practices, 2015). In epistemology, there are three philosophy paradigms; positivism, interpretivism and critical realism. The following subsections will explain each philosophy paradigm.

4.1.1 Positivism

Positivism is related to the philosophical stance that is concerned with an objective description of reality, where the phenomenon can be verified and measured by testing a theory in order to accept or reject assumptions (Orlikowski and Baroudi, 1991; Bell, Bryman and Harley, 2018). This type of paradigm assumes objective facts and produces objective findings for the purpose of law-like generalisations

(Reyes, 2015). In research, practically these validations are carried out by a deductive approach that deduces a theory towards the development of hypotheses and drives the process towards verifying and enhancing a theory (Saunders, Lewis and Thornhill, 2016). The development of hypotheses will follow a scientific method in collecting data to test the developed hypotheses for confirmation or rejection of these assumptions to contribute towards refining an existing theory (Orlikowski and Baroudi, 1991). Several research studies that concentrate on entrepreneurial intention have adopted the positivism paradigm with a quantitative approach as method choice.

4.1.2 Interpretivism

Interpretivism is referred to the assumptions of reality subjectively, where humans, social world, and physical phenomena are emphasised differently (Saunders, Lewis and Thornhill, 2016; Bell, Bryman and Harley, 2018). The purpose of this paradigm is to create a new understanding and interpretation of contexts that conform the difference between people and objects of natural science (Rahi, 2017). It reflects how people differ in interacting with the surrounding world by association of own subjective meanings (Scotland, 2012). Research studies that adopt interpretivism tend to capture what is meaningful to their participants which claims the use of qualitative methods in order to understand social phenomena (Myers, 2011).

4.1.3 Critical Realism

The critical paradigm is referred to the subjective assumptions that are based on real world phenomena concerned with social science existence and conditions critiquing its conflicts (Saunders, Lewis and Thornhill, 2016; Bell, Bryman and Harley, 2018). It explains the nature as an independent and external social matter that predicts knowledge of reality as it can be seen rather than as it can be valued. Furthermore, this paradigm views people and the world separately as each is viewed as an object that represents a knowledge that is critically evaluated to illustrate reality (Myers, 2011; Reyes, 2015).

The current research study will investigate the antecedents of entrepreneurial intention and its relationship with start-up a business intention. To do so, the conceptual framework has been developed based on existing literature along with fourteen measurable hypotheses. In this context, the positivism paradigm approach becomes the most suitable and relevant paradigm compared with interpretivism and critical realism. The justification for this is provided in following subsection.

4.1.4 Justification of Positivist Research Philosophy

The positivism paradigm is a phenomena of reality that is described objectively and can be quantified, and its variables can be measured through instruments, where other paradigms such as interpretivism and critical realism view the phenomena is viewed as a subjective assumption to explore a phenomenon to interpret an understanding (Bell, Bryman and Harley, 2018). By reviewing previous three paradigms in previous subsections, have directed the current research epistemology to select the positivism paradigm as it determines measuring the social phenomena objectively, and supports quantifying the relationships among the antecedents of the entrepreneurial start-up intention as well as provides an objective view of reality (Stories and Practices, 2015; Bell, Bryman and Harley, 2018). Also, it advocates an objective investigation and arguing on an objective reality to examine the causes of social phenomena by using a scientific method for the purpose of empirical measurement that result in theory verification (Rahi, 2017). It is also used to understand human intention and behaviour by considering objective values that support understanding human attitude, social norms and intention as it reveals the knowledge by social phenomena (Reyes, 2015). In this context, the positivism paradigm has been selected to define, understand, measure, and predict social phenomena in the social world by investigating causal relationships between the entrepreneurial intention antecedents by neutral quantitative objective to explain the phenomena in the social world. The primary objective of current research study is to examine individual's intention towards entrepreneurship through the impact of social norms and individual's expectancy independently and dependently on attitude, perceived behaviour control, entrepreneurial self-efficacy, and effort

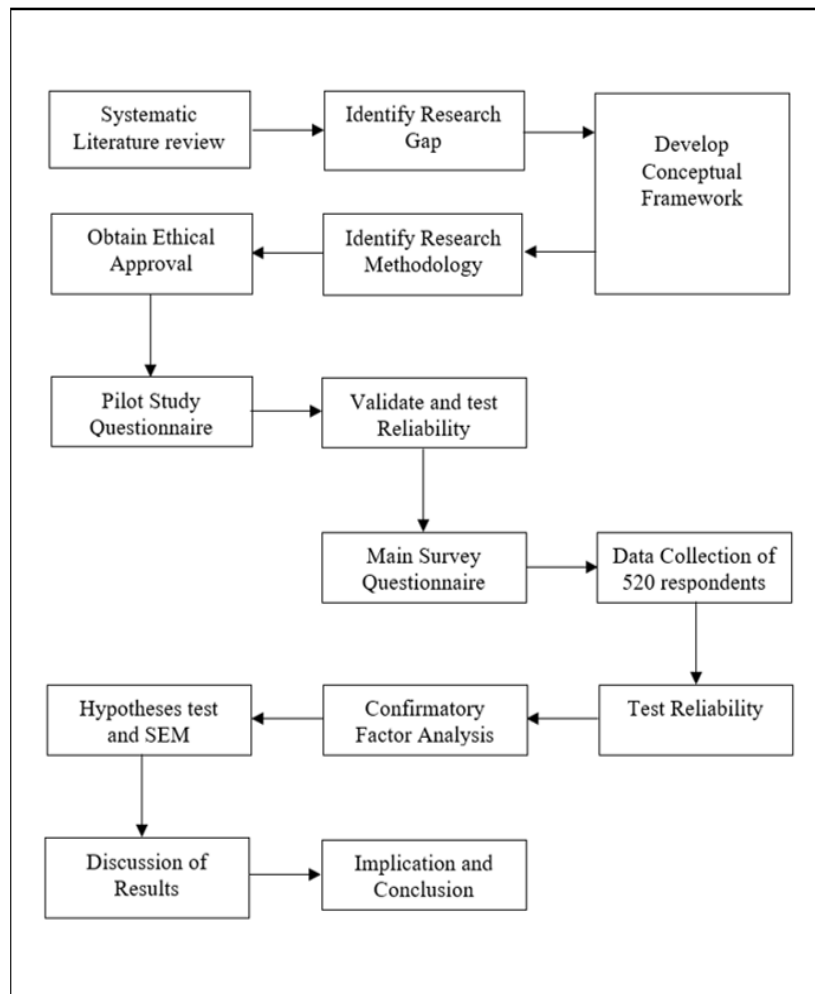
towards entrepreneurial start-up intention. Therefore, the positivism paradigm will serve the purpose of conducting the research study by allowing the understanding, measuring, testing and validation of the proposed conceptual framework's hypotheses that represent the relationships between the variables in an objective manner to measure all variables representing the investigated phenomena (Orlikowski and Baroudi, 1991; Creswell, 2009). The strength in the positivist paradigm is noted by its assumption of a fixed a priori relationship between objects within phenomena that makes it different to other paradigms as well as it determines the reality objectively and examination of the relationships between objects are quantifiable that can be measured through a scientific instrument; assisting the testing of hypotheses that represent the underlying relationships between these factors with a measurable method (Orlikowski and Baroudi, 1991; Bell, Bryman and Harley, 2018).

4.2 Research Design

Research design refers to the plan and strategy of how a research study will be conducted to answer the underlying research question and problem (Saunders, Lewis and Thornhill, 2016). The present research study starts with an in-depth overview of the existing literature of the concept under investigation aiming to identify the existing gaps in scientific knowledge in entrepreneurial start-up intention literature. Then, the study will proceed by developing a conceptual framework based on the previous literature review followed by the formulation of the proposed hypotheses of the present research. This research study adopts a quantitative approach as methodological choice, where the research strategy is survey, see section 4.5. Prior conducting the main survey, a pilot test has been conducted by targeting 50 participants to check the reliability and validity of the questionnaire. The targeted 50 participants represent a group of academics and PhD students at Brunel University London who were approached by the researcher. The purpose of the pilot study was conveyed in order to facilitate testing the measures used in the questionnaire. According to the pilot findings of 35 respondents, the main survey has been amended to present the final main survey of this research

study. The data collection of the present research has been conducted by using both online and postal questionnaires. The questionnaires were distributed to employees working in the Oil and Gas industry, asking them to forward the survey in additional potentially interested colleagues. Overall, a total of 509 completed surveys were collected (850 was the targeted sample and response rate of 68 percent). The collected data has been analysed by using Structural Equation Modelling (SEM) in order to test the proposed hypotheses and validate the proposed conceptual framework. The results of the data analysis are discussed along with existing literature to provide support to the proposed conceptual framework to present the end result of this research in order to accomplish the aim and objectives of this research study, see figure 4.2.

Figure 4.2: The Research Design



As illustrated in figure 4.2, the research study begins with a critical and in-depth literature review to investigate the factors affecting entrepreneurial start up intention informing the next step of the study. Next, the research gap is identified and guides the research study towards the conceptual framework that is developed based on the literature review findings adopting theories of TPB and VIE, followed by identifying the methodology in conducting this research and obtaining the ethical approval. Afterwards, a pilot study is carried out to confirm the validity and reliability of the conceptual framework in order to ensure the survey does not include any weaknesses. The main survey will follow to collect the necessary data that followed by several tests such as reliability, confirmatory factor analysis and testing the proposed hypotheses. The data analysis using SEM will inform the discussion of the present research study where all findings are discussed along with existing literature. The present research study will conclude by offering recommendations for future study and avenues for further investigation.

4.2.1 Reliability

Reliability is concerned with the consistency of measures that attempt to measure a concept, and it reflects how accurate are the used measures in gauging a concept (Bell, Bryman and Harley, 2018). It is an essential step prior analysing the collected data in order to evaluate the measures of a concept. There are three known types of reliability; stability, internal reliability, and inter-rater reliability. Firstly, stability is referred to whether a measure of a concept is stable or not over time, and practically testing stability is achieved by measuring a concept at one occasion and re-measuring it at another occasion, and if the correlation is high it means that the measures are stable and collected data can be relied on (Bell, Bryman and Harley, 2018). However, there are few issues with measuring stability, where respondents' answers change over time due to long span of time that could be reflected from changes in respondents' economy, financial status, and other factors which impact their answers (Bell, Bryman and Harley, 2018). Secondly, internal reliability is concerned with how coherent is the multiple indicator measure of a concept and do the measures are gauging the same concept or not (Bell, Bryman and Harley, 2018).

In data analysis practices, this can be achieved by splitting the indicators (i.e. questions) over two group and measure the concept, and if the correlation is ideally equal to 1.0 then it represents a perfect and strong correlation. On the other hand, a result of equal or above 0.7 is acceptable as a level of internal consistency (Saunders, Lewis and Thornhill, 2016; Bell, Bryman and Harley, 2018). Furthermore, testing internal reliability and checking the scale of measuring a concept is achieved by Cronbach's alpha value that represent a coefficient of the correlation and is produced using SPSS version 20 (Cooper and Schindler, 2009). Lastly, inter-rater reliability is concerned with the involvement of subjective judgment of multiple observations and open-ended questions that impact interpretation of collected data that could produce a lack of consistency.

The current research study adopts internal reliability test to evaluate the consistency of used measures for the concept as all gathered data will represent respondents' answers to questions that are designed in "Likert scale". The justification for adopting the internal reliability is driven from a lack of consistency may occur that will result in inconsistency of measure, therefore, checking the measures of a concept is vital to ensure concepts are measured accurately by the combined questions. In addition, testing the internal reliability will be conducted in SPSS version 20 to obtain Cronbach's alpha value that represents the reliability coefficient of measures, where a rule of thumb shows that Cronbach's alpha value should be above 0.70 (Hair *et al.*, 2010). On the other hand, the other two type such as stability and inter-rater reliability were not tested; in the current research study stability is concerned with measuring a concept over time as in the case of longitudinal studies and inter-rater reliability is concerned with subjective judgment of observation gained in gathering the data where its purpose is to create an understanding of the concept rather than measuring a concept with accurate measures.

4.2.2 Validity

Validity is concerned with whether the measure that used to gauge a concept are really valid to measure the concept (Bell, Bryman and Harley, 2018). There are several ways to test validity such as; face validity, concurrent validity, predictive validity, construct validity, convergent validity, and discriminant validity (Saunders, Lewis and Thornhill, 2016). Face validity refers to the measure of a concept where it represents a reflection of the concept's content (Bell, Bryman and Harley, 2018). Concurrent validity is referred to the status of employing a simultaneous measure and it is concerned with reflection of a construct on a contemporary one as a measure addresses a construct in order to be noted on a later dependent construct (i.e. measuring higher job satisfaction reflects on less absenteeism) (Bell, Bryman and Harley, 2018). Predictive validity is referred to the status of employing a future measure to establish a relationship between a predicted concept and current concept in term of measures (Bell, Bryman and Harley, 2018). Construct validity is concerned with measures that are used to examine the theoretical deduction of a construct are valid (Bell, Bryman and Harley, 2018). Convergent validity is concerned with a validity of a measure on a concept by comparing it with other measures of the same concept that developed in another method. To examine convergent validity, three methods are known such as factor loading, average variance extracted AVE, and composite reliability CR (Hair et al., 2010). Discriminant validity refers to the degree of construct's measures are clearly distinct from other constructs' measures in which indication of no excessive overlap between related constructs (Bell, Bryman and Harley, 2018). More details of reliability and validity tests of this research will be covered in chapter 5.

4.3 Research Approach

In any research study, two methodological approaches are differentiated and labelled as; qualitative and quantitative. In addition, where a research study consists of the both aforementioned two methods then it is referred to as a mixed method research.

Table 4-2: Quantitative vs. Qualitative

Quantitative	Qualitative
Numeric	Words
Generalisation	Understanding
Reliable data	Deep data
Testing a theory	Forming a theory

(Source: Bryman and Bell, 2011).

Table 4.2 compares both approaches; quantitative and qualitative, and provides a summary of differences in each approach. Each of these two methodological approaches are described in the next subsections (Bell, Bryman and Harley, 2018).

4.3.1 Qualitative Approach

Qualitative research strategy is described as the approach that focuses on emphasizing words than quantification during data collection and analysis. It explores the understanding for a social or human problem subjectively (Saunders, Lewis and Thornhill, 2016). It is an inductive approach that contributes towards the development of a theory from a subjective observation deriving findings within a specific context. In qualitative research the concepts and theoretical elaboration emerge out of data collection as the overall aim of the research is to understand the behaviour, beliefs and values by interpreting the subjective reality of the social world viewing events through the eyes of the people that participate in the study; concerned more with words rather than numbers during the presentation of the analyses of the society (Creswell, 2009; Bell, Bryman and Harley, 2018). In qualitative research, usually the interpretive philosophy is used to reflect the research topic and design from an epistemological orientation in order to generate a theory. Qualitative approach is an approach that is used to understand human behaviour from beliefs and values perspective and specifically used to answer why and how these values and beliefs happen in order to recognise a human action. This approach does not fit the purpose of the research study as it explores reality by gathering data subjectively (Creswell, 2009; Saunders, Lewis and Thornhill, 2016).

4.3.2 Quantitative Approach

Quantitative approach refers to an objective view in carrying out a research to test a theory and address research problems by understanding the influences that variables have. The quantitative approach examines the relationships among constructs aiming to understand a social problem objectively for generalisation purposes (Bell, Bryman and Harley, 2018). It is associated with a deductive approach that relates theory to research to deduce hypotheses, collect data (i.e. numeric), and obtain findings that confirm the validity of hypotheses. It emphasises on the quantification (i.e. numeric data) and the use of measurement in collecting and analysing the data (Zikmund, 2010; Saunders, Lewis and Thornhill, 2016). In quantitative research, positivism philosophy is used to reflect epistemological orientation to modify a theory. The vast majority of research studies on entrepreneurial intention have adopted quantitative approaches in order to measure the influences of constructs and their relationship to entrepreneurial intention (Karimi *et al.*, 2016; Feola *et al.*, 2017; Fernández-Pérez *et al.*, 2017; Kiatkawsin and Han, 2017).

Quantitative methods offer an overall understanding of the investigated phenomena, and testing a theory is accomplished by following a deductive approach in order to confirm or reject the proposed hypotheses (Creswell, 2009). The current research study aims to investigate the factors impacting entrepreneurial start-up intention; the overall aim of the study can be achieved by measuring the impact of factors on entrepreneurial intention through developing hypotheses to test TPB and VIE theories. By selecting a quantitative approach, the research study can measure the constructs and the relationships between independent and dependent variables. In addition, a quantitative approach supports the collection of data from a large population in an objective manner where participants are anonymous thus bias is eliminated by limiting the interference of the researcher in the data collection process. In addition, quantitative approach is found to be suitable for the current research study as it aims to obtain generalised findings from the collected sample to the whole population by leveraging the use of an objective manner in collecting

data as well as the use of numeric, quantifiable data (Saunders, Lewis and Thornhill, 2016; Creswell, 2009). Since the majority of previous studies in entrepreneurship literature have adopted a quantitative approach, and further quantitative research in entrepreneurship field is deemed as essential, the present research study is motivated to adopt quantitative approach as it fits for the purposes of the research in examining the relationships of its constructs and evaluate the impact of these variables on entrepreneurial start-up intention phenomena (Bell, Bryman and Harley, 2018).

A qualitative approach is deemed as not appropriate for the purposes of the current research study as it offers a contextual understanding of a research phenomenon aiming to analyse the collected data in order to build a theory (Echambadi, Campbell and Agarwal, 2006). In line with previous justification, the quantitative approach is used in the research study to examine a number of variables impacting attitudes, perceived behaviour control, entrepreneurial self-efficacy, and effort by measuring their relationship towards entrepreneurial start-up intention (Hair, Ringle and Sarstedt, 2011).

In summary, the current research study adopts quantitative approach to measure the impact of variables on entrepreneurial start-up intention. This is conducted by starting with a literature review to define an academic gap that contributes to the development of a conceptual framework with a set of links among a number of variables to develop hypotheses and examine the impact of these variables to validate these hypotheses.

4.4 Research Strategy

Research strategy refers to the direction, plans and actions that a research adopts in conducting the research study to answer a research question. It involves methodological choice in selecting philosophy and methods in collecting data followed by analysis. There are several strategies in conducting a research study; experiment, survey, archival and documentary research, case study and

ethnography (Saunders, Lewis and Thornhill, 2016). In quantitative approaches, it is suggested that the research strategy adopts tools such as surveys and experimental studies (Collis and Hussey, 2014). The present research study adopts quantitative approach (as stated in section 4.4) and hence a survey tool has been selected in order to collect the necessary data. The next section will provide a full overview of the selected tool with a justification for this study.

4.4.1 Surveys

Research studies adopting quantitative approach are mostly associated with the survey strategy (Krueger, Reilly and Carsrud, 2000; Feola *et al.*, 2017). Survey is one of the most popular strategies that are widely accepted and adopted in business and management research to collect data from a population (Bell, Bryman and Harley, 2018). Survey is mostly associated with a deductive approach that emphasises on theory driven hypotheses to obtain exploratory and descriptive findings (Saunders, Lewis and Thornhill, 2016). In a survey, the questions are standardised and there are three types of tools; questionnaire, structured observation, and structured interview, where each of these tools is adopted according to the purpose of the research study and sample size (Bell, Bryman and Harley, 2018). This research study aims to collect data in a systematic way from a sample that represents the targeted population for the purpose of discovering patterns in order to generalise findings. To do so, a survey-based approach as online questionnaire tool was employed since it provides the most economical way to collect data, authoritative by people, simplified and standardised list of questions, participants are anonymous, accessible all time, and can reach a high number of participants (Cooper and Schindler, 2009; Bell, Bryman and Harley, 2018).

Based on the previous argument, the survey-based approach (i.e. online questionnaire) is adopted due to the large size of data required to allow statistical analysis as well as survey is noted to be the most effective and relevant tool for this research study in collecting data. In addition, this research follows epistemological assumption adopting a positivism paradigm with a deductive view adopting

quantitative approach; hence survey strategy is the appropriate strategy to collect data for this research purpose (Saunders, Lewis and Thornhill, 2016).

4.4.2 Pilot Testing

The pilot study targeted a sample size of 50 (response rate of 70 percent equal to 35 respondents was collected). A pilot test is recommended in research studies using an online questionnaire to ensure functionality of the main survey prior its distribution. The aim of the pilot is to check the validity and reliability of the survey before the actual distribution of the survey (Bell, Bryman and Harley, 2018). It is vital to check the data collection instrument of the study to ensure its validity and avoid failure of measurement of the survey prior conducting the main collecting data questionnaire. Pilot survey ensures that the designed survey delivers its purpose and upon feedback from participants the survey can be revised to ensure its effectiveness. Several purposes are aimed through the pilot study test such as; testing the adequacy of the research instrument, check the questions are effective thus indicating that the developed questionnaire is appropriate for the full scale of the study, collecting preliminary data and revise the measures within the instrument in order to improve the instrument by received feedback from the tested sample (Cooper and Schindler, 2009; Hair, Ringle and Sarstedt, 2011; Bell, Bryman and Harley, 2018). In the present research study, a pilot test has been designed to verify the clarity of the questions and detect any weakness in the questionnaire as well as to confirm validity and reliability of the questionnaire. The pilot online-questionnaire of the present study was distributed to a group of academics and PhD students aiming to test the questionnaire's measures while also validate each construct's reliability. The selection of the pilot study population was based on the practical and the common ways of testing a questionnaire's measures. It provided the ease to reach, access, and test the language that was used to ensure it is understandable. The pilot test collected a total of 35 surveys; results showed support on the clarity of the questionnaire by participants. Also, a reliability test has been carried out on each item to validate its consistency, where as a role of thumb of Cronbach's alpha (α) value is $\alpha \geq 0.90$ it indicates an excellent reliability value,

and if $0.70 \leq \alpha \leq 0.90$ then it is considered high reliability, and if $0.50 \leq \alpha \leq 0.70$ is considered moderate reliability, and if $\alpha \leq 0.50$ is considered low reliability. In this research pilot survey, the reliability test has been applied and Cronbach's value indicated $\alpha \geq 0.94$ that confirm that reliability of Cronbach's Alpha rated as excellent reliability. More details of the validity and reliability will be covered in chapter 5.

4.4.3 Sampling Strategy

Sampling strategy is a vital step in research studies that facilitates the overall process of collecting data by defining the target respondent's population and its size. Sampling refers to the process of selecting a portion of a population that represents the total population, where observations are created, and data is collected based on using this portion of population (Cooper and Schindler, 2009). Executing a research study requires a sampling procedure that structures the process of collecting data that assists in answering the research question and objectives. To do so, research study faces restriction in accessing data for a "general public" opinion such as consumed time in collecting the data. Therefore, sampling strategy provides a range of techniques that can facilitate research studies in term of accessing data, collecting data, accuracy of data, low costs, less time, and quick (Cooper and Schindler, 2009; Saunders, Lewis and Thornhill, 2016).

Sampling techniques are categorised into two types; probability or representative sampling and non-probability sampling. Probability sampling refers to the chance that each selected case of the target population will be known with a probability of all cases are equal (Cooper and Schindler, 2009). However, this will serve the estimation of the population characteristics statistically that contributes to answering research question and objective. There are four main types of probability sampling technique; simple random, systematic random, stratified random, and multi-stage cluster random and these are explained as follows:

Simple random refers to a basic form of probability sampling, where each case of the targeted population represents equal probability to all other cases. Also, it is

common in simple random type the use of programs to determine the number of samples and each selected sample for the research study that results of a random numbers generation (Saunders, Lewis and Thornhill, 2016).

Systematic random refer to a systematic way in selecting samples that vary to simple random type. In this type, the selection of samples depends on a regular interval manner to select from a population (Saunders, Lewis and Thornhill, 2016).

Stratified random refers to a modified version of simple random type, where the samples are divided into subgroups (i.e. strata), using criteria such as department or salary grade. Then, research sample are selected from each subgroup to represent the selected sample for the study (Saunders, Lewis and Thornhill, 2016).

Multi-stage cluster random refers to the selection of samples by clustering population into subgroups that will be used for selecting the samples, and this type is similar to stratified random type, but differ in criteria as cluster random is used for picking samples from subgroups that represents organisation (Saunders, Lewis and Thornhill, 2016; Bell, Bryman and Harley, 2018).

The non-probability sampling represents alternative techniques of sampling that involve a subjective judgment in selecting a research sample and assumptions of each case in the targeted population is unknown (Saunders, Lewis and Thornhill, 2016). Therefore, probability of being chosen requires in-depth research to focus on a small sample to answer a particular research question and objectives. There are two types of non-probability sampling; convenience sampling and quota sampling and these are explained as follows:

Convenience sampling refers to the sample that selected virtually on accessibility to population, where the targeted population can be reached easily, to result in high response rate. It is an economical and efficient type of sampling that is common in business management research studies (Cooper and Schindler, 2009; Saunders, Lewis and Thornhill, 2016).

Quota sampling refers to obtaining a sample from the population based on certain categorisation basis such as gender, ethnicity, and region of residence. This type

commonly is used in commercial and marketing research studies (Saunders, Lewis and Thornhill, 2016; Bell, Bryman and Harley, 2018).

The vast majority of studies in business management literature have adopted a convenience sampling; thus, the current research, motivated by previous research, followed a convenience-based approach of non-probability sampling (Manson and Carr, 2011; Beville *et al.*, 2014; Aznie *et al.*, 2015; Cardoza *et al.*, 2015). The key advantages of using a convenience sampling is that the accessibility and availability of resources to collect the data for this research study of large population, which offers reaching the targeted population easily and efficiently (Stangor, 2011). Also, convenience sampling offers high responses rate (i.e. availability of resources) that is essential to this research study to further carry out the analysis of the collected data (Rahi, 2017). As mentioned earlier, the research study adopts convenience sampling method from the non-probability sampling technique due to that each case of the population is unknown, ease of virtual accessibility, and effectiveness in reaching the targeted population.

4.4.4 Sample Size and Selection

In this research there are 52 items representing eight constructs, therefore, the minimum sample size required is 260 cases and the maximum size is 520 (Rahi, 2017). Determining the sample size of a research study is pivotal as it affects both the data collection and data analysis process of a research study and according to existing literature (Kline, 2005; Hair *et al.*, 2010) there is no definite number for the sample size of a research; however, previous studies have provided guidelines on defining an adequate sample size that can be determined upon several factors such as; time required in collecting the data, cost-involvement, non-response rate, type of population (i.e. heterogeneity or homogeneity), and instrument used for analysis (Kline, 2005; Hair *et al.*, 2010). As discussed in section 4.4.3, the selected sampling technique in the present study is convenience non-probability sampling, where the data collected will be analysed using structural equation modelling (SEM) to validate the relationships among the constructs and test the proposed

hypotheses. A considerable amount of studies have focused on determining the sample size that is required in order to use SEM as a technique for the data analysis. Generally, SEM is considered as a method that requires large sample sizes; as the sample size is essential in determining an acceptable factor model, there are few rules and guidelines in determining the size of the sample in order to be acceptable (Ullman and Bentler, 2013). In their work, Hair *et al.*, (2010) suggest that the sample size can have range of a minimum and a maximum number that is determined by multiplying the constructs' items by 5 and 10 respectively.

The entrepreneurship research to date has been mostly based on examining university students (Kiwanuka *et al.*, 2016; Kwong and Thompson, 2016; Ozaralli and Rivenburgh, 2016; Fernández-Pérez *et al.*, 2017) and limited research has been focused on employees (Cantner, Goethner and Silbereisen, 2016). As supported by literature, there are a number of differences between university students and employees in term of work-experience, career-commitment, and income-wealth source (Goethner *et al.*, 2012). Therefore, in this research study, the targeted sample is employees, working in oil and gas field, in a developing country called Qatar. The rationale behind the selected targeted sample is driven from the amount of value that can be embedded within perceived beliefs in constructs in employees such as; entrepreneurial self-efficacy, perceived behavioural control, effort, and expectancy, where each of the aforementioned constructs is related to inner perceived beliefs of one's expectancy, skills control, confidence, and commitment to establish a business (Cantner, Goethner and Silbereisen, 2016; Fernández-Pérez *et al.*, 2017). Furthermore, once the pilot test is accomplished and measures are checked for reliability and validity, the researcher began to reach the targeted sample for the main survey that represent employees working in the Oil and Gas industry in the State of Qatar. In general, the level of entrepreneurship in Qatar is low and the number of non-oil sector private companies is small as well as the level of entrepreneurship activity shows that Qatar is among the lowest three countries across Middles East North Africa MENA (GEM, 2016, Germm, et al., 2018). In addition, oil and gas sector in Qatar mostly consists of companies that founded on partnership basis with global firms that their presence in the country allow a

leverage in policies and cultural within these companies that inspired by a multinational culture atmosphere to support exchanging knowledge and skills among expatriate and local employees, where the state aims to create a local dependable source of skilled employees (Isik, 2018). These companies provide training and skills enhancement to ensure the business achieves the most and therefore, targeting this sector become an attractive choice for the research study as it reflects experienced and skilled employees that developed continuously as well as the ease of access to this sample by the researcher due to past career history in the same field.

The researcher has reached people working in oil and gas sector as he has worked over the past fifteen years in the same sector prior joining Qatar University as a lecturer. While he was working in oil and gas sector, he was promoted to several positions such as; corrosion engineer, integrity engineer, human resources advisor of employee's development project at RasGas Company which is merged with QatarGas Company recently that owned 100% by Qatar Petroleum. In addition, the researcher worked as human resources director, government affair director at ConocoPhillips Qatar, as well as chief of Abu Dhabi ConocoPhillips that part of ConocoPhillips Global based in Houston in United States of America. The researcher's career journey in oil and gas industry, has developed a good database of network with professional and experts working in oil and gas sector and involved employees with roles such as CEO's, manager directors, directors, managers, and professionals. Therefore, the researcher began to communicate with the targeted sample by meeting them at majlis which is known in Qatar as place to socialise with locals. The researcher communicated by phone and emails prior the start of data collection activity in order to convey the importance of the research and its purpose by ensuring that confidentiality of participants' contribution and all information that will be used for the purpose of the research study only. Once acceptance for participation is gained, the targeted sample was informed of the survey which can be communicated by online in an email or by social media, or by handing hard copies, where participants decide on their contribution method preference. Also, participants were asked if they are interested to widen the range of participation by

inviting other colleagues working in oil and gas by sending emails or social media link or handing a hard copy of the survey by informing that the participation is not mandatory, but it will add a beneficial value for the study where confidentiality is protected. Therefore, emails were sent, and many participants have forwarded the email to other employees within the company to support gathering data to reach potentially interested colleagues at different level of management within participants' organisation such as CEO's, directors, manager, and professionals. Several participants have shown interests to participate as well as asking the researcher for the final result of the study once it is available for public to gain insights of the relationship and impact on entrepreneurial intention's antecedents.

Prior of the completion of data collection and reaching the targeted number of samples required for the research study, there were obvious challenges that the researcher faced. These difficulties involved follow up and collecting the questionnaire such as delays in receiving the documented hard copies of survey as well as receiving the completed online surveys within the timeframe of two months. Following collecting the questionnaire, the researcher put plans for follow-up and reminders to be sent to participants to fill the questionnaire on bi-weekly basis to ensure gentle reminder is conveyed to motivate participants to take part in the research study as well as personal contact by phone or social media means. Moreover, the online survey was published online in professional social networks and by email aiming to achieve high response rates. Overall, a total of 580 surveys have been collected; however, 60 questionnaires had to be removed due to incomplete responses. As a result, 520 questionnaires were used for data analysis. In attempt to make the demographics of participants clear, table 4-3 shows the number of companies that been contacted by the researcher and shows the hierarchy level of the job of participants that included in the gathered data.

Table 4-3: Demographics of Job Level and Company Specialisation

Company Code	Participants Job Title	Sector in Oil and Gas	Company location in Qatar
C1	CEO, Chiefs, Group Managers, Managers, and Engineers	Upstream and downstream	Ras Laffan – Northsides, Dukhan – westsides, Mesaieed – southside, Doha – capital.
C2, C3, C4, C5, C6 & C7.	CEO, Group Managers, Managers, and Engineers	Upstream	Ras Laffan – Northsides, Doha – capital.
C8 & C9	Managers and Engineers	downstream	Mesaieed – southside, Doha – capital.
C10, C11 & C12	Group Managers, Managers and Engineers	Petrochemical	Mesaieed – southside, Doha – capital.
C13	Group Managers, Managers and Engineers	Fertilisers	Mesaieed – southside, Doha – capital.
C14 & C15	Managers and Engineers	Offshore and onshore service providers	Ras Laffan – Northsides, Doha – capital.

As shown in table 4.3, the researcher contacted fifteen companies operates in the field of oil and gas. The table 4.3 presents the features of the targeted sample that was reached in order to collect the data. It reveals companies’ various locations in Qatar as well as its specialised sector in the supply chain, and the role of participants within such company to present that data is collected from various level of professionals within oil and gas field. Due to confidentiality and sensitivity of the gathered data, both of company name and participants are made anonymously.

4.4.5 Instrument Measurement

In the survey of the present research study, all measures are adopted from existing literature. A total of eight constructs (entrepreneurial intention, social norms, expectancy, affective attitude, cognitive attitude, entrepreneurial self-efficacy, perceived behavioural control, effort) are measured and included in the instrument of the present study, see table 4.4. Furthermore, all measurements used “Likert scale” to allow capturing estimation of magnitude of opinions, with seven points rating scale been used. These rating scales are; 1 = totally disagree, 2 = disagree, 3 = slightly disagree, 4 = neutral, 5 = slightly agree, 6 = agree, 7 = totally agree. In addition, the questionnaire included reverse questions to reflect respondent’s engagement in the questionnaire (Saunders, Lewis and Thornhill, 2016). It should be noted that the construct of social norms consists of subjective norm (SN), injunctive (IN), and descriptive norms (DN).

Table 4-4: Instrument Measurement

Constructs	Items Code	Item Measurement	Source
Entrepreneurial Intention (EI)	EI1	I am ready to do anything to be an entrepreneur.	(Liñán and Chen, 2009)
	EI2	My professional goal is to become an entrepreneur.	
	EI.3	I will make every effort to start and run my own business.	
	EI4	I am determined to create a business in the future.	
	EI5	I have very seriously thought of starting a business.	
	EI6	I have the firm intention to start a business someday.	
Perceived Behavioural Control (PBC)	PBC1	To start a business and keep it working would be easy for me.	(Liñán and Chen, 2009)
	PBC2	I am prepared to start a viable business.	
	PBC3	I can control the creation process of a new business.	

	PBC4	I know the necessary practical details to start a business.	
	PBC5	I know how to develop an entrepreneurial project.	
	PBC6	If I tried to start a business, I would have a high probability of succeeding	
Affective Attitude (AA)	AA1	A career as entrepreneur is attractive to me.	(Botsaris and Vamvaka, 2016)
	AA2	If I had the opportunity and resources, I would love to start a business	
	AA3	Being an entrepreneur would give me great satisfaction.	
Cognitive Attitude (CA)	CA1	Being an entrepreneur has more advantages than disadvantages for me	
	CA2	Being an entrepreneur brings mainly positive thoughts.	
	CA3	Entrepreneurship would present more up than downsides	
Effort (EF)	EF1	There is no limit as to how long I would give a maximum effort to establish my business.	(Manolova, Brush and Edelman, 2007)
	EF2	My philosophy is to “do whatever it takes” to establish my own business.	
	EF3	I would rather own my own business than earn a higher salary employed by someone else.	
Expectancy (EX)	EX1	If I work hard, I can successfully start a business	(Manolova, Brush and Edelman, 2007)
	EX2	My past experience will be very valuable in starting a business	
	EX3	Overall, my skills and abilities will help me to start a business	

	EX4	I am confident that I can put in the effort needed to start a business	
Subjective Norms (SN)	If you decided to create a business, would people in your close environment approve that decision?		(Liñán and Chen, 2009)
	SN1	My family (i.e. tribe) would approve my decision	
	SN2	My parents would approve my decision	
	SN3	My brothers and sisters would approve my decision	
	SN4	My cousins would approve my decision	
	SN5	My friends would approve my decision	
	SN6	My colleagues (i.e. work colleagues) would approve my decision	
Injunctive Norm (IN)	The following people whose opinions matter to me think I should participate in the development of a business:		(Cantner, Goethner and Silbereisen, 2016)
	IN1	Most of my family (i.e. parents, brothers, sisters, and cousins)	
	IN2	Most of my friends	
	IN3	Most of my colleagues (work colleagues)	
	IN4	Most of my supervisors	
	The following people whose opinions matter to me would encourage my participation in the development of a business:		
	IN5	Most of my family (i.e. parents, brothers, sisters, and cousins)	
	IN6	Most of my friends	
	IN7	Most of my colleagues (work colleagues)	
	IN8	Most of my supervisors	
Descriptive Norm (DN)	The following people have already participated in the founding of a business.		(Cantner, Goethner and Silbereisen, 2016)
	DN1	Most of your family members (i.e. parents, brothers, sisters, and cousins)	
	DN2	Most of your colleagues (i.e. work colleagues)	

	DN3	Most of your friends	
	DN4	Most of your supervisors	
Entrepreneurial Self- efficacy (ESE)	ESE1	I am able to solve problems	(Wilson, Kickul and Marlino, 2007)
	ESE2	I can manage money	
	ESE3	I am creative	
	ESE4	I can get people to agree with me	
	ESE5	I am a leader	
	ESE6	I can make decision	
	ESE7	I can take investment risk.	
	ESE8	I can recognise investment opportunities	
	ESE9	I can arrange funds for my investment	

4.5 Data Analysis

The current research study selected convenience non-probability sampling for the data collection following a quantitative approach in the form of an online and postal questionnaire. Regarding the data analysis, at first the data is filtered to detect any missing data by using Statistical Package for Social Science SPSS version 20 and also to conduct preliminary evaluations aiming to test that the collected data conforms in terms of reliability and validity to verify consistency. Next, the collected data will be analysed by using structural equation modelling (SEM) using AMOS to determine the constructs' relationships and test the proposed hypotheses aiming to validate the proposed conceptual framework.

4.5.1 Structure Equation Modelling (SEM)

In statistics, structural equation modelling (SEM) gained popularity in describing dependency of variables in a model that consists of set of constructs, where in research studies, SEM has become a very common method that used to facilitate data analysis empirically in many disciplines. SEM provides statistical techniques to validate and test hypotheses of a conceptual model (Hair *et al.*, 2010).

In the current study, SEM was selected as the most appropriate data analysis technique as the proposed theoretical model is rather advanced reflecting sophisticated and complex theoretical concepts and phenomena. Moreover, SEM allows for the use of both latent and unobserved variables in the same model while also allows for the representation of interrelated dependent relationships between constructs; while other statistical methods are limited in this matter, SEM enables the researcher to use variables that act both as dependent and independent in different relationships with other variables that is not feasible with other statistical methods. As a result, in this way the research study using SEM can be examine the model as whole (Hair *et al.*, 2010; Schumacker, Lomax and Group, 2010; Tabachnick and Fidell, 2014). Thus, SEM was determined as the most appropriate data analysis technique in order to test the proposed hypotheses and evaluate the proposed theoretical model of the present study.

4.6 Ethical Consideration

In research studies, ethical clearances are vital prior to conducting an empirical research study that involves participants. It is based on code of conduct and refers to moral values and practices to ensure no harm can be raised from the research study to participants as well as securing confidentiality of the collected data (Cooper and Schindler, 2009). Research ethical clearance follows a clear guideline that conveys the following:

- **Right and protection:** all participants are informed prior participating of their right to participate or else not to do so, based on volunteering desire. Participants have the right to withdraw at any point of the research and they are not obliged to any commitment. In addition, it is clearly communicated that collected data will be stored securely and will be used for research study purposes considering its confidentiality and no sharing with third parties.
- **Benefits:** the research study aim, objectives, and purpose are conveyed to participants to communicate the importance of this research and the

understanding of what this study gains. In addition, a consent document is completed and shared with participants prior participating.

This research study has obtained the document of ethical approval from Brunel University Research Ethic Committee (BUREC). Both the researcher and the researcher's supervisor are obliged to the guidelines that based on BUREC code of conduct. Once ethical approval is gained, the research was conducted.

It is worth noting that prior reaching to the selected sample, the importance of the research and its purpose is conveyed as well as informing them that all data will be confidential, and participants identity will be anonymous. In addition, an ethical statement was mentioned at the beginning of the survey to inform participants to obtain their consent prior contribute and fill the survey. Also, it was communicated verbally to the participants who preferred to fill the hard copy version of the survey that they can only select one option of either completing the online questionnaire or the hard copy version to ensure that no duplicate versions of the same participants.

4.7 Chapter Summary

This chapter has offered a focused view of research methodology and explain the entire research process employed for the current research study. It pursues to discuss the understanding with justification of selected method, approach, and technique for data collection and data analysis process.

This chapter has outlined the three different types of philosophies; ontology, epistemology, and axiology and discussed the justification of selecting epistemology philosophy as it is a common and accepted in business research studies particularly in entrepreneurship. However, epistemology philosophy is concerned with the nature of knowledge logic or the theory of knowledge and provides how the social world must be studied by entailing a scientific approach in forming hypotheses that will be tested using specific measurement techniques. Next, the research paradigms have been highlighted and the selection of positivism

paradigm was justified. Then, this chapter has drawn a clear distinction between research approaches to recognise the suitable approach in collecting data as well as justifying the choosing quantitative approach for the current research study. Also, it covers research approach tool adoption in collecting data as a survey that recognised as one of the most popular strategies that are widely accepted and adopted in business and management research. A justification is provided to verify the use of survey strategy in collecting the data. Then consideration of conducting a pilot study is covered to check reliability and validity of the constructs to confirm consistency and the concept's measures. Also, this chapter shows the instruments measurement (i.e. questionnaire) that used in collecting that data. Furthermore, this chapter has explained several types of both probability and non-probability sampling and justification of selected convenience non-probability sampling was provided for the current research study. Prior the chapter summary, this chapter explains the ethical consideration and acknowledgement that has been considered prior conducting the research study.

The next chapter will describe the analysis of the data gathered and addresses the hypotheses testing and findings to conform the conceptual framework of the research study.

Chapter 5: Results and Findings

This chapter presents detailed data analysis and the findings obtained and it is structured as follows: section 5.1 discusses the pilot study findings performed by SPSS version 20, where reliability was calculated using Cronbach's alpha. Section 5.2 describes the main study sample demographics. Then, section 5.3 provides the descriptive statistics; means and standard deviation that were generated for the variables to measure average responses. Section 5.4 portrays the results of conducting the preliminary examinations that includes data screening, missing data, outliers, and bias, followed by checking the collected data normality, linearity, multicollinearity, homoscedasticity, and reliability. Section 5.5 explains the findings of implementing structural equation modelling for checking second order constructs verification, confirmatory factor analysis CFA that consists of goodness of fit indices and construct validity, structural model, and the research study hypotheses testing. Section 5.6 offers the final developed framework and then the chapter concludes with a summary in section 5.7.

5.1 Pilot Study Results

The aim of a pilot study test of 35 respondents (response rate of 70 percent) is to detect any inconsistencies or issues in measuring the constructs alerting the researcher towards any further amendments needs prior proceeding to perform the main survey data collection. Therefore, this pilot study was conducted to examine the structure of the questionnaire and its dimensions to investigate the accuracy of measurement and to confirm that the collected data is consistent (Saunders, Lewis and Thornhill, 2016). However, it is worth noting that this research study has adopted all measure (items) in the questionnaire from existing relevant literature that already tested and indicated acceptable validity and reliability.

The pilot study was distributed by online-questionnaire means to a group of academics and PhD students at Brunel university in London. The questionnaire's web-link was sent by email and social media application called "WhatsApp" to a sample of 50 people and in return the collected completed online-questionnaires were a total of 35 surveys that represents a 70% response rate. Within the questionnaire, there was a feedback open question that allow participants to provide comments and feedback. One comment was received in terms of clarity of what is meant by a supervisor and due to the tested sample nature, that involved PhD students, it was appropriate to misunderstand such title. In the main questionnaire the focus is on employees who understand the term supervisor that indicates a clear meaning as a direct reporting line manager.

The overall response to the pilot study was good and the results revealed a clear understanding and therefore proceeding to the testing of the reliability and validity of the constructs. The data was entered in SPSS version 20 to test reliability and content validity of the items used to measure each construct. Reliability is measured by Cronbach's Alpha, while content validity refers to the measures used to represent the construct in order to clearly capture answers from the participants and achieve what the research intended to measure. The results of the pilot study data analysis showed three constructs with excellent reliability, while the rest showed high reliability, see table 5.1.

Table 5-1: Cronbach's Alpha (α) of Pilot Study Test

Variable	Items	Cronbach's Alpha (α)	Type
Entrepreneurial Intention	6	0.939	Excellent Reliability
Subjective Norms	6	0.935	Excellent Reliability
Injunctive Norms	8	0.936	Excellent Reliability
Descriptive Norms	4	0.723	High Reliability
Entrepreneurial Self-Efficacy	9	0.893	High Reliability
Perceived Behavioural Control	6	0.889	High Reliability
Affective Attitude	3	0.814	High Reliability
Cognitive Attitude	3	0.729	High Reliability
Effort	3	0.801	High Reliability
Expectancy	4	0.807	High Reliability

As shown in Table 5.1, the reliability test conducted, and Cronbach's value was calculated to show that all alpha values were above 0.723 confirming that reliability of Cronbach's Alpha of most variables have high reliability, where three constructs reflected an excellent reliability. However, as a rule of thumb, Cronbach's alpha value of equal or above 0.90 represents an excellent reliability, while if it falls between 0.70 and 0.90 then it is considered high reliability, and if alpha value falls between 0.50 and 0.70 then it is considered moderate reliability, but if Cronbach's alpha value is equal or below 0.50 then it is considered low reliability (Hair *et al.*, 2010). The reliability test results have confirmed that the purpose of the pilot study was accomplished and therefore, commencing the main study questionnaire was progressed to begin collecting the main study research data. In addition to that, validity was conducted as validity is referred to the degree to which an assessment process or device is actually measuring what it is intended to measure. In the pilot study, a determination of the item's validity has been examined to check whether items are measuring what they are meant to measure in term of a concept (Hair *et al.*, 2010).

5.2 The Main Study Sample Demographics

In this section, the sample demographics describe the characteristics of the targeted population statistically in term of gender, age, experience, entrepreneurial status, work status, education level, and nationality. The sample demographics help understanding the targeted population better and prepare to deal with outcomes in a scientific method.

Selecting professional participants with a career as targeted population for a research study was meant to be as previous research studies of entrepreneurship have rarely dealt with a professional sample such as employees, but mostly focused on university students as a sample of the research (Zhang, Duysters and Clodt, 2014; Feola *et al.*, 2017). However, in this research study the focus was on collecting data by targeting employees working in oil and gas sector, having a work experience aiming to examine entrepreneurial intention as recommended by previous studies (García-Rodríguez *et al.*, 2015). The main research was conducted in Qatar targeting employees working in companies operate in Qatar and its business nature is within oil and gas industry. The employees work at various locations within Qatar such as; onshore or offshore or both. The companies' location represents various cities among Qatari land mostly industrial areas within each city such as; Ras Laffan Industrial City (Northsides), Dukhan City (Westside), Mesaieed City (Southside), or Doha City (the capital). In addition, these companies are the true representation of oil and gas sector and they are specialised in either one or more of the following business types; upstream, downstream, petrochemical, or fertilisers.

Table 5-2: Responses by Postal and Online Means vs. locations

State of Qatar	Postal Means	Online
Ras Laffan Industrial City (Northsides)	135	261
Dukhan City (Westside)	36	
Mesaieed City (Southside),	92	
Doha City (the capital)	56	
Total collected questionnaires		580

Table 5.2 shows the number of collected data based on location, and the questionnaires were either hand delivery and postal method, and online-questionnaire, where online present a total of 261. The gathered data represents fifteen firms in the oil and gas sector in Qatar. Also, the targeted population consists of participants from different levels of management and professionals within each company’s hierarchy structure such as; CEO’s, Manager Directors MD, Chiefs, Group Managers, Managers, Engineers, and professionals. All participants were contacted by the researcher, and due to the sensitivity and confidentiality of the gathered data, both of company name and participants name are made anonymously.

The research study achieved a total of 580 responses, where the participants were engaged in filling the questionnaire. However, due to incomplete response, 71 questionnaires had to be removed. As a result, 509 questionnaires were used for data analysis and to represent the sample demographics. All sample demographics were generated by using SPSS version 20.

Next, the representation of sample demographics proceeds to start with gender, age, experience, entrepreneurial status, work status, education level, and ends with the nationality statistics of the participants. In Qatar, working in oil and gas requires commuting for long distances especially for firms located at Northsides, Southsides or Westsides, and few firms provides transportation facilities such as busses to enhance commuting trips from safety and welfare perspectives. However, this can be seen in the gender statistics of the respondents, where almost three quarters

(73.5%) represents male's participants, while 26.5% were females' participants, see table 5.3.

Table 5-3: Respondent's Gender

Gender	Frequency	Percentage
Male	374	73.5%
Female	135	26.5%

As shown in table 5.3, total of 374 of the participants representing 73.50% of the sample was male, while 135 participants that represent 26.50% were female.

The age of the respondents in table 5.4 shows that the majority (48.9%) of the sample has age of between 26 to 35 years old, followed by 21.8% of the sample with age of between 36 to 45 years old, while 18.5% of the sample indicated age between 46-55 years old. The research study investigates factors influences start-up a business intention, and as shown in table 5.4 almost 50% of the respondents aged between 26 to 35 and this age is considered an experienced person at work place where usually people graduate at 22 years old.

Table 5-4: Respondent's Age

Age	Frequency	Percent
<25	22	4.3%
26-35	249	48.9%
36-45	111	21.8%
46-55	94	18.5%
56-65	21	4.1%
>65	12	2.4%

The work-experience of the respondents is one of the important characteristics of the sample, where it indicates time spend in a workplace and gained skills and knowledge, as it is shown in table 5.5, more than one third of the sample has

indicated over sixteen years of work experience (37.7%), followed by 22.4% as shown in table 5.5 of the participants with work experience more than eleven years and less than fifteen years old, and 19.6% of the sample has shown work experience between one to five years as well as six to ten years of experience. The experienced professional varies from a university student as they began career life and gained income, enhanced skills and overcome challenges on daily basis as well as commitment to work on daily basis.

Table 5-5: Respondent's Work experience

Years	Frequency	Percent
1-5	100	19.6%
6-10	100	19.6%
11-15	114	22.4%
>16	192	37.7%

The questionnaire has included a question to ask participants of their entrepreneurial status and the findings were as shown in table 5.6 as that the majority (47.4%) does not own a business followed by 26.8% who at the planning stage to start up a business. Also, as shown in table 5.6., the statistics indicates 14.4% of the respondents has already started and owned a business, where 9.7% of the respondents have bought shares in an established firm.

Table 5-6: Respondent's Entrepreneurial status

Entrepreneurial Status	Frequency	Percent
Not owner of a business	243	47.4%
Owner of a business	73	14.4%
Shareholder in a business	49	9.7%
Planning to start a business	138	26.8%
Other	6	1.1%

The questionnaire has targeted working personnel in order to investigate the entrepreneurial intention to start a business from work-status of the respondents. Therefore, as shown in table 5.7 the majority of the respondents (60.3%) are full time (FT) employees representing more than the half of the targeted sample, while 19.3% of the respondents represented part time (PT) employees. Therefore, working respondents represents almost 80% of the collected data. On the other hand, the questionnaire also covered 10.8% of unemployed respondents, and as shown in table 5.7, a total of 9.5% of students as a sum of 7.5% full time students and 2.0% part time students. It is worth mentioning that oil and gas companies sponsor its employees to obtain diploma or bachelor's degree and that's why the sample represented a number of students who are studying and at the same time considered employees and receives income.

Table 5-7: Respondent's Work status

Work Status	Frequency	Percent
Unemployed	55	10.8%
FT Employee	307	60.3%
PT Employee	98	19.3%
FT student	38	7.5%
PT student	10	2.0%
Other	1	0.2%

The education level of the respondents was included in the questionnaire to understand the level of qualification that respondents have achieved as well as to visualise the majority of the participants knowledge level. As shown in table 5.8 the majority (51.7%) hold a university bachelor's degree, followed 31.0% who hold a master's degree, where 2.9% hold a PhD qualification representing graduates of 51.7% and postgraduate of 33.9%. As shown in table 5.8, 8.8% of the respondents represent holders of diploma qualification, where 4.9% hold a secondary school qualification.

Table 5-8: Respondent’s Education level

Qualification	Frequency	Percent
Secondary	25	4.9%
Diploma	45	8.8%
Bachelor	263	51.7%
Master	158	31.0%
PhD	15	2.9%
Other	2	0.4%

Collecting the data was in Qatar and all of the participants were based in Qatar and working in oil and gas field, and one of the demographics characteristics was to recognise the nationality of the respondents who participated in the questionnaire. Table 5.9 presents the nationality breakdown and shows an interesting aspect of participants’ nationality, where the majority of the sample representing 54.4% was Qatari nationals. This indicates the formal nationality of the country where the questionnaires were conducted. This leads to a remaining of 45.6% that represents expatriates who are not Qataris, but lives and work in Qatar representing a multinational workforce sample. It is worth noting that non-Qatari nationals are significantly playing a vital role in founding firms in Qatar. This is due to the flexibility of the government’s regulations as well as expatriate’s experience in setting up a business. From the collected data, the non-Qatari nationals were noted to be interested to start-up a business in Qatar, but the timeframe was different among those participants. This remaining 45.6% represents nationalities from GCC, Arab, European, Asian, American, African, and other countries. Firstly, 21.2% represents respondents from Asian countries living and working in Qatar such as India, Indonesia, Korea, and other Asian countries. Followed by 14.7% of the respondents were from Arab countries that represent countries of north Africa such as Egypt, Tunis, Morocco, Algeria, and other countries in the middle east that not part of Gulf Cooperation Council countries (GCC) such as Lebanon, Syria, Yemen, Palestine, and Iraq. As shown in table 5.9, the term GCC is used to refer to countries such as; Qatar, Oman, Kuwait, Bahrain, Saudi Arabia, and United Arab Emirates,

but it is worth mentioning that in this research study, the GCC countries represent all aforementioned countries except Qatar. Furthermore, 4.5% of the respondents represents participants of European nationality who lives and work in Qatar. The other 2.2% of the respondents were from countries in Africa other than north Africa continent region such as, South Africa, Nigeria, Ghana, Ethiopia, Kenya. 1.6% of the respondents represent American nationality, and 0.8% and 0.6% represent GCC countries and other nationality respectively.

Table 5-9: Respondent's Nationality

Nationality	Frequency	Percent
Qatari	227	54.4%
GCC	4	0.8%
Arab	75	14.7%
European	23	4.5%
Asian	108	21.2%
American	8	1.6%
African	11	2.2%
Other	3	0.6%

5.3 Descriptive Statistics

This section provides statistical measures, i.e. description of average mean, means, and standard deviations of all constructs that are used in the conceptual framework for the research study. As mentioned in chapter 3 section 3.2, the variables of the conceptual framework consist of independent and dependent variables; social norms, expectancy, affective attitude, cognitive attitude, perceived behavioural control, entrepreneurial self-efficacy, effort, and entrepreneurial intention.

- **Entrepreneurial Start-up Intention (ESI)**

The main construct of the research study, entrepreneurial start-up intention, was adopted from Liñán and Chen (2009) and was measured with seven questions on 7-

point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-10: Mean and Standard Deviation of ESI

Measure	Mean	Std. Deviation
ESI1	4.84	1.67
ESI2	5.17	1.49
ESI3	5.44	1.41
ESI4	5.68	1.36
ESI5	5.50	1.52
ESI6	5.46	1.46
ESI7 (Reverse)	5.30	1.73

As can be seen from table 5.10, the analysis of the mean and standard deviation of the seven items of the entrepreneurial start-up intention are presented. It reveals that the mean range between 4.84 to 5.68 with an overall mean of all seven items being 5.34. As a result, the findings indicated that all questions of the entrepreneurial start-up intention construct were highly rated as overall mean for all items was above the neutral point (4). In addition, Item ESE7 was a reverse question to check participant's engagement with the questionnaire and its data was entered in SPSS as reverse to ensure data validity. Furthermore, it can be concluded that the responses of the sample reflect a medium to high levels of entrepreneurial start-up intention.

▪ **Perceived Behavioural Control (PBC)**

Perceived behavioural control construct was adopted from Liñán and Chen (2009) and was measured with six questions on 7-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-11: Mean and Standard Deviation of PBC

Measure	Mean	Std. Deviation
PBC1	3.78	1.65
PBC2	4.59	1.53
PBC3	4.88	1.39
PBC4	4.71	1.59
PBC5	4.61	1.51
PBC6	4.88	1.35

Table 5.11 shows the mean and standard deviation of the six items of the perceived behavioural control construct. It illustrates that the mean range between 3.78 to 4.88 with an overall mean of all six items being 4.57. As a result, the findings presented that all items of the perceived behavioural control construct were not highly rated as overall mean for all items was above the neutral point (4) except for one item (PBC1) which reported mean of 3.78. However, it can be noted that the responses of the sample reflect medium positive levels of perceived behavioural control.

- **Affective Attitude (AA)**

Affective attitude construct was adopted from Botsaris and Vamvaka (2016) and was measured with four questions on 7-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-12: Mean and Standard Deviation of AA

Measure	Mean	Std. Deviation
AA1	5.39	1.43
AA2	6.01	1.19
AA3 (Reverse)	5.74	1.40
AA4	5.76	1.30

As shown in table 5.12, the value of mean and standard deviation of the four items of affective attitude are presented with one item as a reverse question (AA3). It shows that the mean ranges from 5.39 to 6.01 and overall mean of all four items equal to 5.39. As a result, all items of the affective attitude construct were highly rated as overall mean for all items was above the point (5). Also, it can be considered that the responses of the sample reflect medium to high levels of affective attitude construct (emotions attitude).

- **Cognitive Attitude (CA)**

Cognitive attitude construct was adopted from Botsaris and Vamvaka (2016) and was measured with three questions on 7-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-13: Mean and Standard Deviation of CA

Measure	Mean	Std. Deviation
CA1	5.30	1.34
CA2	5.36	1.28
CA3	5.18	1.32

Table 5.13 provides the mean and standard deviation of the three items of the cognitive attitude construct. It shows that the mean range between 5.18 to 5.36 with an overall mean of all four items being 5.28. As a result, the analysis illustrated that all items of the cognitive attitude construct were highly rated, where all items overall mean was above point (5). In addition, it can be noted that the responses of the sample reflect medium to high levels of cognitive attitude construct (non-emotion attitude).

- **Effort (EI)**

Effort construct was adopted from Manolova, Brush and Edelman (2007) and was measured with three questions on 7-point Likert scale ranging from 1=strongly

disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-14: Mean and Standard Deviation of EI

Measure	Mean	Std. Deviation
EI1	5.07	1.46
EI2	4.75	1.59
EI3	4.70	1.69

Table 5.14 displays the mean and standard deviation of the three items of the effort construct. It presents the mean range between 4.70 to 5.07 with an overall mean of all four items being 4.84. As a result, the analysis illustrated that all items of the effort construct were not highly rated, but represented positive responses, where overall mean of all items was above the neutral point (4). In addition, it can be noted that the responses of the sample reflect medium levels of effort (commitment).

▪ **Expectancy (EEX)**

Expectancy construct was adopted from Manolova, Brush and Edelman (2007) and was measured with five questions on 7-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-15: Mean and Standard Deviation of EEX

Measure	Mean	Std. Deviation
EEX1	5.57	1.33
EEX2	5.65	1.27
EEX3	5.73	1.13
EEX4	5.62	1.21
EEX5 (Reverse)	5.01	1.83

Table 5.15 presents the mean and standard deviation of the five items of the expectancy construct. It presents the mean range between 5.01 to 5.73 with an overall mean of all four items being 5.52, and item EEX5 represents a reverse question that treated reversely using SPSS version 20. As a result, the analysis illustrated that all items of the expectancy construct were highly rated, and overall mean of all items was above the neutral point (4). In addition, it can be considered that the responses of the sample reflect medium to high levels of expectancy.

- **Subjective Norms (SN)**

Subjective norms construct was adopted from Liñán and Chen (2009) and was measured with six questions on 7-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-16: Mean and Standard Deviation of SN

Measure	Mean	Std. Deviation
SN1	5.46	1.43
SN2	5.46	1.42
SN3	5.48	1.40
SN4	5.09	1.50
SN5	5.42	1.35
SN6	5.17	1.38

Table 5.16 shows the mean and standard deviation of the six items of the subjective norms construct. It presents the mean range between 5.09 to 5.46 with an overall mean of all four items being 5.35. the result of the analysis showed that all items of the subjective norms construct were highly rated, and overall mean of all items was above the point (5). In addition, it can be considered that the responses of the sample reflect medium to high levels of subjective norms.

▪ **Injunctive Norms (IN)**

Injunctive norms (IN) construct was adopted from Cantner, Goethner and Silbereisen (2016) and was measured with eight questions on 7-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-17: Mean and Standard Deviation of IN

Measure	Mean	Std. Deviation
IN1	5.30	1.35
IN2	4.96	1.36
IN3	4.66	1.40
IN4	4.49	1.49
IN5	5.52	1.32
IN6	5.32	1.25
IN7	4.94	1.30
IN8	4.73	1.41

Table 5.17 illustrates the mean and standard deviation of the eight items of the injunctive norms construct. It presents the mean range between 4.49 to 5.52 with an overall mean of all four items being 4.99. the result of the analysis showed that all items of the injunctive norms construct were not highly rated, but overall mean of all items still was above the neutral point (4). In addition, it can be noted that the responses of the sample reflect medium positive levels of injunctive norms.

▪ **Descriptive Norms (DN)**

Descriptive norms construct was adopted from Cantner, Goethner and Silbereisen (2016) and was measured with four questions on 7-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-18: Mean and Standard Deviation of DN

Measure	Mean	Std. Deviation
DN1	4.76	1.66
DN2	4.54	1.50
DN3	4.18	1.48
DN4	4.10	1.52

As shown in table 5.18, the mean and standard deviation of the four items of the descriptive norms construct are presented. It presents the mean range between 4.10 to 4.76 with an overall mean of all four items being 4.39. the result of the analysis showed that all items of the descriptive norms construct were not highly rated, but still overall mean of all items was above the neutral point (4). In addition, it can be noted that the responses of the sample reflect medium positive levels of descriptive norms. It is worth noting that, social norms (SN, IN, DN) have been adopted from exiting literature and includes close family, friends, colleagues, and supervisors at work. It will be beneficial to include wider range of the society that could have an impact on individual's entrepreneurial intention, but the research study on the subject has been mostly restricted to limit the range by following the measures that have been adopted in previous studies.

- ***Entrepreneurial Self-Efficacy (ESE)***

Entrepreneurial self-efficacy construct was adopted from Wilson, Kickul and Marlino (2007) and was measured with nine questions on 7-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

Table 5-19: Mean and Standard Deviation of ESE

Measure	Mean	Std. Deviation
ESE1	5.94	0.95
ESE2	5.68	1.13
ESE3	5.73	1.12
ESE4	5.68	1.01
ESE5	5.74	1.09
ESE6	6.01	0.95
ESE7	5.34	1.38
ESE8	5.36	1.28
ESE9	5.19	1.32

As can be seen from table 5.19, the mean and standard deviation of the nine items of the entrepreneurial self-efficacy construct are presented. It presents the mean range between 5.19 to 6.01 with an overall mean of all four items being 5.63. The findings of this analysis showed that all items of the entrepreneurial self-efficacy construct were highly rated, and overall mean of all items was above the neutral point (4). Also, it can be considered that the responses from the respondents are medium to high levels of entrepreneurial self-efficacy (confidence).

Overall, social norms are comprised of second order of subjective, injunctive, and descriptive. All means were greater than 4.10 except for PBC that has a 3.78. Overall the result expressed positive responses to all items of the survey. The average mean of each construct is reported in table 5.20.

Table 5-20: Mean and Standard Deviation of all constructs

Construct	Average Mean
ESI	5.34
PBC	4.57
AA	5.39
CA	5.28
EI	4.84
EEX	5.52
SN	5.35
IN	4.99
DN	4.39
ESE	5.63

As shown table 5.20 illustrates the average mean of all constructs of the conceptual framework. It is worth noting that social norms consist of three norms; subjective norms (SN), injunctive norms (IN), and descriptive norms (DN) as a second order. What stand out in the table 5.20 is that the highest average mean was for entrepreneurial self-efficacy ESE equal to 5.63 indicating medium to high level of ESE (confidence), where the lowest average mean was reported for descriptive norms equal to 4.39 that shows the social influence of descriptive norms has medium level of impact on the individuals who were part of this selected sample.

5.4 Preliminary Examination

Prior to commencing any multivariate data analysis, it is necessary to examine the collected data to demonstrate that statistical assumptions and theoretical underpinnings are supported as well as meeting the requirement for multivariate analysis (Hair *et al.*, 2010). Preliminary examination of the data reveals any hidden effects that can be overlooked resulting in bias that impacts the final results. In the preliminary examination, the data are screened and tested by using SPSS version 20 and AMOS version 23 to report any missing data, bias, outliers, statistical

characteristics such as; normality, linearity multicollinearity, homoscedasticity, and reliability. It provides basic understanding of the collected data and reveals the relationships among constructs. However, once the data is cleaned, further multivariate data analysis can be performed using SEM to test CFA and the proposed hypotheses (Hair *et al.*, 2010).

The research study targeted a population sample of professionals working in oil and gas sector in Qatar, and the actual data was collected between the periods of October 2017 to March 2018. However, observations have indicated a decline in the population in the Oil and Gas sector due to restructuring organisation in the aforementioned sector. The total number of employees working in Oil and Gas field was 35,457 in 2017 (Planning and Statistics Authority, 2018). The number of questionnaires distributed was 850, and the total number of collected responses was 580 questionnaires, equal to 68% response rate, that consists 261 online-based questionnaires and 319 postal questionnaires. In the screening stage, a total number of 71 questionnaires were removed due to unengaged responses and incomplete questionnaires. Therefore, 509 questionnaires have been considered for the data analysis for the research study.

▪ **Data Screening and Missing Data**

The collected data (N=580) was screened as data screening is an essential practice in preparing the data prior proceeding to any multivariate data analysis test. It assists research study in recognising any defects within the collected data such as missing data. Missing data is a common issue in research study; therefore, researchers acquaint and emend the data to avoid hidden effect that influence the final result. According to guidelines from extant literature, missing data can be treated with one of the followings four approaches; complete case approach (listwise deletion), all-available approach (pairwise deletion), imputation techniques, and model-based approaches (Hair *et al.*, 2010). The complete case approach (listwise deletion) refers to the method where each respondent's case that has a missing data will be completely removed, but the disadvantage of this approaches is that the data size will be reduced once deletion is completed, allowing less data available for SEM

test. The all-available approach (pairwise deletion) allows more data to be used for SEM as all missing data cases are not deleted completely as found in the complete case approach (listwise deletion). In the imputation techniques, the use of known valid values is employed to estimate the missing value of the collected data, and missing values are replaced with mean substitution that results from valid available cases. The imputation technique assists in maintaining the sample size, but careful consideration of adopting this technique is required as it may impact the result of the data analysis. As mentioned in section 5.4, a total of 580 questionnaires were collected to represent the data that will be used for this research study analysis. These 580 questionnaires were administered through a process of detecting missing data, defining outliers, and statistical characteristics checks. During the screening of the data, the first step was to detect any missing data using SPSS version 20. The missing data was less than 2% per variable and per respondent; Followed by screening the unengaged responses calculating the standard deviation per case and also by examining the reverse questions' answers used in the survey to track participants' attention and engagement within the questionnaire. Overall, 71 cases were deemed as unengaged responses and incomplete that deleted from the set of the data in order to avoid affecting the validity of final result and the generalisability. As a result, the final set of data was 509 responses, and in the research study it was decided to retain the cases including missing data (less than 2%) in order to retain the sample size. Thus, the study proceeded in the replacement of the missing values using SPSS version 20 and mean replacement based on nearby points, retaining the 509 responses that would be used for analysis in the current study.

- **Outliers**

Outlier refers to the observations that represent unusual and unique characteristic differ from all other observations. It is typically judged by observing an extremely high or low value or a combination of values of a variable or variables respectively. Also, it represents a strange values of more than two variables that in statistics called a multivariate outliers (Hair *et al.*, 2010). In research study, it is vital to detect the outliers to avoid any distortion of statistical testes that deforms the results and

findings. Various methods are known to identify the outliers in the data such as univariate, bivariate, and multivariate detection by graphic illustration outliers (Hair *et al.*, 2010).

According to Hair *et al.* (2010), distinguishing the outliers from the others using univariate method is referred to the cases that fail to be within the distribution range of a variable and indicate either high or low cases are detected. This method assists identifying the outliers, and it is worth noting that some cases are expected to be at the outer range of the distribution and may not represent outliers. Therefore, the researcher must carefully view these cases and identify the truly representatives of outliers that show extremely distinct high or low cases. In addition to univariate method, bivariate method can detect outliers by the assessment of two or more variables by a graphic illustration called scatterplot. It is ideally for two or more variables in research study that consists of few variables, where scatterplot provides the researcher a pattern of observation where variables that have relationship are shown and data that do not fall within the pattern can be identified as outliers. In the research study, the boxplot graph was conducted in order to test the univariate outliers for each variable, see table 1 in Appendix D. The results showed that there was one extreme outlier. Also, scatterplot was used in SPSS version 20 to examine the outliers and the graph illustrated a case that shows a unique observation that represented a respondent with age below or equal to 25 years old and experience of more than 16 years. This case was detected by using Cook's distance test that exhibited abnormal scenario and therefore the researcher decided to remove it to strengthen the regression and according to this justification. Once outliers are detected, then it is the researcher's decision to retain or exclude the outliers that depend on the objective of the data analysis stage (Hair *et al.*, 2010).

Another method is called multivariate detection, where large number of variables can be examined to produce a common point of the multidimensional position of the variables. In multivariate test using AMOS version 23 the test was conducted to check outliers by Malalanobis distance, where any value less than 0.05 indicate outliers. See table 2 in Appendix D.

- **Bias**

The research study has adopted a survey-based approach to collect data using self-reported measures, and collected data shows similar attributes with demographics of the selected sample of population. Regarding bias, in the current study the sample is typical of the population representing 85.6% knowledgeable working individuals having obtained bachelor and postgraduate degree, where 60% of the population are full-time workers that their age range falls between 26-35 representing 48.9% of the population. Furthermore, regarding non-response bias the researcher carefully investigates the data carrying t-tests in SPSS version 20. The t-test refers to dividing the population into two groups using early submission of the survey and late submission of the survey, where comparison between these two groups illustrate any bias existence with configuring the size of the bias and its impact.

- **Normality**

Normality refers to the shape of data distribution and its appropriateness in accordance with the normal distribution, and it is one of the essential assumptions that required in checking data prior proceeding to any multivariate analysis (Hair *et al.*, 2010). However, assessing the data normality is obtained by describing its shape using two graphical measures; Skewness and Kurtosis. Skewness is referred to the symmetry shape that represent how balanced or unbalanced is the data distribution on the graphical shape comparing with the normality distribution. Kurtosis is referred to the height of the data distribution shape comparing with the normal distribution shape. From extant literature, the skewness and kurtosis values of normal distribution equal to zero, where values below or above zero indicate shifting from normality line (Hair *et al.*, 2010). According to Hair *et al.* (2010), the acceptable values of skewness and kurtosis should fall between +2.58 and -2.58 (.01 significance level). In the research study, SPSS version 20 was used to apply skewness and kurtosis value checks of the collected data show that values are within acceptable range except for two items that were found to have a high kurtosis values; ESE1 = 4.4 and ESE6 = 3.6, where both items were part of nine items that measure entrepreneurial self-efficacy variable. These two items have exceeded the

recommended range of kurtosis guideline and therefore, the researcher decided to exclude them from the analysis as the sample size is (N=509). Also, the items in entrepreneurial self-efficacy construct is covered by 9 questions. Therefore, we can safely remove these two items in order to ensure the rest of items will cover the model and assure avoiding non-normality issues, so the analysis is not affected. In addition, the data was checked by multivariate normality test in AMOS version 23, where Mardia's coefficient CR less than 1.96 indicates normality. As a result, CR value is $21.347 > 1.96$ thus showing non-normality. Therefore, the researcher should interpret carefully the results of the SEM analysis. See table 2 in Appendix D.

- **Linearity**

Linearity refers to the association between a pair of variables for all multivariate techniques. It is a precondition step for all multivariate techniques prior conducting any test in SEM as it assumes existing of relationships between variables as a straight line. There are three methods to check linearity of data; scatterplot, regression analysis, and explicitly model. Scatterplot is the most common method to examine linearity, where visually non-linear patterns are identified by depicting any non-straight line. The alternative approach to scatterplot is the regression analysis, where the residuals shows all unexplained portion of the constructs reflecting the non-linear matters. Another method assists checking the linearity is the explicitly model that refers to curve fitting, where testing of alternative model to reflect any non-linear case. In the research study, linearity was checked by implementing regression analysis to determine relationship among each pair of the model's variables using SPSS version 20. The results reveal a sufficiently linear relationship among the variables, see table 4 in Appendix D.

- **Multicollinearity**

Multicollinearity refers to the extent to which a variable can be explained in the regression model by other variables where high correlation appears among these variables. It is one of the matters that require checking prior conducting any statistical analysis as the existence of multicollinearity affects the predictive ability

in term of the stability of the statistics (Hair *et al.*, 2010). According to Tabachnick and Fidell (2014), a factor correlation equal or above 0.85 indicates a problematic issue in regression for multicollinearity, where conversely Yong and Pearce (2013) indicate that correlation above ± 0.90 indicates a multicollinearity issue. In the research study, the multicollinearity is determined by applying two measures in SPSS version 20; variance inflation factor (VIF) and tolerance level (TL). VIF refers to the reciprocal of tolerance level ($VIF = 1 / TL$), where TL refers to the unexplained variance's measure ($1 - R^2$). The general rules for VIF to be less than 5.0 and table 5 in Appendix D shows the result of conducting multicollinearity test where mediating and predictor are examined by regression models.

- ***Homoscedasticity***

Homoscedasticity refers to the extent where the dependent variables reveal equal levels of variance (error; e) on a number of predictor variables (Hair *et al.*, 2010). It is one of the assumptions required testing prior commencing any multivariate analysis. A common method to test the Homoscedasticity is called Levene's test, where it reveals whether a variable's variance is equal among a number of predictor variables. However, the residuals (the unexplained portion of a dependent variable) assists in illustrating these issues by diagnosing unspecified relationship or detecting issues in the estimation technique. In the research study, Levene's test is carried out and result of Levene's test is in table 6 in Appendix D. As shown in in table 6 in Appendix D, the result of Levene's test is used in order to check the homoscedasticity of data. The result reveals that p value is greater than 0.05, which convey that the variance of one variable among the groups is valid. The Levene's test was used as the data is considered non-normal data where the case of normal data KMO test is used.

- ***Reliability***

As mentioned in chapter 4 subsection 4.2.1, testing for reliability and validity is a vital characteristics check of adopted measures that reflect how consistent are the measures and do they measure the concept correctly, and to ensure that the concept is accurately representing a concept of interest (Hair *et al.*, 2010). Moreover,

Cronbach’s coefficient alpha is examined to check consistency of the constructs, and as a rule of thumb, any figure is more than 0.9 reflects an excellent reliability, where high reliability is limited to range between 0.70-0.90, and moderate reliability ranges between 0.50-0.70, but any figure below 0.50 is considered low reliability (Hinton *et al.*, 2004; Field, 2005). However, a total of 509 questionnaires were collected for the research study. First, a reliability test was applied depicting Cronbach’s alpha (α) values to measure the internal consistency for each construct of the conceptual framework. All constructs indicated high reliability except for subjective norms that indicated excellent reliability, see table 5.21.

Table 5-21: Main Study Reliability Cronbach’s Alpha

Variable	Items	Cronbach’s Alpha (α)	Type
Subjective Norms	6	0.934	Excellent Reliability
Entrepreneurial Intention	7	0.889	High Reliability
Perceived Behavioural Control	6	0.878	High Reliability
Affective Attitude	4	0.820	High Reliability
Cognitive Attitude	3	0.832	High Reliability
Effort	3	0.752	High Reliability
Expectancy	5	0.739	High Reliability
Injunctive Norms	8	0.898	High Reliability
Descriptive Norms	4	0.838	High Reliability
Entrepreneurial Self-Efficacy	9	0.886	High Reliability

Table 5.21 illustrates Cronbach’s Alpha values that was determined to obtain the internal consistency of the measures. The values were between (0.752) for effort to a maximum of (0.934) for subjective norms, while all remaining constructs showed (0.815) for affective attitude, (0.832) for cognitive attitude, (0.819) for expectancy, (0.898) for injunctive norms, (0.838) for descriptive norms, (0.886) for entrepreneurial self-efficacy, and (0.893) for entrepreneurial intention.

Exploratory factor analysis (EFA) is another parallel method of exploring the relationship among the constructs, where the constructs are tested in order to define association of relationship among the constructs with every latent variable. It assists the research study in reducing the number of issues prior CFA test. Therefore, EFA was tested and confirmed that all constructs have greater value than 0.3 in communality, where Levene's test indicated that p is greater than 0.05, see table 6 in Appendix D.

5.5 Structural Equation Modelling Results

In section 5.4 the preliminary tests revealed all required checks that begins with screening the collected data of any missing, outliers, bias, normality, linearity, multicollinearity, homoscedasticity, Unidimensionality, reliability, and validity, where section 5.5. provides descriptive statistics such as mean and standard deviation of all construct of the conceptual framework. These preliminary and descriptive tests are essential to determine whether the data is suitable prior progressing into multivariate data analysis and ensure data meets the underpinning data analysis for the purpose of the empirical enquiry.

This section presents in depth the multivariate data analysis using structural equation modelling (SEM) with AMOS version 23. The structure equation modelling is performed by the following steps; verification of second-order constructs, determining the confirmatory analysis factor CFA to test reliability and validity of the measurement model followed by testing the proposed hypotheses of the research study conceptual framework. CFA aims to confirm the existing of a relationship among the variables to support the adopted theory, while the structural model aims to test the proposed hypotheses.

▪ **Second-Order Constructs**

Prior progressing to analyse the confirmatory factor of the model, the research study verified a second order model existence for social norms constructs. This was confirmed by calculating the ratio of chi-square values of first order to chi-square

values of second order which represent the *t*-coefficient value. However, if *t*-coefficient product indicates a greater value than 0.80, then it verifies that existence of a second order model (Tarafdar, Tu and Ragu-Nathan, 2010). In the research study, the *t*-coefficient was calculated by using AMOS version 23 to obtain chi-square values of first order that was equal to 1695, and chi-square values of second order that equal to 2115. As a result, *t*-coefficient was equal to 0.80 ($t = 1695/2115$), showing acceptable figure thus confirming the existence of second order model.

5.5.1 Confirmatory Factor Analysis CFA

Confirmatory factor analysis CFA aims to define the underlying framework of variables and assesses how well the variables are measured in order to demonstrate reliability and validity of convergent and discriminant of the constructs' measures in multivariate data analysis. Furthermore, it confirms that the research study can progress to test the hypotheses once the structure of interrelationship among variables is analysed and show valid relationships.

According to Hair *et al.* (2010), CFA consists of assessing goodness of fit indices and construct validity. Therefore, in the research study both assessments will follow next prior proceeding towards testing the research study hypotheses.

- **Goodness of Fit Indices**

The initial CFA test was conducted on eight constructs; social norms, expectancy, affective attitude, cognitive attitude, perceived behavioural control, entrepreneurial self-efficacy, effort, and entrepreneurial intention. Following existing literature, social norms are modelled as a second order construct consisting of subjective, injunctive, and descriptive norms (Hagger and Chatzisarantis, 2005). Figure 5.1 shows the testing of CFA model in AMOS version 23.

Figure 5.1: Confirmatory Factor Analysis Initial Model

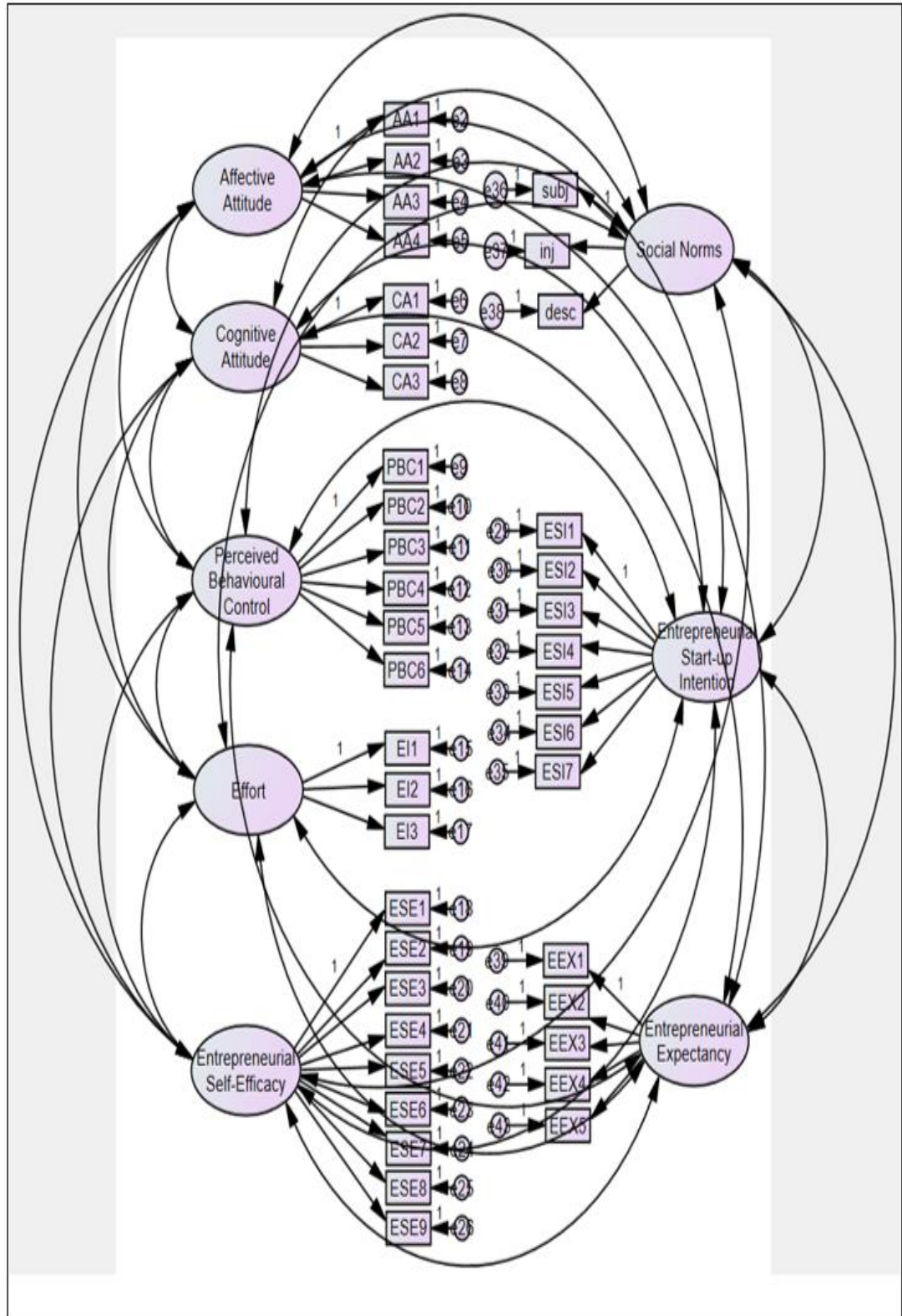


Figure 5.1 illustrates the measurement model as a default model (i.e. first run), where all eight constructs and latent variables are represented. However, part of the model validity assessment is to check the goodness of fit measures (GOF); absolute measure fit, incremental measure fit, and parsimony fit measures. Absolute fit refers to how well the theory fits the data and the estimated model fits the data collected, while incremental measure fit show how well the model is differentiated from other alternative model, and parsimony fit measures indicate the estimated model fitness in term of its complexity, see table 5.22.

Table 5-22: Initial CFA Model Goodness of Fit Indices

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	110	2096.213	710	.000	2.952
Saturated model	820	.000	0		
Independence model	40	12327.497	780	.000	15.804

As shown in table 5.22 that the ratio of chi-square to the degree of freedom 2.952 represents normed chi-square (CMIN/DF) that indicates an acceptable value as values between 2 to 5 is acceptable (Salisbury, Chin and Gopal, 2002). Therefore, as from the default run figure show acceptable fit. However, the first run included all construct with no deletion of any items that capture normality, linearity, and regression issues. This allows the research study model for further improvement by removing the items with aforementioned issues resulting in a better fit index. According to Hair *et al.* (2010), research study should attempt to examine other alternative indices for each of the goodness of fit measures such as absolute fit indices, incremental fit indices, and parsimony fit indices. This allows the research study to disclose figures of incremental indices such as CFI, TLI, NFI and RFI, and for parsimony indices such as PNFI and RMSEA, and also for absolute indices such as PMR, GFI, and AGFI that indicate result within recommended thresholds. Moreover, after the CFA first run, room for further improvement was observed; figure 5.2 presents the measurement model as the final model after making necessary improvements.

Figure 5.2: Confirmatory Factor Analysis Final Model

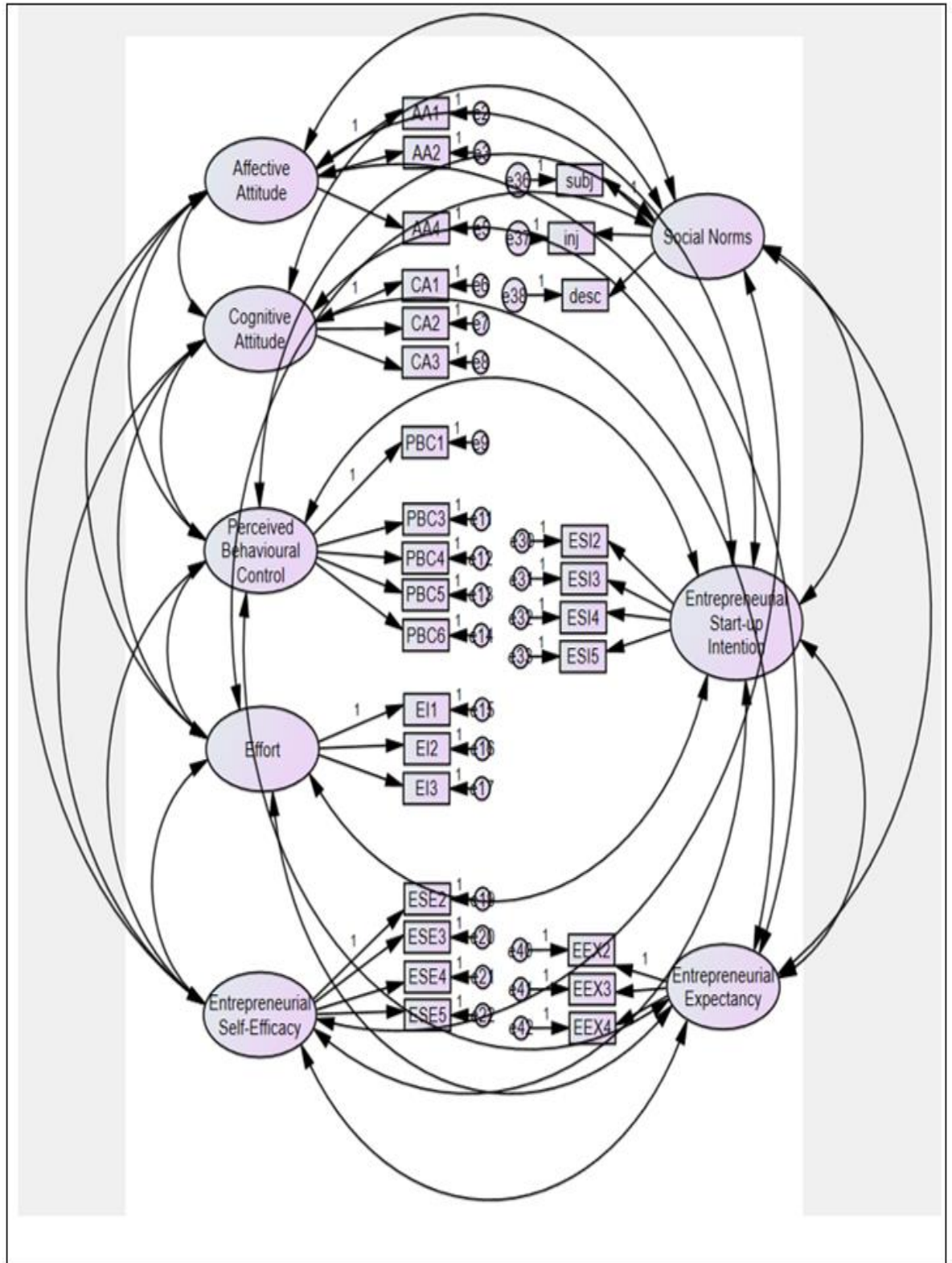


Figure 5.2 illustrates the final revised measurement model in AMOS version 5.2 after removing 12 items that did not meet the recommended thresholds (<0.6) (Hair *et al.*, 2010). Therefore, as a result table 5.23 presents the estimated model for first run and final run.

Table 5-23: CFA Models Goodness of Fit Indices

Fit Measure	Acceptable Figure	1 st CFA	Final CFA
Comparative fit index (CFI)	> 0.90	0.880	0.922
Goodness of fit index (GFI)	> 0.90	0.822	0.885
AGFI	> 0.80	0.794	0.855
Root mean squared error of approximation (RMSEA)	< 0.08	0.062	0.061
RMR	0 is a perfect fit	0.140	0.093
Parsimony comparative fit index (PCFI)	> 0.80	0.801	0.785
Normed fit index (NFI)	> 0.90	0.830	0.886
CMIN/DF	< 5.0	2.952	2.860
RFI	> 0.90	0.813	0.866
IFI	> 0.90	0.881	0.923
NFI	> 0.06	0.755	0.754
TLI	> 0.90	0.868	0.908

As shown in table 5.23, an improvement is observed at final CFA run, where values of fit indices fall within recommended thresholds thus showing the accomplishment of a good measurement model. Next, the construct validity examination will follow for the model.

▪ **Construct Validity**

Construct validity is referred to the degree to which items of a construct effectively measures the concept of interest. It reflects how accurate are the measures in gauging the construct thus the concept. There are well known common methods of examining the construct validity which is by assessing its components; convergent

validity, discriminant validity, and nomological validity and face validity. The details of each component of construct validity are explained respectively next.

Convergent validity refers to the case where items (indicators) of a construct cover or share a high attribution of variance in common. Several methods currently exist for the measurement of convergent validity, and these are conducted by examining the factor loading, average variance extracted, and reliability. According to Hair *et al.* (2014) a significant weight of factor loading must have all standardised loading estimates higher than 0.50 and ideally above 0.70. Average variance extracted (AVE) refers to the convergence indicator that is calculated by overall mean of variance accounted for items loading on a construct. It is suggested that AVE value should be above 0.50 (Hair *et al.*, 2010).

Reliability is the one of the indicators of convergent validity, and it is referred to construct reliability (CR) that represents a computed value in SEM resulted from calculating the ratio of squared sum of factor loading of each construct to the sum of error variance. According to Hair *et al.* (2014) CR values between 0.60 to 0.70 are acceptable, where CR equal to or above 0.70 indicate a good reliability figure. However, for the research study the details of AVE and CR are shown in table 5.24.

Table 5-24: Average Variance Extracted and CR Values

Construct	AVE	CR
Entrepreneurial Intention	0.541	0.822
Entrepreneurial Self-Efficacy	0.649	0.881
Perceived Behavioural Control	0.554	0.881
Affective Attitude	0.586	0.810
Cognitive Attitude	0.616	0.827
Effort	0.525	0.767
Expectancy	0.654	0.850
Social Norms	0.489	0.736

As shown in table 5.24, all AVE values are above the minimum suggested figure 0.50 except for social norms that equal to 0.489, and all constructs CR value indicates no issues.

Discriminant validity refers to the extent to which a construct is unique from other constructs and measure a concept that other constructs do not measure. The assessment of discriminant validity is performed by ensuring that AVE is greater than squared inter-construct correlations (i.e. $AVE > SIC$).

Nomological validity and face validity are part of construct validity checks, where face validity begins at early stage prior any theoretical testing using CFA. It is considered an essential step in ensuring every item's content is meaningful and understandable by representing the concept of interest. Nomological validity refers to an examination of whether the correlation between constructs make sense in a measurement theory. It is checked by emphasizing that all constructs of the CFA model has significant correlations (Hair *et al.*, 2010).

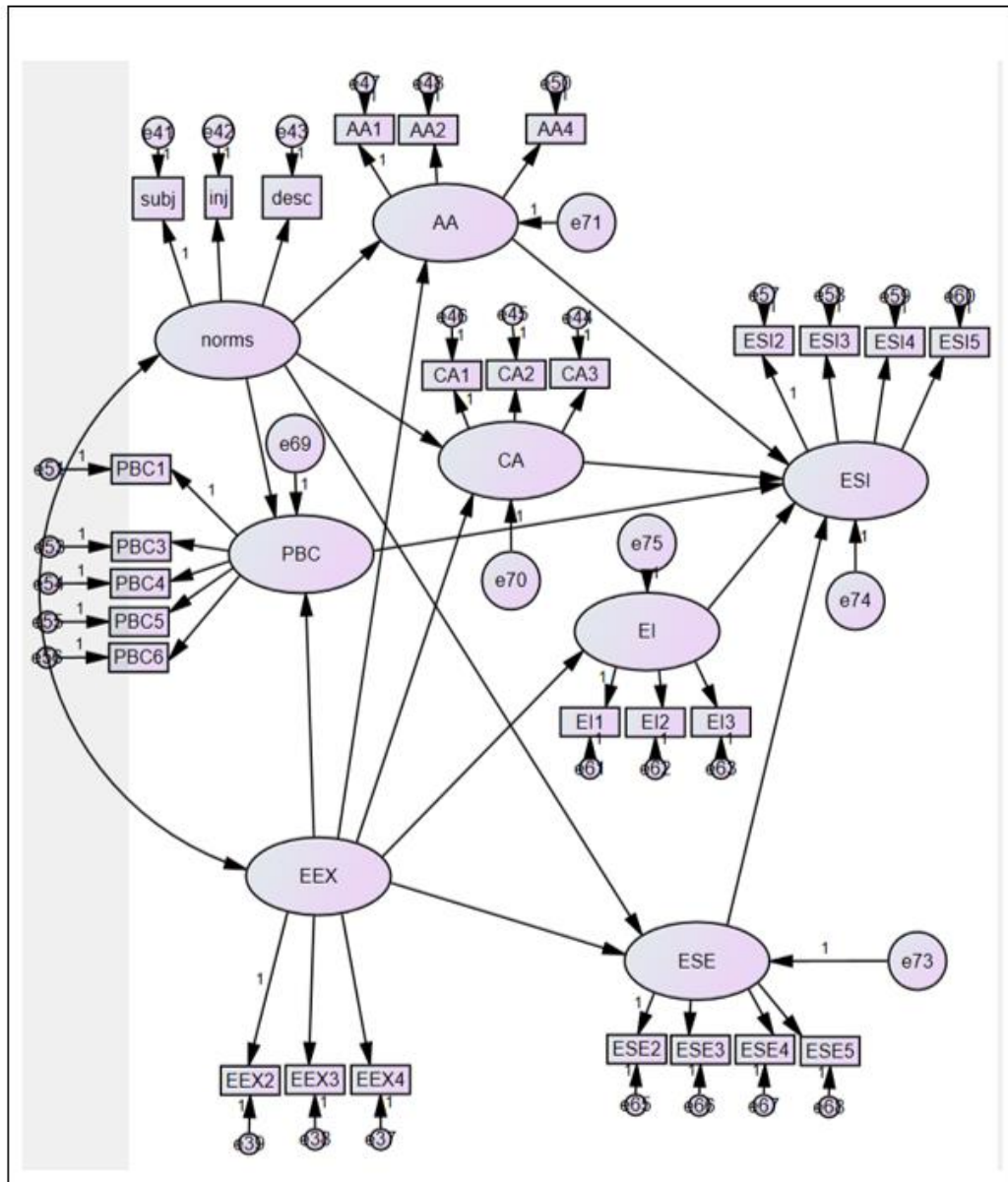
In order to check the common method bias from the collected data, two tests were conducted. At first, Harman's single factor test in SPSS, where the result indicated that 31.84% of variance in all variables can be explained by a single factor. Therefore, no concerns in the research study of the common method bias issue (See table 7 in Appendix D). Secondly, correlation method was used in AMOS to check that no correlations exceed 0.90 that could show possible bias (Pavlou, Liang and Xue, 2007). The results showed that none of the correlations surpass the threshold. Therefore, common method bias is not a concern in the research study (See table 8 in Appendix D). As a result, the rest of the analysis proceed without adding a common latent factor.

5.5.2 Structural Model

Prior proceeding to structural model and hypotheses testing, a good measurement model was established by conducting several checks such as goodness of fit and construct validity to ensure that the model is prepared to test the hypotheses. In

structural model the relationships among independent variables and dependent variable are figured by the direction of arrows, where in CFA there is no requirement to define these relationships as it is considered. Despite that, in structural model the relationship between independent variables are deemed by covariance factor that represented with two-headed arrows. Figure 5.12 illustrates the structural model in AMOS version 23.

Figure 5.3: Hypotheses Testing Model



As shown in figure 5.3 the estimated model for testing the hypotheses is finalised and the figure shows social norms (norms), expectancy (EEX), affective attitude (AA), cognitive attitude (CA), perceived behavioural control (PBC), entrepreneurial self-efficacy (ESE), effort (EI), and entrepreneurial start-up intention (ESI). However, prior adopting the control variable in the estimated model, a further check was implemented similar in criteria of checking CFA in

order to check control variables' effect on the model. Once the hypotheses are tested, the control variables will be loaded in the model to test their effect.

Table 5-25: Final Structural Model Goodness of Fit Indices

Fit Measure	Acceptable Figure	Final Structural Model
Comparative fit index (CFI)	> 0.90	0.893
Goodness of fit index (GFI)	> 0.90	0.851
AGFI	> 0.80	0.819
Root mean squared error of approximation (RMSEA)	< 0.08	0.070
RMR	0 is a perfect fit	0.129
Parsimony comparative fit index (PCFI)	> 0.80	0.800
Normed fit index (NFI)	> 0.90	0.856
CMIN/DF	< 5.0	3.470
RFI	> 0.90	0.837
IFI	> 0.90	0.893
NFI	> 0.06	0.856
TLI	> 0.90	0.878

Table 5.25, shows the fit indices of final structural model that was used to test the proposed hypotheses, where values of fit indices fall within the recommended thresholds (Hair *et al.*, 2010).

Table 5-26: Default Model Goodness of Fit Indices

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	72	1158.861	334	.000	3.470

As shown in table 5.26, CMIN/DF value is 3.470 that indicates an acceptable figure as it falls between 2 to 5 (Salisbury, Chin and Gopal, 2002). After testing the hypotheses and following extant literature that indicated control variables such as gender, age, and educational background can influence the level of individual's

entrepreneurial start-up intention. Result using SEM analysis indicated that control variables do not influence the individual’s entrepreneurial start-up intention, as a result the control variables were removed from the model.

5.5.3 Hypotheses Testing

The proposed hypotheses representing relationship among constructs that was examined in the structural model after confirming CFA. This examination resulted several indices that indicates the research study conceptual model fit the data. The hypotheses were tested, and results show that all hypotheses are supported expect three hypotheses that were not supported.

Table 5-27: Hypotheses Testing Results

Hypothesis	Coefficient	P Value	Result
H1: Social norms positively influence Affective attitude	0.313	***	Support
H2: Social norms positively influence Cognitive attitude	0.175	**	Support
H3: Social norms positively influence PBC	0.086	NS	Not supported
H4: Social norms positively influence ESE	0.062	NS	Not supported
H5: Entrepreneurial Expectancy positively influences Affective attitude	0.839	***	Support
H6: Entrepreneurial Expectancy positively influences Cognitive attitude	0.723	***	Support
H7: Entrepreneurial Expectancy positively influences PBC	0.783	***	Support
H8: Entrepreneurial Expectancy positively influences ESE	0.434	***	Support
H9: Entrepreneurial Expectancy positively influences Effort	0.933	***	Support
H10: Affective attitude positively influences Entrepreneurial intention	0.621	***	Support
H11: Cognitive attitude positively influences Entrepreneurial intention	-0.003	NS	Not supported
H12: PBC positively influences Entrepreneurial intention	0.083	*	Support
H13: ESE positively influences Entrepreneurial intention	-0.273	***	Support
H14: Effort positively influences Entrepreneurial intention	0.358	***	Support
Note. *p<0.1, **p<0.05, ***p<0.01, NS p>0.1			

As illustrated in Table 5.27 all proposed hypotheses were supported except three hypotheses (H3, H4, and H11). Moreover, it was predicted that social norms impact

individual attitude in terms of (H1) affective attitude and (H2) cognitive attitude, where testing hypotheses have confirmed that social norms do not influence perceived behavioural control (H3) and entrepreneurial self-efficacy (H4). Furthermore, it was predicted that individuals with higher expectation are more likely to have higher attitude towards intention to start-up a business thus (H5) and (H6) were supported. In addition, it was predicted that individual's expectation of starting up a business is more likely to increase the amount of perceived skills control (H7), confidence (H8), and commitment (H9) thus H7 – H9 were supported. In regard to the influence of individual's attitude towards the intention to start-up a business, it was predicted that individuals with higher attitude as affective (H10) and cognitive (H11) are more likely to create more entrepreneurial start-up intention thus H10 was supported, while H11 is rejected showing that individuals are emotionally driven rather than faith and beliefs driven in this specific sample and context. Also, it was predicted that individual perceived behavioural control (H12), entrepreneurial self-efficacy (H13), and effort (H14) are more likely to influence individual's intention to start-up a business. H12, H13, and H14 were supported representing that individuals who has higher control on skills (H12), higher amount of commitment (H14) will impact their intention to start-up a firm. Also, one's confidence level (H13) has shown a significant negative association with entrepreneurial start-up intention indicating that entrepreneurial self-efficacy has a reverse effect on entrepreneurial start-up intention than what expected.

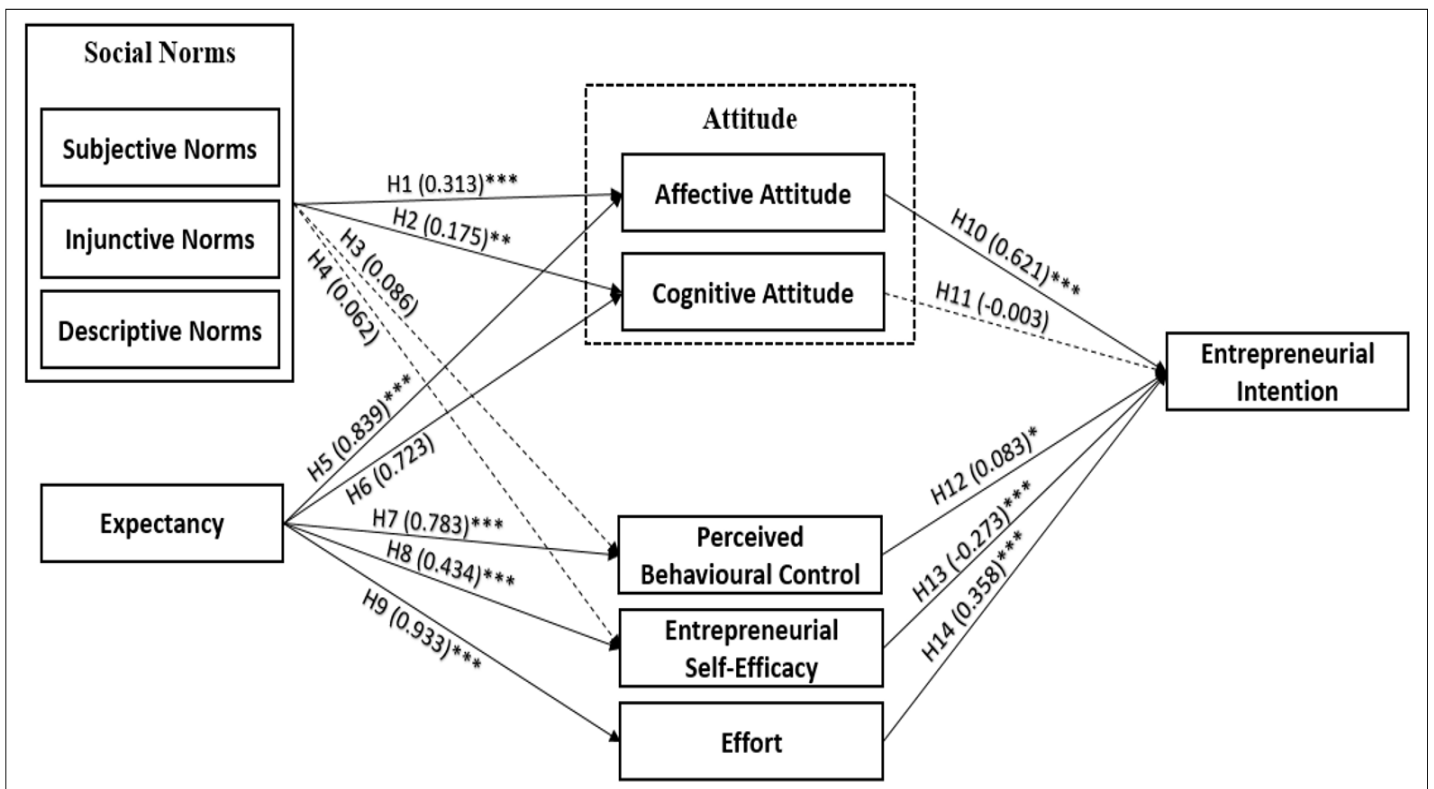
5.6 Final Developed Framework

Sections 5.4 and 5.6 revealed the results of the preliminary examination and structural equation modelling assessments respectively in order to obtain validated and efficient data prior validating the proposed conceptual framework and testing the hypotheses using AMOS version 23. In this section the final developed framework is presented with all supported hypotheses see figure 5.4.

The final developed framework demonstrates that out of fourteen hypotheses eleven hypotheses of the research study are supported and accepted. The most interesting

aspects of this developed framework is that social norms did not impact perceived behavioural control and entrepreneurial self-efficacy contradicting previous literature (Fretschner and Weber, 2013; Garcia, Puente and Mazagatos, 2015; Fernández-Pérez *et al.*, 2017). In addition, no significant correlation was found between cognitive attitude and entrepreneurial intention that was argued by limited studies (Liñán and Chen, 2009; Cantner, Goethner and Silbereisen, 2016). On the other hand, the most striking results to emerge from the data and testing hypotheses is that entrepreneurial expectancy has a significant impact on both attitude types, perceived behavioural control, entrepreneurial self-efficacy, effort.

Figure 5.4: Final Developed Framework



As shown, Figure 5.4 displays the final developed framework as a result of the research study data analysis phase. It presents that social norms impact both types of attitudes; affective and cognitive, while entrepreneurial expectancy impacts in addition attitudes, the perceived behavioural control, effort, and entrepreneurial self-efficacy. Furthermore, entrepreneurial start-up intention shows impact by

affective attitude, perceived behavioural control, effort, and entrepreneurial self-efficacy, but no impact is supported by cognitive attitude. Moreover, social norms showed a significant positive impact on affective (H1) and cognitive attitude (H2) with more influence on affective attitude than cognitive attitude. In addition, social norms failed to positively impact perceived behaviour control and entrepreneurial self-efficacy as hypothesised in the proposed framework and therefore H3 and H4 were rejected and removed from the final model. Another interesting result was the insignificant impact of cognitive attitude on entrepreneurial start-up intention (H11), and thus being removed from the final model as well. The surprising finding was the impact of entrepreneurial self-efficacy on entrepreneurial start-up intention (H13) that showed a negative significant impact, meaning that entrepreneurial self-efficacy has a reverse effect on the entrepreneurial start-up intention than what expected. This is a new finding that appears to provide an interesting result. In this section, the framework shows the result of testing the hypotheses, and in section 6.3 in chapter 6 a detailed discussion is provided to discuss each hypothesis' findings and synthesis of the results with extant literature. Overall, the developed framework provides new insights into the effects of social norms and entrepreneurial expectancy on the antecedents of entrepreneurial intention. It provides a better and deeper understanding of social norms components and their indirect impact on entrepreneurial intention.

5.7 Chapter Summary

This chapter provides in depth results and findings of data analysis underpinning the empirical enquiry. First, it presented the results of performing the pilot study test using 35 responses. The results revealed that all construct possessed a Cronbach's alpha above (0.70) indicating high reliability. Followed by presenting the main study data analysis results that includes demographics, preliminary examination, descriptive statistics, and reliability test. The data collection achieved (N=580) that was screened and cleaned by using SPSS version 20, where preliminary examinations were conducted and identified incomplete and removed 71 responses, resulting in a total of 509 responses for data analysis. Then, findings

from descriptive statistics show that all constructs rated slightly agree within (1-7) Likert scale except for descriptive norms that a component of social norms represented neutral figure. Further statistics included sample demographics that reported 73.5% as male gendered participants with overall of 79.6% have a job. Also, 90% has a work experience, and more than the half of the participants has not started a business. The sample demographics represented the targeted sample as the study investigating entrepreneurial start-up intention of experienced employees in Oil and Gas industry in Qatar.

Thereafter, the result of the structural equation modelling using AMOS version 23 revealed confirmation of second-order construct existence for social norms. It is verified by calculating the ratio of chi-square values of first order (1695) to chi-square values of second order (2115) which represent the t -coefficient value ($t > 0.8$). Followed by confirmatory factor analysis (CFA) that reported acceptable goodness of fit (GOF) and construct validity that indicated average variance extracted AVE of all constructs are above minimum required (0.50). Next, fourteen hypotheses were tested and confirmed eleven hypotheses. Three hypotheses were rejected; social norms impact on perceived behavioural control, social norms impact on entrepreneurial self-efficacy, and cognitive attitude impacts entrepreneurial intention.

At the end, the chapter uncovers the final developed framework of the research study depicting the supported eleven hypotheses. The next chapter will provide a discussion on research study results and findings.

Chapter 6: Discussion of Results and Findings

This chapter provides a discussion of the research study findings that emerged from the statistical analysis presented in chapter 5. It is structured as follows; section 6.1 provides an introduction to the discussion of the empirical research data findings. This is followed by section 6.2, which presents a discussion of the findings related to testing the 14 proposed hypotheses, while section 6.3 discusses the overall findings, and the final developed framework is presented in section 6.4. Then, section 6.5 presents a discussion of the findings within the context of Qatar, and the chapter concludes with a chapter summary in section 6.6.

6.1 Overview

Entrepreneurial intention went through a major evolution, shifting the concept from a pure economic perspective to a medley of social psychology; namely, cognitive psychology. Previous studies evaluating entrepreneurial start-up intention's antecedents have advocated a consideration of a limited variables from the theory of planned behaviour (TPB) that impact on entrepreneurial intention, while other research studies have observed inconsistent results regarding these same relationships and so called for further research on this matter (Fayolle and Liñán, 2013). Furthermore, the theory of planned behaviour has been vigorously challenged in recent years by a number of scholars in terms of defining the key influential factors that impact on entrepreneurial intention, where most studies value its contributions towards the general behaviour concept. However, TPB does not fully explain why individuals are motivated to start a business as no expectation factor is observed among its constructs. In this research study, the relationships among the entrepreneurial intention antecedents have been reframed by adopting

the theory of planned behaviour (TPB) and Vroom's expectancy theory (VIE) and considering recent research calls for alternative approaches to investigate the impact of these antecedents in order to uncover the cognitive aspects of attitude, recognise the deeper view of the social norms, investigate the role of individuals' expectancy, and the overall associations among all of the constructs impacting entrepreneurial intention.

As mentioned in the literature review (chapter 2), the key influential factors that depict the antecedents of entrepreneurial intention are mainly adopted from TPB, and are limited to subjective norms, attitude, and perceived behaviour control (PBC) or entrepreneurial self-efficacy (ESE), where the extant literature offers evidence of selecting PBC and ESE interchangeably. In the same vein, several studies have pointed out that the VIE constructs (entrepreneurial expectancy and effort) are closely related to the TPB ones, as attitude is akin to expectancy (Krueger, Reilly and Carsrud, 2000; Renko, Kroeck and Bullough, 2012). Nevertheless, it is unfortunate that these studies failed to address the VIE constructs (entrepreneurial expectancy and effort) in their research as this remains an assumption and has been poorly articulated. There is no evidence of using entrepreneurial expectancy and effort as factors within research in the entrepreneurial intention field. Therefore, conducting a comprehensive in-depth literature review and recognising the key influential factors was the first objective of the research study in order to ensure that these key factors are identified and recognised. These factors are: social norms, attitudes, perceived behaviour control (PBC), entrepreneurial self-efficacy (ESE), entrepreneurial expectancy and effort. It is also worth noting that one of the reasons why this research study adopted the VIE constructs and integrated them within TPB is because VIE provides an explanation for the motivation of individuals to adopt entrepreneurial behaviour, such as expecting a reward.

Furthermore, a proposed conceptual framework was developed in chapter 3 to present the relationship among the identified key influential factors and confirm the accomplishment of objective 2 of the research study. This was followed by

collecting the data, then using SPSS version 20 and AMOS version 23 to clean and analyse them in order to validate the proposed hypotheses within the proposed framework to accomplish objective 4 of the research study. The data analysis was reported in chapter 5 and the results show further support for 11 of the 14 proposed hypotheses, while three hypotheses were rejected. Also, it confirmed the impact of individuals' entrepreneurial expectancy and social norms on most of entrepreneurial intention's antecedents, as argued in the extant literature. However, these findings differ from other studies, that demonstrated a direct valid relationship between social norms and intention (Krueger, Reilly and Carsrud, 2000; Goethner *et al.*, 2012), while the research study investigated a specific intention, "entrepreneurial intention", that is broadly consistent with recent research by Liñán and Chen (2009) and Fernández-Pérez *et al.* (2017), that reported and confirmed that social norms have an indirect impact on entrepreneurial intention. It is also vital to note that a key strength of the present research study is that social norms are represented as a "second order" combination of three types of social norms, which previous studies have not explored. Adopting the second order model of social norms to confirm that theorized social norms loads into certain number of sub-components; subjective norms, injunctive norms, and descriptive norms. This is conducted in Structural Equation Modelling (SEM), and as mentioned in chapter 5 section 5.5 the research study verified using second order by following the guidelines that provided from extant literature and calculated the *t*-coefficient value that was confirmed to be equal to 0.80, thus the existence of a second order was validated (Tarafdar, Tu and Ragu-Nathan, 2010).

Several studies have shown that attitude towards entrepreneurship plays an important role in shaping individuals' intention to form a business. Very little was found in the literature to determine the type of attitude, as most of the research considers attitude as a construct that represents a multidimensional concept. Recent studies evaluating attitude have noted that individuals' attitudes differ in developed and developing cultures and that the type of attitude plays an essential role in shaping individuals' willingness to adopt a particular behaviour. In line with these findings, affective attitude and cognitive attitude have been introduced to represent

emotions and beliefs, respectively. Therefore, in the research study, these findings have been taken into account to investigate the impact of both types of attitude on entrepreneurial intention. Surprisingly, the results have shown that emotions and feelings, “affective attitude”, impact on entrepreneurial intention positively, while beliefs and thoughts, “cognitive attitude”, have an insignificant impact on entrepreneurial intention. The next section discusses in-depth the empirical findings derived from chapter 5 from testing the 14 proposed hypotheses to uncover the hidden influential factors of entrepreneurial intention’s antecedents towards forming a business.

6.2 Outcomes of Hypotheses Testing

The research study’s purpose is to provide a better understanding of the key influential factors, such as society’s influence and individuals’ expectations, that lead to the intention to start a business and the creation of more entrepreneurs. From the literature review in chapter 2, it was found that several studies have employed subjective norms as a single construct to represent social norms and attitude as a single multidimensional construct. In the research study, these two constructs are highlighted as vital in impacting on individual behaviour. Three distinguished norms are employed that represent society’s influence (subjective, injunctive, and descriptive) and emotions are separated from beliefs in order to differentiate affective attitude from cognitive attitude that has recently become a common trend in the entrepreneurial intention research. Therefore, the research study proposed 14 hypotheses to validate the proposed conceptual framework and the relationship among the constructs. The results indicate 11 hypotheses were supported (H1, H2, H5, H6, H7, H8, H9, H10, H12, H13, and H14) as follows:

H1: Social norms positively influence Affective attitude

H2: Social norms positively influence Cognitive attitude

H5: Entrepreneurial Expectancy positively influences Affective attitude

H6: Entrepreneurial Expectancy positively influences Cognitive attitude

- H7: Entrepreneurial Expectancy positively influences PBC
- H8: Entrepreneurial Expectancy positively influences ESE
- H9: Entrepreneurial Expectancy positively influences Effort
- H10: Affective attitude positively influences Entrepreneurial intention
- H12: PBC positively influences Entrepreneurial intention
- H13: ESE positively influences Entrepreneurial intention
- H14: Effort positively influences Entrepreneurial intention

On the other hand, 3 hypotheses were rejected (H3, H4, H11) as follows:

- H3: Social norms positively influence PBC
- H4: Social norms positively influence ESE
- H11: Cognitive attitude positively influences Entrepreneurial intention

The result, as shown in table 6.1, of testing all of the proposed hypotheses show that they were all supported, except for three hypotheses which were rejected (H3, H4, and H11). Interestingly, the social norms were observed to have no influence on perceived behavioural control and entrepreneurial self-efficacy, resulting in the rejection of hypotheses 3 and 4, respectively. Also, the more surprising finding was the rejection of hypothesis 11, that indicated that cognitive attitude does not have a positive impact on entrepreneurial intention. The finding regarding H11 was unexpected and suggests that beliefs and thoughts do not influence entrepreneurial intention in this research study's specific developing context (Qatar). Next, a further discussion will follow of the 14 proposed hypotheses, with a synthesis of each hypothesis of the research study with the existing literature on the field of entrepreneurial intention.

- **H1-H4: Social norms positively influence attitudes, PBC, and ESE**

Social norms are defined as the perceptions of the normative pressure in a society, where reference people, such as parents, family, friends, and peers, think and react to behaviour specifically in terms of influencing the creation of individuals' intention. In previous studies, social norms have been presented as subjective

norms, where few scholars have indicated that subjective norms constitute a problematic construct that demands reconceptualization (Liñán and Chen, 2009). Several studies in the entrepreneurship field have suggested the exclusion of social norms from TPB due to their failure to predict entrepreneurial intention; however, reconceptualising the construct would offer a new approach for examining social norms' indirect impact on entrepreneurial intention through attitudes, perceived behavioural control, and entrepreneurial self-efficacy (Liñán and Chen, 2009; Fretschner and Weber, 2013). Following this call to confirm social norms' role in influencing the antecedents of entrepreneurial intention (Liñán and Chen, 2009; Fayolle and Liñán, 2013; Fernández-Pérez *et al.*, 2017), the present research study aimed to determine the effect of other components of social norms and adopted social norms as a collective of subjective, injunctive, and descriptive norms, where subjective norms refer to the acceptance and gained approval from reference people to a certain behaviour, while injunctive norms refer to encouragement received from reference people, and descriptive norms refer to a demonstration of a behaviour of interest that already exists and is being performed by the reference people. Therefore, this research study considered the deeper view of social norms' influence on individuals by adopting these three components of social norms (subjective, injunctive, and descriptive). Also, this research study set out to test the hypotheses regarding social norms' influence in the extant literature and, accordingly, it was hypothesised that social norms impact affective attitude AA (H1), cognitive attitude CA (H2) (Botsaris and Vamvaka, 2016), perceived behavioural control PBC (H3) (Fretschner and Weber, 2013), and entrepreneurial self-efficacy (ESE) (H4) (Biraglia and Kadile, 2017; Fernández-Pérez *et al.*, 2017).

- **H1: Social norms positively influence Affective attitude**

Society's effect on individuals is represented by social norms in the research study. The existing evidence supports the impact of society on intention, showing that social norms play a crucial role in forming individuals' planned behaviour through intention (Shah, 2015), while recent studies have argued that social norms provide weak evidence of the causes of entrepreneurial intention and reported that social norms have a substantial impact on individuals' attitudes rather than directly

impacting on their entrepreneurial intention (Hui-Chen, Kuen-Hung and Chen-Yi, 2014). Also, it is worth noting that several studies have investigated social norms as subjective norms that impact on attitude (Fernández-Pérez *et al.*, 2017), where in the research study social norms are considered to reflect subjective norms and two other components, namely injunctive and descriptive, to illustrate a full presentation of society's effect. Also, the present research study determined the effect of attitude components by including affective and cognitive attitudes, as both of these are important determinants of attitude and distinguishable from each other, to recognise the responsible and influential aspect that impacts on entrepreneurial intention (Trafimow *et al.*, 2004). Therefore, it was hypothesised that social norms positively impact on affective attitude. The results of testing this hypothesis (H1) indicated that social norms have a positive influence on affective attitude in terms of forming an entrepreneurial intention to start a business, where the p-value indicated a value of <0.01 , and hence H1 is supported. These findings are consistent with the existing research (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Tsai, Chang and Peng, 2014; Fernández-Pérez *et al.*, 2017) that supports the view that attitude is positively affected by social norms, but conflicts with other studies which have suggested that attitude is uninfluenced by social norms (Krueger, Reilly and Carsrud, 2000; Ozaralli and Rivenburgh, 2016). According to Tsai, Chang and Peng (2014), social norms play only a moderating role in impacting on attitude's relationship with entrepreneurial intention. This research study demonstrated that social norms are a vital dimension in influencing the emotions and feelings of individuals towards developing an entrepreneurial intention to start a business. In addition, this result provides a fresh insight into the deeper components of social norms and attitude rather than a single representative of each of the aforementioned constructs.

- **H2: Social norms positively influence Cognitive attitude**

As mentioned in the literature review (chapter 2), few studies have found that social norms have a significant impact on attitude, resulting in an indirect impact on entrepreneurial intention (Fernández-Pérez *et al.*, 2017). Whether the predictive validity results from both affective or cognitive attitude's influence on

entrepreneurial intention, it is important to bear in mind that, depending on the type of participants in the research study. each attitude of interest will ultimately be represented (Trafimow *et al.*, 2004). Therefore, the present research study proposed that cognitive attitude is a vital component that shapes an individual's attitude in term of his/her beliefs and thoughts and, accordingly, it was hypothesised that social norms positively impact on cognitive attitude (H2). The results from chapter 5, that tested hypothesis (H2), indicated that social norms have a positive influence on cognitive attitude towards forming an entrepreneurial start-up a business, where the p-value = 0.004 indicated a value of <0.01 , and hence H2 is supported. This finding illustrates that society play a significant role in forming the beliefs and thoughts of individuals. Also, this finding corroborates those of other previous work that examined social norms' impact on attitude (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Tsai, Chang and Peng, 2014; Fernández-Pérez *et al.*, 2017). As a result, the present research study confirmed the role of social norms in influencing cognitive attitude, which has not been previously investigated in the literature. Our findings reflect how social pressure shapes individuals' beliefs and thoughts regarding their entrepreneurial intention to start a business. Although our results contrast with a few published studies (Goethner *et al.*, 2012; García-Rodríguez *et al.*, 2015), they are consistent with the majority of the existing literature (Fayolle and Liñán, 2013; Fretschner and Weber, 2013; Fernández-Pérez *et al.*, 2017). It is worth noting that previous studies have failed to demonstrate a consistent association between social norms and both types of attitudes but show support for social norms as subjective norms on a multidimensional attitude as one factor. These findings of H1 and H2 confirm that the relationship between social norms and their specificities with affective and cognitive attitude is positive and supported and, therefore, our results signify the role of society in shaping individuals' behaviour in terms of creating the affected attitude towards intentional behaviour.

- **H3: Social norms positively influence PBC**

Following the theoretical and empirical foundation of the previous research, it has been demonstrated that a positive link exists between social norms and perceived behavioural control (PBC) (Krueger, Reilly and Carsrud, 2000; Liñán and Chen,

2009; Hui-Chen, Kuen-Hung and Chen-Yi, 2014), while very limited research studies have produced contradictory findings to these results (Fretschner and Weber, 2013). PBC represents an individual's perception of how easy it is to perform a task in terms of controlling the perception of resources. Recent studies suggest that individuals who believe in their ability to control their skills required to conduct an entrepreneurial task are more likely to exert the required behaviour accordingly (Karimi *et al.*, 2016; Ozaralli and Rivenburgh, 2016), if the societal pressure from the reference people encourages and approves these beliefs. Social pressure is produced by social norms that contribute and influence an individual's perception of his/her control ability, where the reference people approve (subjective), encourage (injunctive), or acknowledge similar behaviour in a society (descriptive) with regard to establishing a business (Fretschner and Weber, 2013; Tsai, Chang and Peng, 2014). Surprisingly, an unexpected finding of the present research study was that social norms have no impact on perceived behavioural control (PBC), where the p-value = 0.158 indicated a value of >0.1 , and thus H3 is not supported. This research finding conflicts with previous studies that suggested a positive association between social norms (subjective norm) and PBC (Liñán and Chen, 2009; Tsai, Chang and Peng, 2014). while is also in accordance with another stream of studies that argue that social norms insignificantly impact on PBC (Fretschner and Weber, 2013; García-Rodríguez *et al.*, 2015). It is worth noting that, recently, scholars have become cautious about including social norms when investigating the impact of entrepreneurial intention's antecedents (Fretschner and Weber, 2013; Garcia, Puente and Mazagatos, 2015). These inconsistencies in the empirical findings may be due to the fact that previous TPB has used subjective norms only to represent social norms when investigating their impact on PBC; in the present study, social norms include subjective, injunctive, and descriptive norms, thus providing a deeper view for understanding societal pressure on individuals' perceived behavioural control. Our findings confirm that social pressure does not influence individuals' perceptions about accomplishing a task, and thus does not influence their perceived beliefs about their ability to control the required resources and skills to form a business. A possible explanation for this might be that the skill of controlling a task is an attribute that is created and

influenced by other means, such as education, training, or expectation based on past experience of engaging with a similar task.

- **H4: Social norms positively influence ESE**

Unlike perceived behavioural control (PBC) and the perception of controlling a task, entrepreneurial self-efficacy (ESE) refers to the amount of confidence in one's ability to accomplish a task. The previous research uses PBC and ESE interchangeably, and in this research both constructs are adopted to investigate their impact, as each represents different aspects of beliefs, while recent developments of ESE show that the reference people in society exert a social influence on individuals' confidence and beliefs, resulting in upgrading their confidence about forming a business (Schlaegel and Koenig, 2014; Fernández-Pérez *et al.*, 2017). A number of studies have reported that social norms have a positive impact on entrepreneurial self-efficacy (Hayton and Cacciotti, 2013; Fernández-Pérez *et al.*, 2017). Therefore, this research study proposed that social norms positively impact on ESE, as previous studies have validated its role and suggested that future research in the field of entrepreneurial intention must consider the importance of representing the confidence level of individuals regarding performing the task of interest. However, the result of testing this proposed hypothesis is congruent with the existing literature, showing that social norms have no impact on entrepreneurial self-efficacy, where the p-value = 0.255 indicated a value of >0.1, and thus H4 is not supported (Tsai, Chang and Peng, 2014; Saeed *et al.*, 2015; Bacq *et al.*, 2016; Biraglia and Kadile, 2017; Fernández-Pérez *et al.*, 2017). This finding was unexpected, and reflects how social pressure does not have a direct influence on individuals' confidence levels with regard to the entrepreneurial intention to establish a firm, meaning that other factors influence the confidence of individuals. A possible explanation for this might be that the amount of confidence and beliefs in one's ability are initiated by an individual's expectation and beliefs, that are unrelated to society but already exist, based on the experience of accomplishing a similar task in the past (Mcgee *et al.*, 2009). Also, education level and gained knowledge and competencies through training could be another source that

contributes towards increasing individuals' confidence levels about performing a task. Therefore, this research study considered individuals' entrepreneurial expectancy and its influences on the antecedents of entrepreneurial intention, that will be discussed next.

- **H5-H9: Entrepreneurial Expectancy positively influence attitudes, PBC, ESE, and Effort**

As mentioned in the literature review (chapter 2), limited studies have shown the importance of entrepreneurial expectancy and its role when forming a business. Therefore, the present study was designed to determine the effect of entrepreneurial expectancy in order to question its impact on entrepreneurial intention. Entrepreneurial expectancy refers to momentary belief as the outcomes that ensue from acting in a specific manner. Also, it reflects the motivation to encourage certain behaviour with the goal of receiving a reward as an outcome. Several studies have shown that expectancy significantly influences intention and perceptions (Holland and Garrett, 2015; Fernández-Pérez *et al.*, 2017), but very few studies have empirically investigated the role of an individual's entrepreneurial expectancy on his/her entrepreneurial intention (Gatewood *et al.*, 2002). In the following section, the results of the proposed hypotheses H5-H9 will be discussed concerning entrepreneurial expectancy as the independent variable and its influence on each dependent variable: affective attitude, cognitive attitude, perceived behavioural control, entrepreneurial self-efficacy, and effort.

- **H5: Entrepreneurial Expectancy positively influences Affective attitude**

Prior studies have noted the importance of entrepreneurial expectancy by compromising the fact of predictive attitude towards entrepreneurial intention; however, there are no studies to date have differentiated the type of attitude and its association with entrepreneurial expectancy. In the present study, attitude specificities are adopted to distinguish the role of each type and examine the impact of entrepreneurial expectancy on affective attitude and cognitive attitude, respectively. This is of interest because understanding entrepreneurial expectancy's role on individuals' emotions and feelings may clarify how individuals are

motivated to establish a business. The research study proposed that entrepreneurial expectancy positively impacts on affective attitude, meaning that individuals' expectancy of rewards arising from establishing a business motivate their emotions and feelings towards an entrepreneurial act. The research study found that hypothesis H5 is confirmed and the entrepreneurial expectancy positively influences affective attitude, where the p-value indicated a value of <0.01 , and hence H5 is supported. This is in accordance with previous studies that confirmed the impact of expected benefits on attitude towards academic entrepreneurial intention (Goethner *et al.*, 2012). Our results may be explained by arguing that individuals who believe in gaining a reward from forming a business will have the relevant emotions and feelings to start a business. The present study constitutes the only study to date that empirically confirms entrepreneurial expectancy's role in positively impacting affective attitude, thus signifying the importance of our results. Therefore, this study has confirmed the role of entrepreneurial expectancy in influencing affective attitude.

- **H6: Entrepreneurial Expectancy positively influences Cognitive attitude**

Similar to the previous hypothesis (H5), hypothesis H6 pinpoints the second component of cognitive attitude. H6 is examined whether entrepreneurial expectancy affects individuals' beliefs and thoughts, while in H5 the focus was on the emotions and feeling only. This research proposed testing the impact of entrepreneurial expectancy on cognitive attitude, which was examined in chapter 5. The results revealed an interesting finding as it confirmed the positive impact of entrepreneurial expectancy on cognitive attitude, where the p-value indicated a value of <0.01 , and hence H6 is supported. This finding is consistent with previous research that found that expectancy is a better predictor of attitudinal variables (Gatewood *et al.*, 2002; Goethner *et al.*, 2012). In addition, this research study confirms the role of entrepreneurial expectancy in influencing ESE, which has not been previously investigated in the literature. The research study's findings reflect how the entrepreneurial expectation of rewards can create thoughts and beliefs that lead to a potential willingness to start a firm. Also, the results signify the role of entrepreneurial expectancy in positively influencing individuals' attitudes, based on

beliefs, thoughts and rational arguments, towards intentional behaviour. Thus, entrepreneurial expectancy is a significant predictor of cognitive attitude and, in a similar vein, while the emotions represent an affective attitude and beliefs refer to a cognitive attitude, both H5 and H6 are supported.

- **H7: Entrepreneurial Expectancy positively influences PBC**

As explained in the literature review (chapter 2), limited research has recognised the critical role played by expectancy or reported its influences on perceived behavioural control (PBC); studies in the entrepreneurial field have been unable to demonstrate a clear significant impact here (Schlaegel and Koenig, 2014). However, PBC is built on salient beliefs, and linked to beliefs regarding controlling the required skills and resources to start a business that are more likely to be motivated by the expectation of reward (Goethner *et al.*, 2012). Built on this argument and supported by the existing literature (Renko, Kroeck and Bullough, 2012; Hui-Chen, Kuen-Hung and Chen-Yi, 2014), H7 was proposed and tested in the research study. The results of testing H7 in chapter 5 revealed a positive impact of entrepreneurial expectancy on PBC, where the p-value indicated a value of <0.01 , and hence H7 is supported. This finding is consistent with previous studies (Goethner *et al.*, 2012) that demonstrated the positive influence of entrepreneurial benefits' "expected gain" on beliefs about controlling the accomplishment of a task. As a result, this research study has confirmed the role of entrepreneurial expectancy in influencing PBC, which has been previously investigated and confirmed in the literature. This finding makes an important contribution to entrepreneurial intention studies that show the role of entrepreneurial expectancy in influencing individuals' perception and beliefs about accomplishing a task that leads towards forming a business. Also, it confirms that PBC is affected by entrepreneurial expectancy and not social norms, providing a new direction for considering the factors that impact on PBC in research studies. Therefore, the results signify the role of the expectation of rewards, "entrepreneurial expectation", in influencing individuals in terms of creating beliefs in one's ability to control the required resources to set up a business.

- **H8: Entrepreneurial Expectancy positively influences ESE**

Prior studies have demonstrated that passion and confidence create the beliefs in one's self-confidence to accomplish a task, while these beliefs are generated by the expectation of generating benefits (Wilson, Kickul and Marlino, 2007; Biraglia and Kadile, 2017). The expectation of gaining benefits from establishing a business is a motivating force that encourages individuals to behave in an entrepreneurial manner. Therefore, the research study hypothesised that the amount of confidence that individuals possess is affected by the expected returns from completing a task, as represented in H8; entrepreneurial expectancy positively impacts entrepreneurial self-efficacy. The findings of testing H8 in chapter 5 revealed supporting evidence that entrepreneurial expectancy positively influences entrepreneurial self-efficacy (ESE), where the p-value indicated a value of <0.01 , and hence H8 is supported. This findings is consistent with previous research that reported that entrepreneurial self-efficacy is influenced by the expected reward from accomplishing the task in question (Bullough, De Luque and Abdelzaher, 2015; Wang *et al.*, 2016; Goh, Ritchie and Wang, 2017). The present research study has confirmed the influence generated by entrepreneurial expectancy on ESE, which was previously investigated in the literature specifically using entrepreneurial self-efficacy. Our findings reflect how entrepreneurial expectancy contributes to individuals' confidence regarding their potential entrepreneurial intention to start a business.

- **H9: Entrepreneurial Expectancy positively influences Effort**

Several studies have demonstrated the impact of expectancy on effort by adopting Vroom's expectancy theory, while little research has determined its impact on entrepreneurial intention (Renko, Kroeck and Bullough, 2012). Although limited studies have shown a significant association between the expected gain and the amount of commitment involved in performing a task, the expecting benefits have been found to reflect a vital role in encouraging the required amount of effort by individuals to start a business (Clercq and Bowen, 2008). Accordingly, the research study considered it important to test this hypothesis (H9) to examine how likely it is that expectancy impacts on the effort required to form a business. The result provides supporting evidence that entrepreneurial expectancy positively influences effort, and hence H9 is supported. These findings support those of other studies in

this area that link entrepreneurial expectancy with effort (Manolova, Brush and Edelman, 2007). This research study has confirmed the role of entrepreneurial expectancy in influencing effort, where the p-value indicated a value of <0.01 , and hence H9 is supported. Our findings reflect how the expectation of rewards from forming a business influences individuals' commitment and engagement to exert the required dedication and obligation regarding the entrepreneurial intention that results in establishing a firm. Therefore, our findings denote the role of entrepreneurial expectancy in influencing individuals in terms of their amount of endeavour regarding entrepreneurial intentional behaviour. Our results are consistent with the existing literature (Gatewood *et al.*, 2002; Manolova, Brush and Edelman, 2007; Clercq and Bowen, 2008; Kiatkawsin and Han, 2017).

- **H10: Affective attitude positively influences Entrepreneurial intention**

In reviewing the literature, a large amount of studies have shown that attitude positively impacts on entrepreneurial intention while also representing a construct that is considered multidimensional in nature (García-Rodríguez *et al.*, 2015; Leeuw *et al.*, 2015; Botsaris and Vamvaka, 2016). Recently, limited studies have advocated a distinction between attitude's specificities and confirm that each type of attitude (affective and cognitive) differs with regard to its impact on entrepreneurial intention. Considering all of this evidence, the research study proposed that affective attitude positively influences entrepreneurial intention in order to examine its impact and compare it with cognitive attitude to evaluate whether they exert a similar influence and to recognise the attitude type that is most responsible for encouraging entrepreneurial behaviour. In this research study, the results revealed a positive impact of affective attitude on entrepreneurial intention, where the p-value indicated a value of <0.01 , and hence H10 is supported. These findings are particularly relevant and support the previous research in this area that links affective attitude with entrepreneurial intention (Trafimow *et al.*, 2004; Botsaris and Vamvaka, 2016; Cantner, Goethner and Silbereisen, 2016). Therefore, the present research study has confirmed the role of affective attitude in influencing entrepreneurial intention. Our findings reflect how individuals' feelings and emotions shape their potential willingness to establish a business. The results

signify the role of the emotions and feelings of individuals in creating the intention to start a business. These findings are consistent with the majority of the existing literature (Cantner, Goethner and Silbereisen, 2016).

- **H11: Cognitive attitude positively influences entrepreneurial intention**

In the same vein, recent research has demonstrated that a significant association exists between attitude and entrepreneurial intention, whereas few studies have attempted to differentiate between attitude's specificities (affective and cognitive). The present research study considered these specificities and determined theoretically that both attitudes are important in creating an entrepreneurial intention. Furthermore, the research study proposed that cognitive attitude positively impacts on entrepreneurial intention (H11). The results of testing H11 revealed an unexpected finding and showed that cognitive attitude does not exert any influence on entrepreneurial intention. This finding was surprising but found an insignificant impact by cognitive attitude on entrepreneurial intention, where the p-value of 0.973 indicated a value of >0.1 , and thus H11 is not supported. Prior to testing H11, it was expected to find a difference between the influence of affective and cognitive attitude on entrepreneurial intention, where the former may be more prominent in this regard, as reported in a recent study (Botsaris and Vamvaka, 2016), but this research study's finding shows clearly that cognitive attitude has no impact on entrepreneurial intention. The previous research findings on cognitive attitude have been inconsistent and contradictory and, like the present research study, a few studies have reported a similar finding regarding the insignificant link between cognitive attitude and entrepreneurial intention (Yan, 2014; Cantner, Goethner and Silbereisen, 2016). Although, our results contrast with a few published studies that reported that cognitive attitude may positively impact on intention, where affective attitude has twice the impact than (Botsaris and Vamvaka, 2016), they are consistent with the majority of the existing literature (Cantner, Goethner and Silbereisen, 2016). The present research study has demonstrated that cognitive attitude does not influence entrepreneurial intention in

terms of beliefs and thoughts regarding intentional behaviour, thereby confirming that cognitive attitude does not play a role in influencing entrepreneurial intention. Our findings reflect that starting a business is not influenced by individuals' thoughts and beliefs.

- **H12: PBC positively influences entrepreneurial intention**

There are a large number of published studies that describe the positive link between PBC and intention, and PBC has been considered a major component that differentiates the theory of planned behaviour (TPB) from the original theory of reasoned action (TRA) (Krueger, Reilly and Carsrud, 2000; Schlaegel and Koenig, 2014; García-Rodríguez *et al.*, 2015; Feola *et al.*, 2017). The existing research recognises the critical role played by PBC, and therefore the present study proposed a positive impact of PBC on entrepreneurial intention and formed hypothesis H12. The results showed that PBC has a significant impact on entrepreneurial intention, where the p-value of 0.003 indicated a value of <0.01 , and hence H12 is supported. These findings broadly support those of other studies in this area that link PBC with entrepreneurial intention (Karimi *et al.*, 2016; Feola *et al.*, 2017). The present research study has confirmed the role of PBC in influencing entrepreneurial intention, which has been previously investigated in the literature. Our findings reflect how individuals' perceptions in regard to their belief in their ability to control the resources to accomplish a task influence the formation of their entrepreneurial intention to start a business. Therefore, our results signify the role of individuals' perceptions in influencing intentional behaviour to form a business.

- **H13: ESE positively influences entrepreneurial intention**

Entrepreneurial self-efficacy (ESE) has been interchangeably used with PBC without precision. Prior studies, that have noted the importance of ESE in the entrepreneurial intention research, have indicated that ESE is a vital factor that represents the level of confidence that influences entrepreneurial intention. This study has adopted ESE and proposed that it positively impacts entrepreneurial intention. The results demonstrated that ESE has a significant but negative

influence on entrepreneurial intention, where the p-value indicated a value of <0.01 , and hence H13 is supported. These findings are in contrast with those of previous studies (Hui-Chen, Kuen-Hung and Chen-Yi, 2014; Biraglia and Kadile, 2017). Therefore, the present research study has confirmed the role of ESE in influencing entrepreneurial intention, but in the opposite direction of what expected. Our findings reflect how individuals' confidence levels contribute towards the intention of establishing a business. Since in the current study, participants were individuals who work in the private sector of the oil and gas sector, the findings indicate that higher level of confidence will motivate individuals towards a higher level of position in their current job aiming for a potential promotion within the career ladder rather than starting up their own business; while individuals who have a lower level of confidence about accomplishing entrepreneurial tasks are better potential candidates for becoming entrepreneurs.

- **H14: Effort positively influences entrepreneurial intention**

Effort represents the amount of intended exertion and expenditure on a task, such as commitment. Prior studies that noted the importance of effort adopted Vroom's expectancy theory (VIE), while limited studies have shown that effort has a significant influence on entrepreneurial intention (Manolova, Brush and Edelman, 2007; Renko, Kroeck and Bullough, 2012). This study proposed that effort has a positive impact on entrepreneurial intention and the results of testing this hypothesis provide supporting evidence that effort positively influences entrepreneurial intention, where the p-value indicated a value of <0.01 , and hence H14 is supported. These findings support those of other studies in this area that link effort with the intention to start a business (Manolova, Brush and Edelman, 2007; Renko, Kroeck and Bullough, 2012). Surprisingly, the results showed that effort was found to have a greater impact than PBC and ESE on entrepreneurial intention. Our findings reflect how commitment and engagement can influence individuals to form an entrepreneurial intention to establish a firm. Therefore, our results demonstrate the impact of perceptions of individuals' commitment to engage in entrepreneurial intentional behaviour.

The study findings have shown a significant impact for 11 hypotheses, while three hypotheses were not supported; H3 ($p=0.158$), H4 ($p=0.255$), and H11 ($p=0.973$). However, these results have revealed two main issues that emerged from the findings relating specifically to the rejection of social norms' association with perceived behavioural control (PBC) and entrepreneurial self-efficacy (ESE). These conflicting empirical results could be associated with the nature of social norms as, in most previous studies, social norms refer to subjective norms only. On the other hand, a very encouraging finding was the confirmation of the role of entrepreneurial expectancy in impacting on the factors that contribute to the development of an entrepreneurial intention to establish a business. These findings indicate that the perception of expecting rewards potentially motivates individuals and contributes towards the creation of an entrepreneurial intention. The next section will discuss the overall findings of this empirical research.

6.3 Revised and Final Conceptual Framework

Based upon the empirical findings of the research study outlined in chapter 5, and the discussion of the testing of the 14 proposed hypotheses in this chapter, the initial proposed conceptual framework in chapter 3 was revised. The initial proposed conceptual framework hypothesised that all 14 hypotheses have a positive impact on entrepreneurial intention or its antecedents, but the findings show that three hypotheses were rejected. Therefore, the revised version of the proposed conceptual framework represents the final and developed framework of this research study that shows the 11 supported hypotheses that confirm the factors that influence individuals' entrepreneurial intention to establish a business. The final framework is shown in figure 6.1, and the non-valid hypotheses have been removed.

Moreover, the final and developed framework demonstrates the important role of society and individuals' expectation of rewards in starting a business. The research study presents the final and developed framework which accomplishes objective 5 of this study, which was to revise the conceptual framework. The most striking

results to emerge from the final framework is the vital role that society (social norms) plays in shaping the attitude of individuals, confirming that society impacts on their feelings, emotions, beliefs, and thoughts (H1 and H2). These findings have proven the potential role of collective societal pressure's components; subjective (approval), injunctive (motivation), and descriptive (observing an act), in representing the social norms within a community. Contrary to expectations, this framework did not detect a significant relationship between society (social norms), perceived behavioural control (PBC), and entrepreneurial self-efficacy (ESE), thereby confirming that social norms do not influence individuals' skills and confidence, and thus hypotheses 3 and 4 were removed from the final framework. Moreover, the findings of hypotheses H3 and H4 were not supported and the result was somewhat surprising, given that other researchers reported supportive evidence of these relationships. These outcomes are contrary to previous study findings, where PBC demonstrated a significant relationship with subjective norms (Karimi *et al.*, 2016; Ozaralli and Rivenburgh, 2016), while social norms were shown to have an impact on ESE (Bacq *et al.*, 2016; Biraglia and Kadile, 2017; Fernández-Pérez *et al.*, 2017). A possible explanation for these results may be the lack of the adequate presentation of the social norms in the previous studies that adopted subjective norms while ignoring the other components that represent social norms (i.e. subjective, injunctive, and descriptive), thus resulting in an incomplete presentation of societal pressure. In this study, it was extremely difficult to ignore the existence of the other components of social norms, as recent research calls for a consideration of these in order to explore the full effect of social norms (Meek, Pacheco and York, 2010; Development *et al.*, 2012; Panagopoulos, Larimer and Condon, 2014; Chung and Rimal, 2016).

As shown in figure 5.5. in chapter 5, the final developed framework, with the validated factors and hypotheses, is presented. It is encouraging to compare figure 5.5 with the initial conceptual framework (figure 3.9 in chapter 3), that hypothesised a positive relationship between social norms and affective attitude (H1), cognitive attitude (H2), perceived behavioural control (PBC) (H3), and entrepreneurial self-efficacy (H4). As shown in figure 6.1, social norms have a positive impact on both

affective and cognitive attitude. This finding is consistent with the previous studies that adopted attitude as a multidimensional variable. In this study, the deeper representation of both social norms and attitudes was tested to confirm the significant influence of social norms on both types of attitude and also to examine the anticipated effect of both affective attitude and cognitive attitude separately. Therefore, this study has confirmed the societal influence on individuals' emotions and thoughts regarding forming a business. This means that family, friends, and colleagues play a vital role in shaping individuals' willingness to embrace an entrepreneurial intention by influencing their feelings and emotions. A number of studies have not considered the components of social norms, and most of the research demonstrated society by subjective norms. In the research study, the components of social norms were examined to capture the full impact produced by the society and to confirm its existence and its impact on attitude were validated rather than influencing intention as previous studies have confirmed. Therefore, this is one of the contributions that this research study adds to entrepreneurship research.

Also, it can be seen in figure 5.5 in chapter 5 and from hypotheses testing results in table 5.26 chapter 5 that entrepreneurial expectancy has confirmed the positive impact on all of the antecedents of entrepreneurial intention. Hence, H5-H9 are confirmed, indicating a relationship with affective attitude (H5), cognitive attitude (H6), perceived behavioural control (PBC) (H7), entrepreneurial self-efficacy (ESE) (H8), and effort (H9). This research study confirms that individuals' perceived expectations of rewards from forming a business is associated with their emotions and feelings (H5), thoughts and beliefs (H6), perception of how easy or difficult a task is (H7), perception of their confidence level (H8), and commitment and engagement (H9). These findings are consistent with previous studies that investigated the relationship between entrepreneurial expectancy from forming a business with affective attitude (H5) (Renko, Kroeck and Bullough, 2012), cognitive attitude (H6) (Gatewood *et al.*, 2002), PBC (H7) (Renko, Kroeck and Bullough, 2012), ESE (H8) (Wang *et al.*, 2016; Goh, Ritchie and Wang, 2017), and effort (H9) (Manolova, Brush and Edelman, 2007; Kiatkawsin and Han, 2017).

Figure 5.5 in chapter 5 reveals that, in accordance with the present study, previous studies have demonstrated that the independent variables represented in hypotheses H10 and H12-H14 have shown similar results in confirming the relationship between affective attitude and entrepreneurial intention, PBC and entrepreneurial intention, ESE and entrepreneurial intention, and effort and entrepreneurial intention. It was unanticipated that cognitive attitude's positive impact on entrepreneurial intention (H11) was rejected as recent studies confirmed its impact on entrepreneurial intention with a lower effect than affective attitude (Botsaris and Vamvaka, 2016; Cantner, Goethner and Silbereisen, 2016), but this is also consistent with previous research that reported an insignificant relationship with entrepreneurial intention. Furthermore, the present research study has confirmed that the creation of a business is not initiated by the perceptions, beliefs or thoughts of individuals, but emotions and feelings are confirmed as influential factors that motivate individual to form a business. Also, the research study confirmed that entrepreneurial self-efficacy, perceived behavioural control, and effort are influencing factors that impact entrepreneurial intention, where previous studies have been content with one of these aforementioned factors to investigate self-perception related to the intention of starting-up a business.

In entrepreneurship studies, there are two recent models that inspired this research study. These models are the extended model of TPB by Fernández-Pérez et al. (2017), and a model for predicting entrepreneurial intention by Cantner, Goethner and Silbereisen (2016). Both models adopted TPB as the foundation for their research, while the study by Fernández-Pérez et al. (2017) reframed social norms' (subjective) impact within the TPB concept and reported that subjective norms had a positive impact on attitude and self-efficacy (see figure 2.1 in chapter 2). There is an association between social norms with attitude and self-efficacy, which confirms the existence of an indirect link between social norms and entrepreneurial intention through attitude and self-efficacy. Also, their work confirmed that the direct impact of social norms on entrepreneurial intention is insignificant.

On the other hand, a study by Cantner, Goethner and Silbereisen (2016), demonstrated the social norms' specificities; injunctive and descriptive, while these norms were hypothesised to have a direct impact on entrepreneurial intention (see figure 2.2 in chapter 2). Both the social norms' specificities and attitude specificities' have been adopted to examine and distinguish the impact of each component of social norms and attitude. Their work reported support for an affective attitude relationship with entrepreneurial intention whereas, for cognitive attitude, this relationship was insignificant. Also, their study investigated the role of each component of social norms (injunctive and descriptive) on entrepreneurial intention and found that injunctive norms have a positive relationship with entrepreneurial intention whereas, for descriptive norms, this relationship was insignificant.

Comparing the respective results of Fernández-Pérez et al. (2017) and Cantner, Goethner and Silbereisen (2016), it can be seen that these findings are relevant to the present research, whereas few contradictions exist. First, our results confirm that social norms influence attitude (affective and cognitive) but do not support the assumption that social norms influence entrepreneurial self-efficacy, while Fernández-Pérez et al. (2017) confirmed that social norms impact on self-efficacy. In line with their work, the present research study has confirmed the positive impact of both attitude and self-efficacy on entrepreneurial intention. In addition, the present research reported similar findings to that by Cantner, Goethner and Silbereisen (2016). These findings reported that cognitive attitude has no influence on entrepreneurial intention, while perceived behavioural control (PBC) has a positive impact on entrepreneurial intention. Also, in their work, descriptive norms showed an insignificant relationship with entrepreneurial intention, while injunctive norms reported a significant impact on entrepreneurial intention. Their finding that positive injunctive norms impact on entrepreneurial intention could be because of their assumption that subjective and injunctive attitudes are similar, whereas descriptive attitude represents another stream of society's pressure. In the present research, the result showed that subjective, descriptive, and injunctive norms present better influential factors, as found in Fernández-Pérez et al. (2017)'s

assumption and report. Therefore, the present research study's findings provide a better understanding of the role of attitude's specificity and social norms' specificity within TPB.

6.4 Chapter Summary

The previous sections discussed the results of testing the research study's hypotheses and synthesised the findings for each hypothesis with the existing literature. The findings have shown that social norms and entrepreneurial expectancy have an indirect impact on entrepreneurial intention, while affective attitude, perceived behavioural control, entrepreneurial self-efficacy, and effort have a direct association with entrepreneurial intention. One surprising independent variable that was found to be significantly associated with attitudes was social norms. The results confirmed that approval, encouragement, and indication of a similar behaviour in society contribute towards creating the intention to start a business. On the other hand, one unexpected finding was the insignificant impact of cognitive attitude on entrepreneurial intention. Unfortunately, this finding is rather difficult to interpret because it seems that the selected sample from the context (the developing country of Qatar) represented individuals who are emotionally driven towards an act rather than having beliefs in that act. This research study found that entrepreneurial expectancy is a vital factor in forming a business, where individuals' perceptions regarding the generated rewards help to create the intention to establish a business. It also indicates how individuals believe in task-related aspects; the ability to accomplish a task, the amount of dedication and commitment required, the confidence level, and concern about controlling the resources in order to establish a business and become an entrepreneur.

This study has confirmed that, either by increasing the awareness of entrepreneurship's benefits among individuals or fostering a society that is aware of such benefits, forming a business will be a result of both society's influence and individuals' expectation of generating returns.

Chapter 7: Conclusion

This chapter provides conclusions to the present research study, drawing from the entire thesis and demonstrating its contributions to theory and practice and guiding future research in the area of entrepreneurial intention while also pointing out possible research limitations. It is structured as follows; section 7.1 presents a summary of the research study main findings then ties together the various strands of the thesis. Section 7.2 presents the theoretical implications in the area of entrepreneurial intention. This is followed by the practical implications of this study in section 7.3. Section 7.4 guides future research in the area of entrepreneurial intention and the chapter concludes with section 7.5 that points to the possible research limitations.

7.1 Summary of the Main Findings

As discussed in the literature review (chapter 2), prior studies have shown the importance of entrepreneurial intention and were designed to determine the impact of its antecedents. However, very little evidence has been found in the existing literature regarding the critical factors that influence entrepreneurial intention. The research study aimed to develop a comprehensive model that contributes to the examination of the most critical factors impacting on entrepreneurial intention by following recent calls for further research aimed at bridging the gaps in the existing knowledge. A much-debated question was whether society's pressure influences entrepreneurial intention directly or through its antecedents, such as attitude, representing an indirect effect on entrepreneurial intention and, if this indirect impact exists, then which attitude would be the most influential factor in this stream. Also, another debated topic was the precise effect of an individual's entrepreneurial

expectancy on his/her entrepreneurial intention. So far, however, there has been little research and discussion about the association between social norms and entrepreneurial expectancy with entrepreneurial intention, which suggests that an understanding of these factors and how they contribute to entrepreneurial intention is still lacking. Therefore, this research study set out to uncover the deeper potential impact of social norms' specificity, attitude specificity, and individual's expectancy on entrepreneurial intention. As discussed in section 6.2, the results supported 11 of the 14 tested hypotheses, confirming that social norms positively impact on affective attitude (H1) and cognitive attitude (H2). In addition, the results have provided confirmation of the positive impact of entrepreneurial expectancy on affective attitude (H5), cognitive attitude (H6), PBC (H7), ESE (H8), and effort (H9), while entrepreneurial intention is positively impacted by affective attitude (H10), PBC (H12), ESE (H13), and effort (H14). These results are in line with those of previous studies. On the other hand, the findings reject three hypotheses: the impact of social norms on PBC (H3) and ESE (H4), and the impact of cognitive attitude on entrepreneurial intention (H11). The findings of all of the proposed hypotheses broadly support those of other studies that link entrepreneurial intention with its antecedents. Furthermore, the research study's findings demonstrate that a higher degree of societal influence can encourage the creation of relevant feelings and emotions of individuals with regard to establishing a firm. The present study confirmed that social norms positively impact on attitude, while attitude influences entrepreneurial intention. Our results show that social norms play a very important role in the development of the intention to open a new business and become an entrepreneur; factors, such as the influence of close relatives and colleagues (representing social approval) as well as the ability of individuals to imitate similar behaviour from real-life examples that are accepted by society, play a major influential role in motivating individuals to form a business. Therefore, it is now understood that the results have indicated that individuals are relatively emotionally influenced by society and emotionally driven to start a business rather than being influenced by their beliefs. On the other hand, the research study has determined the influence of society on individuals' ability and confidence, about which the previous research indicates significant findings, but surprisingly this

research has reported that society within this context has no influence on these factors and therefore no association has been noted between society (social norms) and individuals' ability and confidence.

Moreover, a higher degree of reward expectation can generate a higher degree of belief in one's own abilities, skills control, confidence, and attitudes, that can result in planning to start a business. The present research study has confirmed that individuals' expectations play a vital role in creating self-belief in terms of having the confidence to accomplish a task, control resources, and commit to forming a business as an instrument for generating financial and satisfaction rewards. Also, the research study has reported that individuals' expectation of rewards influences their emotions, feelings, beliefs, and thoughts regarding an entrepreneurial act. Therefore, our study has shown that expecting rewards (entrepreneurial expectancy) is a critical factor that contributes to starting a business.

Furthermore, the research study has tested the impact of attitude specificities on entrepreneurial intention and the results revealed an unanticipated finding related to cognitive attitude, which is in line with current literature in this field. Firstly, the results confirmed the positive impact of affective attitude on entrepreneurial intention. Secondly, the results rejected the hypothesised positive impact of cognitive attitude on entrepreneurial intention. This means that the intention to start a business is formed by the emotions and feelings of individuals rather than their beliefs and thoughts.

Also, the research study has confirmed that perceived behavioural control, entrepreneurial self-efficacy, and effort have a positive impact on entrepreneurial intention. It is worth noting that this research study represents one of the first studies to integrate TPB and VIE in order to demonstrate the impact of social norms' specificities and entrepreneurial expectancy on entrepreneurial intention. The research study confirmed their indirect effects as a critical factor regarding entrepreneurial intention.

The research study has selected the State of Qatar as the context of the research to investigate the social dimension and individuals' perceptions towards entrepreneurial behaviour. As mentioned in chapter 1, entrepreneurship has become a vital component that drives the local economy in Qatar, especially following the blockade on Qatar in June 2017 by its neighbouring countries. The Qatari government has encouraged entrepreneurship behaviour by supporting locals through access to funds and providing tailored training courses and seminars to empower and motivate individuals to start businesses. In the same vein, limited studies have examined the factors that influence entrepreneurial behaviour in Qatar, as the majority of the previous research focuses on the adoption of technology and marketing. One of the studies that was related to the current area of research was conducted by Warsame & Ileri (2016), who used TPB model to examine the entrepreneurial intention of investing in bonds with a sample of 553 respondents based in Qatar, specifically in the capital city of Doha. Their study findings show that attitude and perceived behavioural control (PBC) have a significant impact on entrepreneurial intention, while subjective norms (social norms) have been found to be insignificant with regard to entrepreneurial intention. In addition, their study is limited to Doha city while other cities have been neglected, so it cannot be generalised, and further research was suggested by the authors to include expectation and alternative ways to measure social norms' effects. These findings are in line with the present research study that hypothesised and confirmed the direct impact of attitude and PBC on entrepreneurial intention. Also, it agrees with the reframing of how social norms are positioned within the TPB model to reflect a recognisable influence on entrepreneurial intention indirectly, as the current scenario of a direct impact is invalid.

The research study has found that the sample of the research in Qatar consists of emotionally driven individuals who are influenced by society's pressure. Therefore, the role of society has shown a strong impact in directing the emotions and feelings of individuals towards a behaviour; in this case, the entrepreneurial behaviour of establishing a business.

The primary aim of the present research study was to investigate the impact of key influential factors on entrepreneurial intention to start a business. The study achieved the development of a theoretical model depicting the impact of social norms and expectancy on entrepreneurial intention; the empirical validation of the framework was confirmed by testing 14 hypotheses, where entrepreneurial expectancy was shown to exert a significant impact on all of the antecedents of entrepreneurial start-up intention, with social norms failing to show a significant relationship with perceived behavioural control and entrepreneurial self-efficacy. The current study was designed to meet five specific research objectives.

Objective 1 was to conduct a comprehensive and to examine critically the literature on entrepreneurial start-up intention to understand in-depth the key impacting factors on individuals' entrepreneurial intention. A comprehensive literature review was conducted on the phenomenon of entrepreneurship, focused on identifying the antecedents of entrepreneurial intention, in Chapter 2 of the present thesis. First, the chapter offered an in-depth critical review of the theoretical frameworks existing within the academic literature that have been previously deployed by studies focusing on entrepreneurial intention. By exploring the various factors that affect and contribute towards one's willingness to start a business, such as individual characteristics, personal perceptions, and beliefs, the present study achieved a thorough understanding of the existing studies and research gaps within the entrepreneurial start-up intention literature, thus achieving objective 1.

Chapter 2 highlighted the need to explore individuals' expectations and society's aggregated influences within the existing research on entrepreneurial intention, that motivated the researcher to propose a conceptual framework in Chapter 3. Therefore, objective 2 was to develop a conceptual framework that recognises and captures the key impacting antecedents of entrepreneurial start-up intention and examine their impacts. Informed by and grounded on the comprehensive literature review presented in Chapter 2, the development of the theoretical framework of the present study was described in Chapter 3; the proposed conceptual model was presented in the present chapter, examining the relevant academic literature and

existing models and depicting the indirect and direct impact of social norms and expectancy on entrepreneurial intention, thus achieving objective 2. It showed that the proposed conceptual framework captured the key critical factors along with their relationships with entrepreneurial intention in order to facilitate the examination of the relationships among the constructs.

Chapter 4 presented the methodology stance to guide the research study depicting the methods and approach underpinning the empirical enquiry. Highlighting the research design and the quantitative approach to collect the data for the research study, thus achieving objective 3.

In addition, objective 4 was achieved in Chapter 5. By collecting empirical data through an online survey and postal questionnaires distributed to employees working in the Oil & Gas industry in the State of Qatar (N= 850), the current study tested the developed theoretical framework regarding entrepreneurial intention. Using Structural Equation Modeling (SEM), the quantitative data were analysed in Chapter 5 in order to test the proposed hypotheses and validate the developed framework. The results of the SEM analysis confirmed 11 of the 14 hypotheses, thus achieving objective 4.

Chapter 5 was to revise the conceptual framework and formulate a set of theoretical and practical implication and future recommendation for entrepreneurship activity in Qatar. In Chapter 6, the revised conceptual framework was presented and in Chapter 7 the implications and future recommendation were provided, thus achieving objective 5.

In regard to the research question; what are the critical influential factors impacting entrepreneurial intention to start-up a business among employee working in Oil and Gas sector in the state of Qatar. The question was answered by finding that social norms play a vital role in shaping individual's beliefs and perceptions which reflect how individuals' attitudes are shaped towards a predicted behaviour. In addition, expectancy was found to be a critical factor that impact and play as a motivation role on individuals that initiate the forming of the entrepreneurial intention.

7.2 Contribution to Theory

The present thesis aimed to investigate and uncover deeper insights into the entrepreneurship domain as well as critically examine the existing knowledge of entrepreneurial start-up intention by uncovering the factors that are underpinned by the existing scientific literature. The primary contribution of this study is the integration of two theories: the theory of planned behaviour (TPB) and Vroom's expectancy theory (VIE), into a single, unified model, demonstrating the significant role of society's norms and the expectancy of rewards as well as personal values on entrepreneurial intention. Thus, a second very important contribution is the development of a theoretical framework depicting the critical cognitive factors that influence entrepreneurial behaviour regarding starting a business. The findings from the present study make several theoretical contributions to the current literature as follows:

The present research contributes to the existing entrepreneurship literature by identifying important determinants, in addition to the existing ones, that account for entrepreneurial start-up intention (Fayolle and Liñán, 2013; García-Rodríguez *et al.*, 2015; Feola *et al.*, 2017), aiming to gain a better understanding of the cognitive process of starting a business; these include descriptive and injunctive, beliefs and perceptions of outcomes as an entrepreneurial expectancy, affective and cognitive attitudes, and targeting employees rather than graduate-level students (Cantner, Goethner and Silbereisen, 2016). The present study adds to the existing research in the area of entrepreneurial intention, offering an enhanced understanding of the phenomenon, by demonstrating the significant role of cognitive factors in the intention to start a business.

Moreover, the present research study contributes to the existing entrepreneurship literature by developing a conceptual framework, that constitutes one of the first attempts to integrate TPB and VIE in order to fill an existing gap, aiming to improve the understanding of social norms and entrepreneurial expectancy within the entrepreneurial start-up intention research. The developed theoretical framework

contributes to existing scientific knowledge by identifying the potential influences of each element within the latent construct of social norms (subjective, injunctive, descriptive) (Leeuw *et al.*, 2015), indicating a deeper view of social norms' components by adopting measures of each norm during the data collection that represent a complete presentation of the social norms within any society. Furthermore, the development of the conceptual framework revealed that social norms exert a significant effect on an individual's affective and cognitive attitudes, as the findings improved the understanding of social norms' elements and confirmed a direct impact of societal pressure on individuals due to their important role in shaping individuals' attitudes (Cantner, Goethner and Silbereisen, 2016). This research contributes to the existing knowledge of entrepreneurial intention and its antecedents by confirming the significant role of affective attitude, perceived behavioural control, entrepreneurial self-efficacy, and effort on the intention to start a business. It is clear that effort (commitment) plays a vital role in reflecting an individual's engagement with creating a business, while perceived behavioural control and entrepreneurial self-efficacy have a significant impact on entrepreneurial start-up intention (Clercq and Bowen, 2008).

The present research contributes to the existing entrepreneurship literature as it improves the existing current knowledge on the understanding of the role of entrepreneurial expectancy on entrepreneurial start-up intention through a number of antecedents, such as affective attitude, cognitive attitude, perceived behavioural control, entrepreneurial self-efficacy, and effort (Gatewood *et al.*, 2002). This research revealed how important it is for individuals to have a perception of the outcomes of establishing a business that creates a motivational force that predicts the establishment of a business. These motivational perceptions of a reward adds knowledge to the existing literature on the entrepreneurship field by confirming that individuals' entrepreneurial expectancy, as an expectation of rewards as value obtained from setting up a business, create stronger perceptions when of how easy or difficult a task is, one's ability and confidence to complete a task, and the commitment and engagement regarding accomplishing a task than that of others, who do not expect rewards to be generated by starting-up a firm (Saeed *et al.*, 2015).

This research adds to the growing and considerable body of research indicating the importance of attitude components (affective and cognitive) by uncovering the deeper view of each attitude and their potential impact in contributing to an individual's willingness to start a business. The findings of the present study revealed that an individual's emotional (affective) perception is more influential than his/her personal beliefs (cognitive), in the Qatar context, thus demonstrating the stronger impact of affective attitude on entrepreneurial start-up intention. Also, the findings confirmed that the indirect impact of social norms and entrepreneurial expectancy on entrepreneurial intention plays a vital role in shaping individuals' attitudes (Trafimow *et al.*, 2004; Botsaris and Vamvaka, 2016).

The present study contributes to the existing literature on entrepreneurial intention by investigating the concept and conducting research in a context that has been neglected by previous studies; the majority of existing entrepreneurship literature has investigated the antecedents and factors contributing to and affecting the intention to start a business in western cultures and countries, thus neglecting those areas where entrepreneurship is relatively underdeveloped, such as the Middle East. The current study makes an important theoretical contribution by offering an understanding of the critical factors that affect an individual's willingness to start a business in the State of Qatar, which has not been studied previously.

7.3 Contribution to Policy and Practice

This thesis aims to investigate the influencing factors that affect the intention to start a business. The findings of the present thesis constitute the primary practical contribution of this research, demonstrating the important role of society and its contribution towards positioning individuals' emotions, feelings, beliefs, and thoughts regarding the intention to start a business, considering that individuals' perception of future rewards also influence those beliefs and self-aspects. Therefore, the major practical implication of this thesis is the revelation that society can greatly support as well as boost entrepreneurship by creating jobs, generating

incomes, and solving economic problems; this support can be leveraged and empowered by fostering a society that is aware of entrepreneurship benefits. Society's support can be manifested in terms of the acceptance and approval of behaviour, motivating and encouraging behaviour, as well as indicating existing similar behaviour within the society. Another very important practical implication revealed from the findings was that individuals' perceptions of future rewards influence their evaluation of their own abilities through experiencing an entrepreneurial task and expecting rewards; these beliefs can be enhanced by training programmes to enhance their skills, confidence, and commitment. Overall, the results of the present study can be used by policymakers, governments, managers and executives to help and support existing entrepreneurs and, more importantly, create potential future entrepreneurs who wish to start a business. The findings of the present study make several practical contributions to the current literature as follows:

The results of this research study support the idea that society influences individuals' attitudes about intentionally planning a behaviour, as an implication of this research study indicates that understanding the influence of social norms is vital in order to support the creation of entrepreneurs. Therefore, the research study provides a better understanding of society's role within entrepreneurial start-up businesses, which offers policymakers, decision-makers, education leaders, and the research community an enhanced understanding of the causes and influences related to creating entrepreneurs and an entrepreneurial atmosphere. As such, it will facilitate decision-makers to design plans and programmes, noting the importance of society's dimensions as primary elements in influencing and motivating start-up businesses. Also, it may facilitate policymakers and decision-makers to look beyond creating entrepreneurs by the society's value.

Policymakers and decision-makers may benefit from this research's findings by developing and implementing training programmes and an academic syllabus to enhance people's perceptions and skills in society and to increase awareness of entrepreneurship's benefits. As a result, education and training can be set up and

tailored to enhance the skills of individuals and increase awareness in societies, thereby ultimately creating support for individuals to increase the number of entrepreneurial endeavours in society.

As a result of this study, members of society (family, relatives, employers) may better realize that individuals within such society are derived of mostly emotional aspects rather than only beliefs and thoughts, thus enhancing the understanding of individuals' motivation regarding starting a business and helping to shape individuals at an early stage in their life.

Potential entrepreneurs may benefit from this research by creating valuable knowledge through recognising the influence of an individual's perceptions of his/her ability, confidence, and commitment related to creating the intention to plan entrepreneurial behaviour.

Overall, the practical implications of the present study show the vital role of cognitive factors in promoting an entrepreneurial environment, exemplifying society's influence on individuals and providing the means for developing the essential skills to empower individuals to embrace entrepreneurial behaviour. Although social norms play an important role in shaping individuals' attitudes, the results suggest that perceived behavioural control, entrepreneurial self-efficacy, and effort remain the critical drivers of entrepreneurial start-up intention, even though its effects are not impacted by social norms. Therefore, these results suggest that the government and decision-makers shall encourage individuals to become entrepreneurs by developing their perceived behavioural control, entrepreneurial self-efficacy, and efforts by engaging in the syllabus, tasks and training courses that improve individuals' competencies. Also, this can be supported by developing and implementing policy tools, such as access to funds, entrepreneurial activity, and training programmes, and promoting the sharing of experience by guest speakers who are experienced entrepreneurs within educational institutes and corporations.

7.4 Direction for Future Research

This thesis offered new aspects of the antecedents of entrepreneurial intention and can serve as the basis for the future entrepreneurial intention research as it enhanced the notions and understanding of the roles of social norms and individuals' expectancy in shaping their entrepreneurial behaviour. This research has provided several avenues for future research in and outside the field of entrepreneurship:

Future studies could consider the adoption of a construct called "personal agency" (Beville *et al.*, 2014) that represents three constructs related to beliefs about the subjective expectations of outcomes from individuals' produced effects; perceived behavioural control (PBC), entrepreneurial self-efficacy (ESE), and effort. These constructs can be conceptualised as a subconstruct as a composite of the personal agency construct, where the subconstructs can be demonstrated as the second order within a conceptual framework.

This thesis extended the current knowledge of entrepreneurial start-up intention by considering employees in the Oil and Gas sector in the State of Qatar. Considering that this context revealed findings that indicated that the community in Qatar is emotionally driven, future studies can implement the conceptual framework to test it in different contexts such as different countries in Europe, the US or Asia; it would be very interesting and beneficial to replicate the results of the current study in different cultures and communities as well as compare the findings among developed and underdeveloped countries. Moreover, future research should extend the developed theoretical framework by assessing the potential influence of another set of variables within entrepreneurial start-up intention. Furthermore, this thesis has adopted the theory of planned behaviour (TPB) and Vroom's expectancy theory (VIE). In TPB, the intention is followed with actual behaviour. This thesis has considered the theory only up to the intention, where future study could extend this framework to include and assess the determinants' impact on actual behaviour.

In this thesis, a quantitative approach was adopted in order to test the proposed theoretical framework and thus the proposed relationships among the constructs. Future studies could extend this research with the aim of complementing the findings by implementing a qualitative approach, or carry out research using a mixed method approach in order to confirm and generalise our results regarding the factors that affect entrepreneurial start-up intention. As the current study selected a cross-sectional approach for this thesis, future research can consider a longitudinal approach as the time-horizon in order to verify whether an individual's intention changes over a period of time.

Future research could investigate individuals working in other sectors, such as the government sector, while this thesis has focused on employees working in the private sector of the Oil and Gas sector, assuming that these companies have in place development programmes to train their employees. This research study has found that the majority of the participants are interested in establishing a business, but no specific entrepreneurial activity was defined. Therefore, future research may specify the type of businesses that individuals wish to establish.

The present study has collected demographic data to ensure that the participants represent the targeted sample; however, due to the limited resources, there was no measure of job title characterising the participants. For future studies, it would be beneficial to categorise the level of the participants by their role within their organisation, thereby gaining more insights into the impact of certain demographics on the willingness to start a business.

7.5 Limitation

The present study offered deep insights into the influences of societal pressure and individuals' perceptions on establishing a business in general and in particular in the context of Qatar. Although the research has successfully demonstrated

encouraging results, as with all empirical studies, this research study has a number of limitations.

The present research was designed to adopt a convenience sampling strategy in order to facilitate access to the sample efficiently, with limited resources, and gather data effectively. It can be argued that using such a technique can limit the ability to generalise the result to the wider population as it reflects a small sample of individuals working in the Oil and Gas sector in Qatar. As a result, further research is considered essential in replicating the results of the current study in diverse contexts and populations. Moreover, the present research study has selected a quantitative approach for collecting and analysing the data; however, the findings suggest that a follow up qualitative approach of conducting interviews and focus groups to gain an in-depth understanding of the causes and issues related to starting up a business would be beneficial.

Following the significant body of research in the entrepreneurial intention field, this research used the means of online and postal questionnaires to gather the data, reflecting a cross-sectional approach as a time-horizon. However, cross-sectional studies might be useful for determining the unique characteristic of a culture, but prevent the drawing of casual conclusions; therefore, future studies may consider undertaking longitudinal research to generate more insights into the phenomenon of entrepreneurial start-up intention.

This research relied on a sample representing employees of 15 companies from the Oil and Gas sector in a developing country called Qatar. The state of Qatar is part of the Gulf Cooperation Council (GCC) and located in the Middle East as a part of the Asian continent. The results confirmed that the people in the studied context are driven by emotions and feelings rather than thoughts and beliefs, so the current context might limit the ability to generalize the findings to other countries, including the member countries of the GCC, which share similarities in terms of culture and community segmentation, as well as Western communities. Further research is considered essential in order to replicate and validate our findings in different countries and contexts, thus confirming the generalisability of our results.

Finally, in the present study, it would have been useful to add a question to the demographics section of the questionnaire to indicate the role or job title of the participants, but this was not considered essential during the development of the online survey. Therefore, it can be argued that this constitutes a limitation of the current research as it was challenging to identify such information through the online questionnaire; the postal questionnaires were helpful in providing such information due to the direct contact with the participants and keeping records for collection date and participant's role. As a result, future research should consider further demographics during the collection of empirical data for the evaluation of the proposed theoretical framework and research hypotheses.

References

Ahmad, N. and Seymour, R. G. (2006) 'Defining Entrepreneurial Activity', *OECD Statistics Working Papers*, pp. 1–22. doi: 10.1787/243164686763.

Ajzen, I. (1991) 'The theory of planned behavior', *Organizational behavior and human decision processes*, 50(2), pp. 179–211.

Alqubaisi, M., Tonna, A., Strath, A. and Stewart, D. (2016) 'Exploring behavioural determinants relating to health professional reporting of medication errors: a qualitative study using the Theoretical Domains Framework', *European Journal of Clinical Pharmacology*. doi: 10.1007/s00228-016-2054-9.

Alvarez, S. A. and Busenitz, L. W. (2001) 'The entrepreneurship of resource-based theory', *Entrepreneurship: Concepts, Theory and Perspective*, (January), pp. 207–227. doi: 10.1007/978-3-540-48543-8_10.

Aubry, M., Bonnet, J. and Renou-Maissant, P. (2015) 'Entrepreneurship and the business cycle: the "Schumpeter" effect versus the "refugee" effect - a French appraisal based on regional data', *Annals of Regional Science*, 54(1), pp. 23–55. doi: 10.1007/s00168-014-0645-x.

Awais, S., Tipu, A., Arain, F. M., Fisher, R., Maritz, A. and Lobo, A. (2011) 'Managing success factors in entrepreneurial ventures: a behavioral approach', *International Journal of Entrepreneurial International Journal of Entrepreneurial Behavior & Research International Journal of Entrepreneurial Behaviour & Research Iss Journal of Small Business and Enterprise Development*, 17(3), pp. 534–560. Available at: <http://dx.doi.org/10.1108/13552551111158844>.

Aznie, R. C., Malaysia Sabah Mazdi, U. M., Toren, W. W. and Rosmawati, C. C. (2015) 'Stagnation of Rice Straw Agribusiness Development in Malaysia: The Entrepreneurs' Perspectives Jabil MJ', *Mediterranean Journal of Social Sciences MC SER Publishing*, 6(4), pp. 2039–9340. doi: 10.5901/mjss.2015.v6n4p523.

Bacq, S., Ofstein, L. F., Kickul, J. R. and Gundry, L. K. (2016) 'Perceived entrepreneurial munificence and entrepreneurial intentions: A social cognitive perspective', *International Small Business Journal*. doi: 10.1177/0266242616658943.

Bandura, A. (1977) 'Self-efficacy: Toward a Unifying Theory of Behavioral Change', *Psychological Review*, 84(2), pp. 191–215. doi: 10.1037/0033-295X.84.2.191.

Bandura, A. (1999) 'Social cognitive theory: An agentic perspective', *Asian Journal of Social Psychology*, (2), pp. 21–41. doi: 10.1111/1467-839X.00024.

Barba-Sanchez, V. and Atienza-Sahuquillo, C. (2017) 'Entrepreneurial motivation and self-employment: evidence from expectancy theory', *International Entrepreneurship and Management Journal*. *International Entrepreneurship and Management Journal*, pp. 1–19. doi: 10.1007/s11365-017-0441-z.

Barrell, R. and Davis, E. P. (2008) 'the Evolution of the Financial Crisis of 2007–8', *Journal of the National Institute of Economic and Social Research*, 206(1), pp. 5–14. doi: 10.1177/0027950108099838.

Baum, J. R. and Locke, E. a (2004) 'The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth.', *The Journal of applied psychology*, 89(4), pp. 587–598. doi: 10.1037/0021-9010.89.4.587.

Baumeister, C. and Kilian, L. (2015) 'Forty years of oil price fluctuations: Why the price of oil may still surprise us', *CFS Working Paper Series*, 525.

Beck, L. & Ajzen, I. (1991) 'Predicting dishonest actions using the Theory of Planned Behaviour', *Journal of Research in Personality*, 25, pp. 285–301.

Bell, E., Bryman, A. and Harley, B. (2018) *Business research methods*. 5th edn. USA: Oxford University Press.

Beville, J. M., Meyer, M. R. U., Usdan, S. L., Turner, L. W., Jackson, J. C. and Lian, B. E. (2014) 'Gender differences in college leisure time physical activity: application of the theory of planned behavior and integrated behavioral model.', *Journal of American college health: J of ACH*, 62(3), pp. 173–84. doi: 10.1080/07448481.2013.872648.

Biraglia, A. and Kadile, V. (2017) 'The Role of Entrepreneurial Passion and Creativity in Developing Entrepreneurial Intentions: Insights from American Homebrewers', *Journal of Small Business Management*, 55(1), pp. 170–188. doi: 10.1111/jsbm.12242.

Bird, B. (1988) 'Implementing Entrepreneurial Ideas: The Case for Intention', *The Academy of Management Review*, 13(3), pp. 442–453. doi: 10.5465/AMR.1988.4306970.

Bloch, H. (2012) 'Prices in Motion : Schumpeter ' s Contribution to Price Theory', 0. doi: 10.1111/meca.12119.

Boso, N., Story, V. M. and Cadogan, J. W. (2013) 'Entrepreneurial orientation, market orientation, network ties, and performance: Study of entrepreneurial firms in a developing economy', *Journal of Business Venturing*. Elsevier Inc., 28(6), pp. 708–727. doi: 10.1016/j.jbusvent.2013.04.001.

Botsaris, C. and Vamvaka, V. (2016) 'Attitude toward Entrepreneurship: Structure, Prediction from Behavioral Beliefs, and Relation to Entrepreneurial Intention', *Journal of the Knowledge Economy*. *Journal of the Knowledge Economy*, 6(24),

pp. 1–28. doi: 10.1007/s13132-014-0227-2.

Braun, R. E. and Yingling, F. (2013) ‘Using the integrated behavioral model to predict binge drinking among college students.’, *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 73(12–B(E)), p. No-Specified. Available at: http://gateway.proquest.com/openurl?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&res_dat=xri:pqm&rft_dat=xri:pqdiss:3517976%5Cnhttp://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc8&NEWS=N&AN=2013-99120-048.

Brooks, L. and Betz, N. E. (1990) ‘Utility of expectancy theory in predicting occupational choices in college students’, *Journal of Counseling Psychology*, 37(1), pp. 57–64. doi: 10.1037/0022-0167.37.1.57.

Brouwer, M. T. (2002) ‘Weber, Schumpeter and Knight on entrepreneurship and economic development’, *Journal of Evolutionary Economics*, 12(1–2), pp. 83–105. doi: 10.1007/s00191-002-0104-1.

Bullough, A., De Luque, M. S. and Abdelzaher, D. (2015) ‘Developing women leaders through entrepreneurship education and training’, *Academy of Management Perspectives*, 29(2), pp. 250–270. doi: 10.5465/amp.2012.0169.

Bullough, A., Renko, M. and Myatt, T. (2014) ‘Danger zone entrepreneurs: The importance of resilience and self-efficacy for entrepreneurial intentions’, *Entrepreneurship: Theory and Practice*, 38(3), pp. 473–499. doi: 10.1111/etap.12006.

Busenitz, L. W. and Lau, C.-M. (1996) ‘A Cross-Cultural Cognitive Model of New Venture Creation’, *Entrepreneurship Theory and Practice*, 20(4), pp. 25–39. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=bah&AN=9712052098&site=ehost-live>.

Cantner, U., Goethner, M. and Silbereisen, R. K. (2016) ‘Schumpeter’s entrepreneur – A rare case’, *Journal of Evolutionary Economics*. *Journal of Evolutionary Economics*, pp. 1–28. doi: 10.1007/s00191-016-0467-3.

Cardoza, G., Fornes, G., Li, P., Xu, N. and Xu, S. (2015) ‘China goes global: public policies’ influence on small-and medium-sized enterprises’ international expansion’. doi: 10.1080/13602381.2013.876183.

Carsrud, A. and Brännback, M. (2011) ‘Entrepreneurial Motivations: What Do We Still Need to Know’, *Journal of Small Business Management*, 49(1), pp. 9–26. doi: 10.1111/j.1540-627X.2010.00312.x.

Chen, C. C. C., Greene, P. P. G. and Crick, A. (1998) ‘Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?’, *Journal of Business Venturing*, 13(4), pp. 295–316. doi: 10.1016/S0883-9026(97)00029-3.

- Chung, A. and Rimal, R. N. (2016) 'Social Norms: A Review', *Review of Communication Research*, 4, pp. 1–28. doi: 10.12840/issn.2255-4165.2016.04.01.008.
- Clercq, D. De and Bowen, H. P. (2008) 'Institutional context and effort the allocation of entrepreneurial', *Journal of International Business Studies*, 39(4), pp. 747–768. doi: 10.1057/palgrave.jibs.8400343.
- Conner, M. and McMillan, B. (1999) 'Interaction effects in the theory of planned behaviour: studying cannabis use.', *The British journal of social psychology / the British Psychological Society*, 38 (Pt 2), pp. 195–222. doi: 10.1348/014466699164121.
- Cooper, D. R. and Schindler, P. S. (2009) *Business research methods*. New York: McGraw-Hill Irwin.
- Creswell, J. W. (2009) *Research design: qualitative and mixed methods approaches*. London: SAGE.
- Cunningham, J. B. and Lischeron, J. (1991) 'Defining Entrepreneurship', *Journal of Small Business Management*, 29(1), pp. 45–61. doi: 10.1504/IJESB.2007.014395.
- DeBerry-Spence, B. and Elliot, E. A. (2012) 'African microentrepreneurship: The reality of everyday challenges', *Journal of Business Research*. doi: 10.1016/j.jbusres.2012.02.007.
- Development, E., Soriano, D. R., Turker, D. and Selcuk, S. S. (2012) 'Journal of Small Business and Enterprise Development Article information ':
- Doblinger, C., Dowling, M. and Helm, R. (2016) 'An institutional perspective of public policy and network effects in the renewable energy industry: enablers or disablers of entrepreneurial behaviour and innovation?', *Entrepreneurship & Regional Development*, pp. 126–156. doi: 10.1080/08985626.2015.1109004.
- Douglas, E. J. and Shepherd, D. A. (1999) 'Entrepreneurship as a utility maximizing response', *Journal of Business Venturing*, 15(3), pp. 231–251. doi: 10.1016/S0883-9026(98)00008-1.
- Drejer, I. (2004) 'Identifying innovation in surveys of services: A Schumpeterian perspective', *Research Policy*, 33(3), pp. 551–562. doi: 10.1016/j.respol.2003.07.004.
- Eagly, A. H., Mlading, A. and Otto, S. (1992) 'Cognitive and affective Bases of Attitudes towards Social Groups and Social Policies', *Journal of Experimental Social Psychology*, 30, pp. 113–137.
- Van Eerde, W. and Thierry, H. (1996) 'Vroom's Expectancy Models and Work-Related Criteria: A Meta-Analysis', *Journal of Applied Probability*, 81(5), pp. 575–

586. doi: 10.1037/0021-9010.81.5.575.

Elenurm, T. (2011) 'Entrepreneurial orientations of business students and entrepreneurs', *Baltic Journal of Management*, 7(2), pp. 217–231. doi: 10.1108/17465261211219822.

Esposito, G. and Baranowski, T. (2016) 'Applying the Model of Including Descriptive Norms , to Physical Activity Intentions : A Contribution to Improving the Theory of Planned Behavior', *Psychological Reports*, (41092). doi: 10.1177/0033294116649576.

Fayolle, A. and Liñán, F. (2013) 'The future of research on entrepreneurial intentions', *Journal of Business Research*. Elsevier Inc., 67(5), pp. 663–666. doi: 10.1016/j.jbusres.2013.11.024.

Feola, R., Vesci, M., Botti, A. and Parente, R. (2017) 'The Determinants of Entrepreneurial Intention of Young Researchers: Combining the Theory of Planned Behavior with the Triple Helix Model', *Journal of Small Business Management*, 0(0), pp. 1–20. doi: 10.1111/jsbm.12361.

Fernández-Pérez, V., Montes-Merino, A., Rodríguez-Ariza, L. and Galicia, P. E. A. (2017) 'Emotional competencies and cognitive antecedents in shaping student's entrepreneurial intention: the moderating role of entrepreneurship education', *International Entrepreneurship and Management Journal*. International Entrepreneurship and Management Journal. doi: 10.1007/s11365-017-0438-7.

Fernández-Serrano, J. and Francisco, L. (2014) 'Culture and Entrepreneurship: The Case of Latin America', *INNOVAR. Revista de Ciencias Administrativas y Sociales*, 24, pp. 169–180.

Fini, R., Grimaldi, R., Marzocchi, G. L. and Sobrero, M. (2012) 'The Determinants of Corporate Entrepreneurial Intention Within Small and Newly Established Firms', *Entrepreneurship: Theory and Practice*, 36(2), pp. 387–414. doi: 10.1111/j.1540-6520.2010.00411.x.

Fretschner, M. and Weber, S. (2013) 'Measuring and understanding the effects of entrepreneurial awareness education', *Journal of Small Business Management*. doi: 10.1111/jsbm.12019.

García-Rodríguez, F. J., Gil-Soto, E., Ruiz-Rosa, I. and Sene, P. M. (2015) 'Entrepreneurial intentions in diverse development contexts: a cross-cultural comparison between Senegal and Spain', *International Entrepreneurship and Management Journal*, 11(3), pp. 511–527. doi: 10.1007/s11365-013-0291-2.

Garcia, J., Puente, E. and Mazagatos, V. (2015) 'How affect relates to entrepreneurship: A systematic review of the literature and research agenda', *International Journal of Management Reviews*, 17(2), pp. 191–211. doi: 10.1111/ijmr.12058.

Gatewood, E. (1993) 'The Expectancies in Public Sector Venture Assistance', *Entrepreneurship: Theory & Practice*, 17(2), pp. 91–95. Available at: <http://content.ebscohost.com/ContentServer.asp?T=P&P=AN&K=9707191019&S=R&D=buh&EbscoContent=dGJyMNLr40SeqK84y9f3OLCmr0uep7NSs6y4SbKWxWXS&ContentCustomer=dGJyMPGnr0m0r7JJuePfgex44Dt6fIA%5Cnhttp://www.redi-bw.de/db/ebsco.php/search.ebscohost.com/login.aspx%253>.

Gatewood, E. J. ., Shaver, K. G. ., Powers, J. B. . and Gartner, W. B. (2002) 'Entrepreneurial Expectancy, Task Effort, and Performance', *Entrepreneurship Theory and Practice*, 27(2), pp. 187–207.

Van Gelderen, M., Kautonen, T. and Fink, M. (2015) 'From entrepreneurial intentions to actions: Self-control and action-related doubt, fear, and aversion', *Journal of Business Venturing*, pp. 655–673. doi: 10.1016/j.jbusvent.2015.01.003.

Gielnik, M. M., Barabas, S., Frese, M., Namatovu-Dawa, R., Scholz, F. A., Metzger, J. R. and Walter, T. (2014) 'A temporal analysis of how entrepreneurial goal intentions, positive fantasies, and action planning affect starting a new venture and when the effects wear off', *Journal of Business Venturing*. doi: 10.1016/j.jbusvent.2013.09.002.

Goethner, M., Obschonka, M., Silbereisen, R. K. and Cantner, U. (2012) 'Scientists' transition to academic entrepreneurship: Economic and psychological determinants', *Journal of Economic Psychology*. Elsevier B.V., 33(3), pp. 628–641. doi: 10.1016/j.joep.2011.12.002.

Goh, E., Ritchie, B. and Wang, J. (2017) 'Non-compliance in national parks: An extension of the theory of planned behaviour model with pro-environmental values', *Tourism Management*. Elsevier Ltd, 59, pp. 123–127. doi: 10.1016/j.tourman.2016.07.004.

Hagger, M. S. and Chatzisarantis, N. L. D. (2005) 'First- and higher-order models of attitudes, normative influence, and perceived behavioural control in the theory of planned behaviour', *British Journal of Social Psychology*, 44(4), pp. 513–535. doi: 10.1348/014466604X16219.

Hair, J. F., Black, W., Babin, B., Anderson, R. and Tatham, R. (2010) *Multivariate data analysis*. 6th edn. Pearson Prentice Hall.

Hair, J. F., Ringle, C. M. and Sarstedt, M. (2011) 'PLS-SEM: Indeed a Silver Bullet', *The Journal of Marketing Theory and Practice*, 19(2), pp. 139–152. doi: 10.2753/MTP1069-6679190202.

Harms, R., Luck, F., Kraus, S. and Walsh, S. (2014) 'On the motivational drivers of gray entrepreneurship: An exploratory study', *Technological Forecasting and Social Change*. doi: 10.1016/j.techfore.2014.08.001.

Harris, K. J., Murphy, K. S., DiPietro, R. B. and Line, N. D. (2017) 'The

antecedents and outcomes of food safety motivators for restaurant workers: An expectancy framework', *International Journal of Hospitality Management*. Elsevier Ltd, 63, pp. 53–62. doi: 10.1016/j.ijhm.2017.02.004.

Hayton, J. C. and Cacciotti, G. (2013) 'Is there an entrepreneurial culture? A review of empirical research', *Entrepreneurship & Regional Development*, 25(9–10), pp. 708–731. doi: 10.1080/08985626.2013.862962.

Hayton, J. C. and Cholakova, M. (2011) 'The role of affect in the creation and intentional pursuit of entrepreneurial ideas', *Entrepreneurship: Theory and Practice*, 36(1), pp. 41–68. doi: 10.1111/j.1540-6520.2011.00458.x.

Holland, D. V. and Garrett, R. P. (2015) 'Entrepreneur start-up versus persistence decisions: A critical evaluation of expectancy and value', *International Small Business Journal*, 33(2), pp. 194–215. doi: 10.1177/0266242613480375.

Honig, B. and Samuelsson, M. (2012) 'Planning and the Entrepreneur: A Longitudinal Examination of Nascent Entrepreneurs in Sweden', *Journal of Small Business Management*. doi: 10.1111/j.1540-627X.2012.00357.x.

Hossain, A., Naser, K., Zaman, A. and Nuseibeh, R. (2009) 'Factors influencing women business development in the developing countries Evidence from Bangladesh'. doi: 10.1108/19348830910974923.

Hui-Chen, C., Kuen-Hung, T. and Chen-Yi, P. (2014) 'The entrepreneurial process: an integrated model', *International Entrepreneurship and Management Journal*, (March), pp. 1–19. doi: 10.1007/s11365-014-0305-8.

Iakovleva, T. A., Kolvereid, L., Gorgievski, M. J. and Sorhaug, O. (2014) 'Comparison of perceived barriers to entrepreneurship in Eastern and Western European countries', *Int. J. Entrepreneurship and Innovation Management*, 183(2), pp. 115–133.

Iakovleva, T. and Kolvereid, L. (2009) 'An integrated model of entrepreneurial intentions', *International Journal of Business and Globalisation*, 3(1), p. 66. doi: 10.1504/IJBG.2009.021632.

Iakovleva, T., Kolvereid, L. and Stephan, U. (2011) 'Entrepreneurial intentions in developing and developed countries', *Education & Training*, 53(5), pp. 353–370. doi: <http://dx.doi.org/10.1108/00400911111147686>.

Ibrahim, N. A. and Mas'ud, A. (2016) 'Moderating role of entrepreneurial orientation on the relationship between entrepreneurial skills, environmental factors and entrepreneurial intention: A PLS approach', *Management Science Letters*, 6, pp. 225–236. doi: 10.5267/j.msl.2016.1.005.

Isik, M. (2018) 'Getting Ready for the Post-Oil Age: The Entrepreneurship as the Rising Star of Development Policies in the Gulf States', *Modern Economy*, 9(1),

pp. 125–148. doi: 10.4236/me.2018.91008.

Jayawarna, D., Rouse, J. and Macpherson, A. (2014) ‘Life course pathways to business start-up’, *Entrepreneurship & Regional Development*, 26(3–4), pp. 282–312. doi: 10.1080/08985626.2014.901420.

Jefferson, M. (2016) ‘A global energy assessment’, *Wiley Interdisciplinary Reviews: Energy and Environment*, 5(1), pp. 7–15. doi: 10.1002/wene.179.

Jiang, Z., Wang, F., Duan, Y. and Zhou, J. (2016) ‘China’s gas market under new situations: Trends and countermeasures - Taking Sichuan and Chongqing gas provinces as an example’, *Natural Gas Industry*. Elsevier Ltd, 36(4), pp. 1–7. doi: 10.3787/j.issn.1000-0976.2016.04.001.

Karimi, S., Biemans, H. J. A., Lans, T., Chizari, M. and Mulder, M. (2016) ‘The Impact of Entrepreneurship Education: A Study of Iranian Students’ Entrepreneurial Intentions and Opportunity Identification’, *Journal of Small Business Management*, 54(1), pp. 187–209. doi: 10.1111/jsbm.12137.

Kautonen, T., van Gelderen, M. and Fink, M. (2015) ‘Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions’, *Entrepreneurship: Theory and Practice*, 39(3), pp. 655–674. doi: 10.1111/etap.12056.

Khosa, R. M. and Kalitanyi, V. (2014) ‘Challenges in Operating Micro-Enterprises by African Foreign Entrepreneurs in Cape Town, South Africa’, *Mediterranean Journal of Social Sciences MCSEER Publishing*, 5(10), pp. 2039–9340. doi: 10.5901/mjss.2014.v5n10p205.

Kiatkawsin, K. and Han, H. (2017) ‘Young travelers’ intention to behave pro-environmentally: Merging the value-belief-norm theory and the expectancy theory’, *Tourism Management*. Elsevier Ltd, 59, pp. 76–88. doi: 10.1016/j.tourman.2016.06.018.

Kibler, E. (2012) ‘Formation of entrepreneurial intentions in a regional context’, *Entrepreneurship & Regional Development*, (June 2015), pp. 1–31. doi: 10.1080/08985626.2012.721008.

Kiwanuka, H. N., Van Damme, J., Van Den Noortgate, W., Anumendem, D. N., Vanlaar, G., Reynolds, C. and Namusisi, S. (2016) ‘How do student and classroom characteristics affect attitude toward mathematics? A multivariate multilevel analysis’, *School Effectiveness and School Improvement*. Routledge, 0(0), pp. 1–21. doi: 10.1080/09243453.2016.1201123.

Kline, R. B. (2005) *Principles and practice of structural equation modeling*. Guilford.

Kolvereid, L. and Isaksen, E. (2006) ‘New business start-up and subsequent entry

into self-employment', *Journal of Business Venturing*, 21, pp. 886–885.

Kreiser, P. M., Marino, L. D., Dickson, P. and Weaver, K. M. (2010) 'Cultural influences on entrepreneurial orientation: The impact of national culture on risk taking and proactiveness in SMEs', *Entrepreneurship: Theory and Practice*, 34(5), pp. 959–983. doi: 10.1111/j.1540-6520.2010.00396.x.

Krueger, N. (1993) 'The Impact of Prior Entrepreneurial Exposure on Perceptions of New Venture Feasibility and Desirability', *Entrepreneurship Theory and Practice*, 18(1), pp. 5–21. doi: Article.

Krueger, N. F. and Brazeal, D. V (1994) 'Entrepreneurial Potential and potential entrepreneurs', *Entrepreneurship Theory and Practice*, (January 1994).

Krueger, N. F., Reilly, M. D. and Carsrud, A. L. (2000) 'Competing models of entrepreneurial intentions', *Journal of Business Venturing*, 15(5–6), pp. 411–432. doi: 10.1016/S0883-9026(98)00033-0.

Kuratko, D. F., Morris, M. H. and Schindehutte, M. (2015) 'Understanding the dynamics of entrepreneurship through framework approaches', *Small Business Economics*, 45(1), pp. 1–13. doi: 10.1007/s11187-015-9627-3.

Kwong, C. and Thompson, P. (2016) 'The When and Why: Student Entrepreneurial Aspirations', *Journal of Small Business Management*, 54(1), pp. 299–318. doi: 10.1111/jsbm.12146.

Laboratories, N. (2006) 'Introduction To Entrepreneurship', *Assessment*, pp. 25–54.

Lau, V. P., A.Shaffer, M. and Au, K. (2016) 'Entrepreneurial Career Success from a Chinese Perspective: Conceptualization, Operationalization and Validation', *Journal of International Business Studies*, 38(1), pp. 126–146. doi: 10.1057/palgrave.jibs.8400252.

Lau, V. P., Dimitrova, M. N., Shaffer, M. A., Davidkov, T. and Yordanova, D. I. (2012) 'Entrepreneurial Readiness and Firm Growth: An Integrated Etic and Emic Approach', *Journal of International Management*. Elsevier Inc., 18(2), pp. 147–159. doi: 10.1016/j.intman.2012.02.005.

Leeuw, A. de, Valois, P., Ajzen, I. and Schmidt, P. (2015) 'Using the theory of planned behavior to identify key beliefs underlying pro-environmental behavior in high-school students: Implications for educational interventions', *Journal of Environmental Psychology*. Elsevier Ltd, 42, pp. 128–138. doi: 10.1016/j.jenvp.2015.03.005.

Leitch, C. M., Hill, F. M. and Harrison, R. T. (2010) 'The philosophy and practice of interpretivist research in entrepreneurship: Quality, validation, and trust', *Organizational Research Methods*, 13(1), pp. 67–84. doi:

10.1177/1094428109339839.

Leyden, D. P. (2016) 'Public-sector entrepreneurship and the creation of a sustainable innovative economy', *Small Business Economics*. Springer US, 46(4), pp. 553–564. doi: 10.1007/s11187-016-9706-0.

Liñán, F. (2008) 'Skill and value perceptions: How do they affect entrepreneurial intentions?', *International Entrepreneurship and Management Journal*, 4(3), pp. 257–272. doi: 10.1007/s11365-008-0093-0.

Liñán, F. and Chen, Y.-W. (2009) 'Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions', *Entrepreneurship: Theory and Practice*, 33(3), pp. 593–617. doi: 10.1111/j.1540-6520.2009.00318.x.

Mair, J. and Marti, I. (2005) 'Social Entrepreneurship Research: A source of explanation, Prediction, and Delight', *IESE Business School, University of Navarra*, 3(47), pp. 1–12. doi: 10.2139/ssrn.701181.

Mandipaka, F. (2014) 'An Investigation of the Challenges Faced by Women Entrepreneurs in Developing Countries: A Case of King Williams' Town, South Africa', *Mediterranean Journal of Social Sciences MC SER Publishing*, 5(27), pp. 2039–9340. doi: 10.5901/mjss.2014.v5n27p1187.

Manolova, T. S., Brush, C. and Edelman, L. F. (2007) 'What do women (and men) want? Entrepreneurial Expectancies of Women and Men Nascent Entrepreneurs', *Babson College Center for Entrepreneurship Research Paper*, 27(8).

Manson, J. M. and Carr, S. C. (2011) 'Article information ':

Mcgee, J. E., Peterson, M., Mueller, S. L. and Sequeira, J. M. (2009) 'Entrepreneurial self-efficacy: Refining the measure', *Entrepreneurship: Theory and Practice*, 33(4), pp. 965–988. doi: 10.1111/j.1540-6520.2009.00304.x.

Meek, W. R., Pacheco, D. F. and York, J. G. (2010) 'The impact of social norms on entrepreneurial action: Evidence from the environmental entrepreneurship context', *Journal of Business Venturing*. Elsevier Inc., 25(5), pp. 493–509. doi: 10.1016/j.jbusvent.2009.09.007.

Meyer, N. (2014) 'Creating an Entrepreneurial Culture Among Students Through Entrepreneurship Development Programmes (EDP)', *Mediterranean Journal of Social Sciences MC SER Publishing*, 5, pp. 2039–9340. doi: 10.5901/mjss.2014.v5n13p281.

Mishra, C. S. and Zachary, R. K. (2015) 'The Theory of Entrepreneurship', *Entrepreneurship Research Journal*, 5(4), pp. 251–268. doi: 10.1515/erj-2015-0042.

Mitchell, R. K., Smith, B. J., Seawright, K. W. and Morse, E. a. (2000) 'Cross-cultural cognition and the venture creation decision', *Academy of Management*

Journal, 43(5), pp. 974–993. doi: 10.2307/1556422.

Moghavvemi, S., Salleh, N. A. M., Sulaiman, A. and Abessi, M. (2015) ‘Effect of external factors on intention-behaviour gap’, *Behaviour and Information Technology*, 34(12), pp. 1171–1185. doi: 10.1080/0144929X.2015.1055801.

Myers, M. (2011) *Qualitative research in business & management*. Sage.

Ngugi, J. K., Gakure, R. W., Waithaka, S. M. and Kiwara, A. N. (2012) ‘Application of Shapero’s Model in Explaining Entrepreneurial Intentions among University Students in Kenya’, *International Journal of Business and Social Research*, 2(4), pp. 125–148. Available at: http://www.ijbsr.org/images/archive_articles/August2012/9.pdf.

North, D. C. (1992) ‘Institutions and economic theory’, *The American Economist*, 36(1), pp. 3–6.

Obschonka, M. (2016) ‘Adolescent Pathways to Entrepreneurship’, 0(0), pp. 1–6. doi: 10.1111/cdep.12185.

Obschonka, M., Silbereisen, R. K. and Schmitt-Rodermund, E. (2010) ‘Entrepreneurial intention as developmental outcome’, *Journal of Vocational Behavior*. Elsevier Inc., 77(1), pp. 63–72. doi: 10.1016/j.jvb.2010.02.008.

Ojo, A. . and Oluwatayo, I. . (2015) ‘ENTREPRENEURSHIP AS DRIVERS OF GROWTH , Preduzetništvo kao pokretač rasta , kreiranja blagostanja i’, *The Scientific Journal for Theory and Practice of Socio-economic Development*, 4(8), pp. 325–332.

Orlikowski, W. J. and Baroudi, J. J. (1991) ‘Studying Information Technology in Organizations: Research Approaches and Assumptions’, *Information Systems Research*, 2(1), pp. 1–28. doi: 10.1287/isre.2.1.1.

Owoseni, O. O. (2014) ‘The influence of some personality factors on entrepreneurial intentions’, *International Journal of Business and Social Science*, 5(1), pp. 278–284.

Ozaralli, N. and Rivenburgh, N. K. (2016) ‘Entrepreneurial intention: antecedents to entrepreneurial behavior in the USA and Turkey’, *Journal of Global Entrepreneurship Research*. *Journal of Global Entrepreneurship Research*, 6(1), p. 1. doi: 10.1186/s40497-016-0047-x.

Panagopoulos, C., Larimer, C. W. and Condon, M. (2014) ‘Social Pressure, Descriptive Norms, and Voter Mobilization’, *Political Behavior*, 36, pp. 451–469. doi: 10.1007/s11109-013-9234-4.

Pavlou, P. A., Liang, H. and Xue, Y. (2007) ‘Understanding and mitigating uncertainty in online exchange relationships: A principal-agent perspective’, *MIS Quarterly: Management Information Systems*, 31(1), pp. 105–135. doi:

10.2307/25148783.

Rahi, S. (2017) 'Research Design and Methods: A Systematic Review of Research Paradigms, Sampling Issues and Instruments Development', *International Journal of Economics & Management Sciences*, 6(2). doi: 10.4172/2162-6359.1000403.

Renault, C. S. (2014) 'Transforming Maine's Economy: Innovation and Entrepreneurship Policy', *Maine Policy Review*, 23(1), pp. 37–47.

Renko, M., Kroeck, K. G. and Bullough, A. (2012) 'Expectancy theory and nascent entrepreneurship', *Small Business Economics*, 39(3), pp. 667–684. doi: 10.1007/s11187-011-9354-3.

Renko, M., Shrader, R. C. and Simon, M. (2012) 'Perception of entrepreneurial opportunity: a general framework', *Management Decision*, 50(7), pp. 1233–1251. doi: 10.1108/00251741211246987.

Reyes, J. A. (2015) 'Epistemological Positivism and Entrepreneurship in Colombia', pp. 63–76.

Rhodes, R. E. and Courneya, K. S. (2003) 'Investigating multiple components of attitude, subjective norm, and perceived control: an examination of the theory of planned behaviour in the exercise domain.', *The British journal of social psychology / the British Psychological Society*, 42(Pt 1), pp. 129–146. doi: 10.1348/014466603763276162.

Roxas, H. B. and Azmat, F. (2014) 'Community social capital and entrepreneurship: analyzing the links', *Community Development*, 45(2), pp. 134–149. doi: 10.1080/15575330.2014.880495.

Rueda, S., Moriano, J. A. and Liñan, F. (2015) 'Validating a Theory of Planned Behavior Questionnaire to Measure Entrepreneurial Intentions', *8th ESU Conference on Entrepreneurship*, (2001).

Ruiz, J. R., Soriano, D. and Coduras, A. (2016) 'Challenges in measuring readiness for entrepreneurship', *Management Decision*, 54(5), pp. 1022–1046. doi: <http://dx.doi.org/10.1108/09564230910978511>.

Saeed, S., Yousafzai, S. Y., Yani-De-Soriano, M. and Muffatto, M. (2015) 'The Role of Perceived University Support in the Formation of Students' Entrepreneurial Intention', *Journal of Small Business Management*, 53(4), pp. 1127–1145. doi: 10.1111/jsbm.12090.

Said, Z., Al-Emadi, A. A., Friesen, H. L. and Adam, E. (2018) 'Assessing the science interest, attitude, and self-efficacy of Qatari students at the preparatory, secondary, and university levels', *Eurasia Journal of Mathematics, Science and Technology Education*, 14(12). doi: 10.29333/ejmste/94733.

Sánchez, J. (2012) 'Entrepreneurial Intentions: The Role of the Cognitive

Variables', *Entrepreneurship-Born, Made and Educated*. Ed. T. Available at: http://www.researchgate.net/publication/230634533_Entrepreneurship_-_Born_Made_and_Educated/file/79e415023955fee487.pdf#page=41.

Sandri, D. (2014) 'Growth and capital flows with risky entrepreneurship', *American Economic Journal: Macroeconomics*, 6(3), pp. 102–123. doi: 10.1257/mac.6.3.102.

Saunders, M., Lewis, P. and Thornhill, A. (2016) *Research methods for business students*. 7th edn. Harlow, England: Pearson Education Limited.

Schillo, R. S., Persaud, A. and Jin, M. (2016a) 'Entrepreneurial readiness in the context of national systems of entrepreneurship', *Small Business Economics*. Springer US, 46(4), pp. 619–637. doi: 10.1007/s11187-016-9709-x.

Schillo, R. S., Persaud, A. and Jin, M. (2016b) 'Entrepreneurial readiness in the context of national systems of entrepreneurship', *Small Business Economics*. Springer US, 46(4), pp. 619–637. doi: 10.1007/s11187-016-9709-x.

Schlaegel, C. and Koenig, M. (2014) 'Determinants of Entrepreneurial Intent: A Meta-Analytic Test and Integration of Competing Models', *Entrepreneurship: Theory and Practice*, 38(2), pp. 291–332. doi: 10.1111/etap.12087.

Schott, T. and Sedaghat, M. (2014) 'Innovation embedded in entrepreneurs' networks and national educational systems', *Small Business Economics*, 43(2), pp. 463–476. doi: 10.1007/s11187-014-9546-8.

Schumacker, R. E., Lomax, R. G. and Group, F. (2010) *Structural Equation Modeling Third Edition*.

Scotland, J. (2012) 'Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms', *English Language Teaching*, 5(9), pp. 9–16. doi: 10.5539/elt.v5n9p9.

Shah, B. (2015) 'Developing attitudes and intentions among potential entrepreneurs', *Journal of Enterprise Information Management*, 28(2), pp. 304–322. Available at: <http://dx.doi.org/10.1108/JEIM-07-2014-0070>.

Shakhovskaya, L. S. and Akimova, O. E. (2013) 'Motivation Vector of Business Development in Contemporary Russia', *World Applied Sciences Journal*, 22(5), pp. 738–746. doi: 10.5829/idosi.wasj.2013.22.05.279.

Shakhovskaya, L. S., Ksenia, & and Klimkova, O. (2014) 'Increased Opportunities for Private Business as a Direction Vector of Development of the Russian Economy (Case of Volgograd Region)', *Asian Social Science*, 10(23). doi: 10.5539/ass.v10n23p44.

Shaver, K. G., Gartner, W. B., Crosby, E., Bakalarova, K. and Gatewood, E. J. (2001) 'Attributions About Entrepreneurship: A Framework and Process for

Analyzing Reasons for Starting a Business', *Entrepreneurship: Theory and Practice*, 26(2), pp. 5–32. Available at: <http://www.questia.com/googleScholar.qst?docId=5002436368>.

Shinnar, R. S., Giacomini, O. and Janssen, F. (2012) 'Entrepreneurial Perceptions and Intentions: The Role of Gender and Culture', *Entrepreneurship: Theory and Practice*, 36(3), pp. 465–493. doi: 10.1111/j.1540-6520.2012.00509.x.

Simmons, S. A., Wiklund, J. and Levie, J. (2014) 'Stigma and business failure: Implications for entrepreneurs' career choices', *Small Business Economics*. doi: 10.1007/s11187-013-9519-3.

Sivarajah, K. and Achchuthan, S. (2013) 'Entrepreneurial Intention among Undergraduates: Review of Literature', *European Journal of Business and ...*, 5(5), pp. 172–186. Available at: <http://www.iiste.org/Journals/index.php/EJBM/article/view/4566>.

Sommer, L. and Haug, M. (2011) 'Intention as a cognitive antecedent to international entrepreneurship-understanding the moderating roles of knowledge and experience', *International Entrepreneurship and Management Journal*, 7(1), pp. 111–142. doi: 10.1007/s11365-010-0162-z.

Souitaris, V., Zerbinati, S. and Al-Laham, A. (2007) 'Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources', *Journal of Business Venturing*, 22(4), pp. 566–591. doi: 10.1016/j.jbusvent.2006.05.002.

Sperber, S. and Linder, C. (2018) 'Gender-specifics in start-up strategies and the role of the entrepreneurial ecosystem'. *Small Business Economics*.

Stangor, C. (2011) *Research Methods for the Behavioral Sciences*. Nelson Education.

Sternberg, R. (2009) 'Regional Dimensions of Entrepreneurship', *Foundation and Trends in Entrepreneurship*, 5(4), pp. 211–340. doi: 10.1561/03000000024.

Storey, P. D. J. and Greene, D. F. (2010) 'Small Business and Entrepreneurship', p. 576.

Stories, S. and Practices, N. (2015) *Refreshing the Cultural Paradigm*.

Su, Z., Xie, E. and Wang, D. (2015) 'Entrepreneurial orientation, managerial networking, and new venture performance in China', *Journal of Small Business Management*, 53(1), pp. 228–248. doi: 10.1111/jsbm.12069.

Suresh, J. and Ramraj, R. (2012) 'Entrepreneurial Ecosystem : Case Study on the Influence of Environmental Factors on Entrepreneurial Success', *European Journal of Business and Management*, 4(16), pp. 95–102.

Tabachnick, B. G. 1936- and Fidell, L. S. 1942- (2014) *Using multivariate statistics*. Pearson.

Tan, P. J. B. (2013) 'Applying the UTAUT to Understand Factors Affecting the Use of English E-Learning Websites in Taiwan', *SAGE Open*, 3(4), pp. 1–12. doi: 10.1177/2158244013503837.

Tarafdar, M., Tu, Q. and Ragu-Nathan, T. S. (2010) 'Impact of Technostress on End-User Satisfaction and Performance', *Journal of Management Information Systems*, 27(3), pp. 303–334. doi: 10.2753/MIS0742-1222270311.

Teh, P. L. and Ahmed, P. K. (2011) 'MOA and TRA in social commerce: An integrated model', *IEEE International Conference on Industrial Engineering and Engineering Management*, pp. 1375–1379. doi: 10.1109/IEEM.2011.6118141.

Thorgren, S., Sirén, C., Nordström, C. and Wincent, J. (2016) 'Hybrid entrepreneurs' second-step choice: The nonlinear relationship between age and intention to enter full-time entrepreneurship', *Journal of Business Venturing Insights*. Elsevier, 5, pp. 14–18. doi: 10.1016/j.jbvi.2015.12.001.

Tipu, S. A. A. and Ryan, J. C. (2016) 'Predicting entrepreneurial intentions from work values', *Management Decision*, 54(3), pp. 610–629. doi: 10.1108/02656710210415703.

Tolentino, L. R., Sedoglavich, V., Lu, V. N., Garcia, P. R. J. M. and Restubog, S. L. D. (2014) 'The role of career adaptability in predicting entrepreneurial intentions: A moderated mediation model', *Journal of Vocational Behavior*. doi: 10.1016/j.jvb.2014.09.002.

Trafimow, D., Sheeran, P., Lombardo, B., Finlay, K. a, Brown, J. and Armitage, C. J. (2004) 'Affective and cognitive control of persons and behaviours.', *British Journal of Social Psychology*, 43, pp. 207–224. doi: 10.1348/0144666041501642.

Tsai, K. H., Chang, H. C. and Peng, C. Y. (2014) 'Extending the link between entrepreneurial self-efficacy and intention: a moderated mediation model', *International Entrepreneurship and Management Journal*, 12(2), pp. 445–463. doi: 10.1007/s11365-014-0351-2.

Ullman, J. and Bentler, P. (2013) 'Structural Equation Modeling', in Weiner, I. B. (ed.) *Handbook of Psychology*. John Wiley & Sons, Inc, pp. 661–688. Available at: <http://www.tandfonline.com/doi/full/10.2753/MTP1069-6679190202>.

Urban, B. (2013) 'Influence of the institutional environment on entrepreneurial intentions in an emerging economy', *ENTREPRENEURSHIP AND INNOVATION*, 14(3), pp. 179–191. doi: 10.5367/ije.2013.0122.

Usaci, D. (2015) 'Predictors of Professional Entrepreneurial Intention and Behavior in the Educational Field', *Procedia - Social and Behavioral Sciences*. Elsevier B.V.,

187(2007), pp. 178–183. doi: 10.1016/j.sbspro.2015.03.034.

Volery, T., Mueller, S. and von Siemens, B. (2015) ‘Entrepreneur ambidexterity: A study of entrepreneur behaviours and competencies in growth-oriented small and medium-sized enterprises’, *International Small Business Journal*, 33(2), pp. 109–129. doi: 10.1177/0266242613484777.

Walker, J. K., Jeger, M. and Kopecki, D. (2013) ‘The Role of Perceived Abilities, Subjective Norm and Intentions in Entrepreneurial Activity’, *Journal of Entrepreneurship*, 22(2), pp. 181–202. doi: 10.1177/0971355713490621.

Wang, J. H., Chang, C. C., Yao, S. N. and Liang, C. (2016) ‘The contribution of self-efficacy to the relationship between personality traits and entrepreneurial intention’, *Higher Education*. Springer Netherlands, 72(2), pp. 209–224. doi: 10.1007/s10734-015-9946-y.

Warsame, M. H. and Ileri, E. M. (2016) ‘Does the theory of planned behaviour (TPB) matter in Sukuk investment decisions?’, *Journal of Behavioral and Experimental Finance*. Elsevier B.V., 12, pp. 93–100. doi: 10.1016/j.jbef.2016.10.002.

Williams, C. C. and Shahid, M. S. (2016) ‘Informal entrepreneurship and institutional theory: explaining the varying degrees of (in)formalization of entrepreneurs in Pakistan’, *Entrepreneurship & Regional Development*, 5626(April), pp. 1–25. doi: 10.1080/08985626.2014.963889.

Williams, J., Bhanugopan, R. and Fish, A. (2011) ‘Localization of human resources in the State of Qatar: Emerging issues and research agenda’, *Education, Business and Society: Contemporary Middle Eastern Issues*, 4(3), pp. 193–206. doi: 10.1108/175379811111159966.

Wilson, F., Kickul, J. and Marlino, D. (2007) ‘Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intention: Implications for Entrepreneurship Education’, *Entrepreneurship Theory and Practice*, pp. 387–406. doi: 10.1111/j.1540-6520.2007.00179.x.

Wright, M. and Marlow, S. (2012) ‘Entrepreneurial activity in the venture creation and development process’, *International Small Business Journal*, 30(2), pp. 107–114. doi: 10.1177/0266242611432793.

Yan, Z. (2014) ‘Predicting teachers’ intentions to implement school-based assessment using the theory of planned behaviour’, *Educational Research and Evaluation*. Taylor & Francis, 20(2), pp. 83–97. doi: 10.1080/13803611.2013.877394.

Yong, A. G. and Pearce, S. (2013) ‘A Beginner’s Guide to Factor Analysis: Focusing on Exploratory Factor Analysis’, *Tutorials in Quantitative Methods for Psychology*, 9(2), pp. 79–94. doi: 10.20982/tqmp.09.2.p079.

- Yousafzai, S. Y., Saeed, S. and Muffatto, M. (2015) 'Institutional Theory and Contextual Embeddedness of Women's Entrepreneurial Leadership: Evidence from 92 Countries', *Journal of Small Business Management*, 53(3), pp. 587–604. doi: 10.1111/jsbm.12179.
- Yukhanaev, A., Fallon, G., Baranchenko, Y. and Anisimova, A. (2015) 'An Investigation into the Formal Institutional Constraints that Restrict Entrepreneurship and SME Growth in Russia', *Journal of East-West Business*. doi: 10.1080/10669868.2015.1092190.
- Zainol, F. A., Norhayate, W., Daud, W., Abubakar, L. S., Shaari, H. and Halim, H. A. (2018) 'A Linkage between Entrepreneurial Leadership and SMEs Performance: An Integrated Review', *International Journal of Academic Research in Business and Social Sciences*, 8(4), pp. 104–118. doi: 10.6007/IJARBS/v8-i4/4000.
- Zampetakis, L. A., Kafetsios, K., Bouranta, N., Dewett, T. and Moustakis, V. S. (2009) 'On the relationship between emotional intelligence and entrepreneurial attitudes and intentions', *International Journal of Entrepreneurial Behavior & Research*, 15(6), pp. 595–618. doi: 10.1108/13552550910995452.
- Zhang, Y., Duysters, G. and Cloudt, M. (2014) 'The role of entrepreneurship education as a predictor of university students' entrepreneurial intention', *International Entrepreneurship and Management Journal*, 10(3), pp. 623–641. doi: 10.1007/s11365-012-0246-z.
- Zhao, H. and Seibert, S. E. (2006) 'The big five personality dimensions and entrepreneurial status: A meta-analytical review', *Journal of Applied Psychology*, 91(2), pp. 259–271. doi: 10.1037/0021-9010.91.2.259.
- Zikmund, W. G. (2010) *Business research methods*. South-Western Cengage Learning.

Appendix A

Online Questionnaire



Entrepreneurial Start-up Intention

Page 1: Introduction

Thank you for agreeing to take part in this survey that investigates the entrepreneurial start-up intentions of individuals. You are invited to fill in a questionnaire that will take 10 minutes to complete. Participation is voluntary and you can withdraw at any time. All responses are confidential and anonymous, and will be used for research purposes only. All information collected from you will not be shared with any third party and it will be safely stored and secured.

Prior to conduct this research, a research ethics approval has been obtained from the research ethics committee at Brunel University. If you have any concerns or complaints regarding the ethical elements of this project, please contact: Dr. David Sarpong, email: david.sarpong@brunel.ac.uk or Research Ethics Committee at Brunel University, email: res-ethics@brunel.ac.uk

Page 2: Entrepreneurial Intention Antecedents

Entrepreneurial Intention

Below are a number of statements regarding entrepreneurial intention. Please read each one and indicate your level of agreement with each statement

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. I am ready to do anything to be an entrepreneur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My professional goal is to become an entrepreneur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I will make every effort to start and run my own business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I am determined to create a business in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I have very seriously thought of starting a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. I have the firm intention to start a business someday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I am not very serious about starting up a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Perceived Behavioural Control

Please select from following answers to indicate your level of agreement with each statement

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. To start a business and keep it working would be easy for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am prepared to start a feasible business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I can control the creation process of a new business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. I know the necessary practical details to start a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I know how to develop an entrepreneurial project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. If I tried to start a business, I would have a high probability of succeeding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Attitude

Please select from following answers to indicate your level of agreement with each statement

	* Required						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. A career as entrepreneur is attractive to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. If I had the opportunity and resources, I would love to start a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I would never want to be an entrepreneur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Being an entrepreneur would give me great satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please select from following answers to indicate your level of agreement with each statement

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. Being an entrepreneur has more advantages than disadvantages for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Being an entrepreneur brings mainly positive thoughts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Entrepreneurship would present more up than downsides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
--	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Entrepreneurial Effort

Please select from following answers to indicate your level of agreement with each statement

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. There is no limit as to how long I would give a maximum effort to establish my business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My philosophy is to "do whatever it takes" to establish my own business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. I would rather own my own business than earn a higher salary employed by someone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
---	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Page 3: Entrepreneurial Expectancy & Norms

Entrepreneurial Expectancy

Please select from following answers to indicate your level of agreement with each statement

	* Required						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. If I work hard, I can successfully start a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My past experience will be very valuable in starting a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Overall, my skills and abilities will help me to start a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I am confident that I can put in the effort needed to start a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. I do not have the passion to start a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
--	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Social Norms

Please select from following answers to indicate your level of agreement with each statement: If you decided to create a business, would people in your close environment approve that decision?

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. My family (i.e. tribe) would approve my decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My parents would approve my decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. My brothers and sisters would approve my decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. My cousins would approve my decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. My friends would approve my decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. My colleagues (i.e. work colleagues) would approve my decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please select from following answers to indicate your level of agreement with each statement: Most of the listed below people whose opinions matter to me think I should **participate** in the development of a business

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. Most of my family (i.e. parents, brothers, sisters, and cousins)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Most of my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Most of my colleagues (i.e. work colleagues)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Most of my supervisors (i.e. managers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please select from following answers to indicate your level of agreement with each statement: Most of the listed below people whose opinions matter to me would **encourage** my participation in the development of a business

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. Most of my family (i.e. parents, brothers, sisters, and cousins)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Most of my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Most of my colleagues (i.e. work colleagues)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Most of my supervisors (i.e. managers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please select from following answers to indicate your level of agreement with each statement: Most of the listed below people have **already participated** in the founding of a business

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree

1. Most of my family (i.e. parents, brothers, sisters, and cousins)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Most of my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Most of my colleagues (i.e. work colleagues)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Most of my supervisors (i.e. managers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Entrepreneurial Self Efficacy

Please select from following answers to indicate your level of agreement with each statement

	<i>* Required</i>						
	Totally Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Totally Agree
1. I am able to solve problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I can manage money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I am creative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. I can get people to agree with me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I am a leader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I can make decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I can take investment risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I can recognise investment opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I can arrange funds for my investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 4: Demographics

Are you male or female? * *Required*

- Male
- Female

What is your age? * *Required*

What is the highest level of education you have achieved? * *Required*

If you selected Other, please specify:

What is current work status? * *Required*

If you selected Other, please specify:

How many years have you been working in total? * *Required*

- 1-5 years
- 6-10 years
- 11-15 years
- 16 years and more

What is your nationality ? * *Required*

- Qatari
- GCC nationals (i.e Saudi, Emirati, Omani, Bahraini, Kuwaiti)
- Arab countries
- European
- Asian
- American
- African
- Other

If you selected Other, please specify:

What is your entrepreneurial status?

- Not owner of a business
- Owner of a business
- Shareholder in a business
- Planning to start a business
- Other

If you selected Other, please specify:

When do you plan to start a business ?

- Not yet decided
- 1-3 years
- 4-7 years
- 7-10 years
- 10 years or more

What action have you already taken to support your business start-up plans?

- No action yet
- Attended learning sessions, workshop and training related to start-up a business
- Informal learning (i.e. socially, social media, youtube, etc...)
- Reserved a name for my new company at Ministry of Economy and Commerce
- Obtained CR, Commercial Registration from Ministry of Economy and Commerce
- Created website and social media accounts for my new company
- Other

If you selected Other, please specify:

Page 5: Thank you!

Thank you for your time for participating in this survey. Your contribution is very valuable.

If you would like to receive an electronic report of this study and participate in the next stage of this survey, please fill in your email address by clicking on: [here](#).

Key for selection options

13 - What is your age?

- below 25
- 26-35
- 36-45
- 46-55
- 56-65
- over 65

14 - What is the highest level of education you have achieved?

- High school/Secondary
- Diploma
- Bachelor
- Master
- PhD
- Other

15 - What is current work status?

- Unemployed
 - Full time employee
 - Part time employee
 - Full time student
 - Part time student
 - Other
-

Appendix B

Participant Information Sheet



Participant Information Sheet

Research Title:

Entrepreneurial start-up intention and key influential factors: planned behaviour perspectives.

Invitation:

You are being invited to take part in a PhD research project. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading.

Description and Purpose of the project:

My name is Salem Al-Halbadi and I am a PhD student at Brunel University. The aim of this project is to evaluate the impact of key influential factors from planned behaviour perspectives on entrepreneurial start-up intention.

You are invited to fill in a questionnaire that will take about 10 minutes to complete. Participation is voluntary and you can withdraw at any time without giving any reasons. Your participation in this research study does not involve any kind of risks or costs. The information that you will provide will be anonymous and strictly confidential. You will not be identified in any reports or publications. All the information collected about you (individuals) will not be given to any third party and it will be safely stored and secured at Brunel University.

Prior to conducting this research, a research ethics approval has been obtained from the Research Ethics Committee (REC) at Brunel University. If you have any concerns or complains regarding the ethical elements of this project, please contact Prof. Vishanth Weerakkody, Email: Vishanth.weerakkody@bruenl.ac.uk

Your contribution to this project is very important. Thank you.

Appendix C

Ethical Approval



College of Business, Arts and Social Sciences Research Ethics Committee
Brunel University London
Kingston Lane
Uxbridge
UB8 3PH
United Kingdom
www.brunel.ac.uk

25 January 2017

LETTER OF APPROVAL

Applicant: Mr Salem Al-Halbadi

Project Title: Entrepreneurial start-up intention and key influential factors: planned behaviour perspectives.

Reference: 5327-A-Jan/2017- 5470-1

Dear Mr Salem Al-Halbadi

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
- Approval to proceed with the study is granted subject to receipt by the Committee of satisfactory responses to any conditions that may appear above, in addition to any subsequent changes to the protocol.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study.
- You may not undertake any research activity if you are not a registered student of Brunel University or if you cease to become registered, including abeyance or temporary withdrawal. As a deregistered student you would not be insured to undertake research activity. Research activity includes the recruitment of participants, undertaking consent procedures and collection of data. Breach of this requirement constitutes research misconduct and is a disciplinary offence.

A handwritten signature in black ink, appearing to read 'James D. Knowles', written over a horizontal line.

Professor James Knowles

Chair

College of Business, Arts and Social Sciences Research Ethics Committee
Brunel University London

Appendix D

Results of Data Analysis

Table 1. Univariate Outliers (Boxplots)

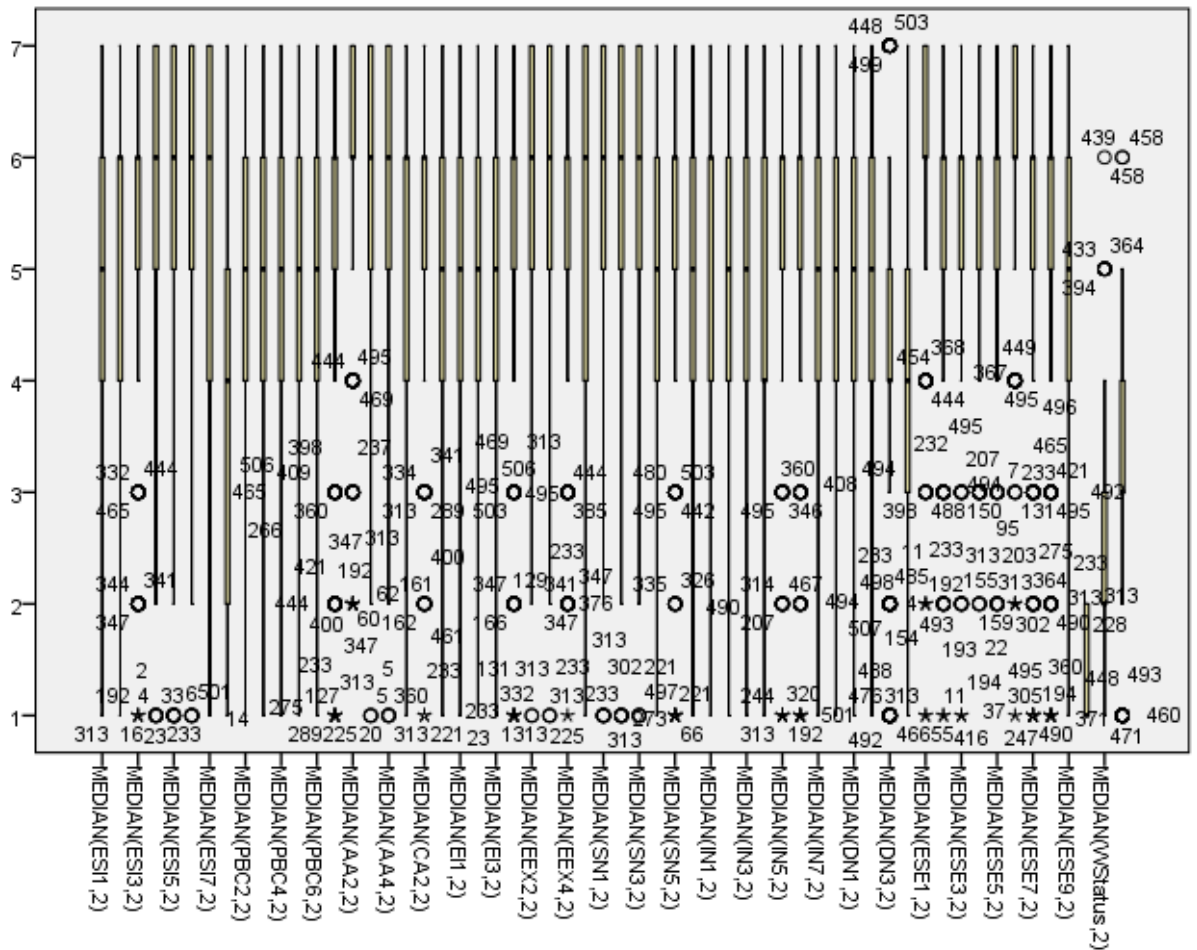


Table 2. Multivariate Outliers (Mahalanobis distance)

Observation number	Mahalanobis d-squared	p1	p2
5	44.546	.000	.000
11	37.217	.000	.000
360	36.070	.000	.000
4	34.717	.000	.000
194	31.542	.000	.000
166	30.112	.000	.000
233	29.642	.000	.000
2	28.396	.000	.000
8	27.889	.000	.000
47	27.417	.001	.000
313	27.212	.001	.000
22	26.782	.001	.000
1	26.034	.001	.000
3	25.515	.001	.000
13	25.430	.001	.000
7	24.407	.002	.000
190	24.241	.002	.000
54	24.129	.002	.000
9	23.726	.003	.000
225	22.897	.003	.000
10	22.574	.004	.000
24	22.371	.004	.000
38	22.279	.004	.000
104	22.086	.005	.000
21	22.084	.005	.000
23	21.995	.005	.000
347	21.541	.006	.000
44	21.412	.006	.000
60	21.379	.006	.000
221	19.974	.010	.000
16	19.598	.012	.000
58	19.441	.013	.000
20	18.871	.016	.000
49	18.843	.016	.000
320	18.784	.016	.000
192	18.681	.017	.000
68	18.676	.017	.000

Appendix D

Observation number	Mahalanobis d-squared	p1	p2
306	18.667	.017	.000
37	18.511	.018	.000
18	18.177	.020	.000
14	18.154	.020	.000
12	17.941	.022	.000
6	17.936	.022	.000
62	17.457	.026	.000
400	17.151	.029	.000
72	17.140	.029	.000
29	16.969	.030	.000
191	16.718	.033	.000
32	16.626	.034	.000
40	16.396	.037	.000
41	15.911	.044	.000
168	15.754	.046	.000
133	15.515	.050	.000
15	15.427	.051	.000
48	15.266	.054	.000
27	15.146	.056	.000
159	15.060	.058	.000
234	14.918	.061	.000
340	14.737	.064	.000
144	14.605	.067	.000
134	14.527	.069	.000
223	14.494	.070	.000
115	14.440	.071	.000
230	14.272	.075	.000
302	14.114	.079	.000
312	14.089	.079	.000
461	14.072	.080	.000
33	14.063	.080	.000
36	13.956	.083	.000
126	13.617	.092	.000
135	13.574	.094	.000
30	13.530	.095	.000
332	13.487	.096	.000
91	13.478	.096	.000
211	13.424	.098	.000
404	13.371	.100	.000
59	13.266	.103	.000
184	13.171	.106	.001

Appendix D

Observation number	Mahalanobis d-squared	p1	p2
28	13.107	.108	.001
31	13.008	.112	.001
207	12.732	.121	.006
101	12.473	.131	.027
232	12.427	.133	.028
65	12.381	.135	.028
161	12.371	.135	.022
162	12.371	.135	.016
25	12.250	.140	.027
34	12.209	.142	.027
113	12.203	.142	.021
195	12.170	.144	.020
26	12.085	.147	.027
78	12.035	.150	.028
224	12.004	.151	.026
82	11.997	.151	.021
357	11.989	.152	.017
187	11.938	.154	.018
273	11.863	.157	.023
494	11.760	.162	.035
495	11.726	.164	.034
295	11.673	.166	.038

Table 3. Multivariate Normality

Variable	min	max	skew	c.r.	kurtosis	c.r.
EEX	1.482	5.727	-1.073	-9.864	1.393	6.404
norms	1.247	6.043	-.625	-5.743	1.016	4.669
CA	2.097	6.704	-.677	-6.226	.250	1.147
AA	2.091	7.784	-1.038	-9.544	1.010	4.642
ESE	1.763	5.559	-1.046	-9.617	1.827	8.398
PBC	1.508	6.441	-.393	-3.616	-.226	-1.041
EI	1.555	6.855	-.666	-6.121	.016	.075
ESI	1.432	5.996	-1.096	-10.078	.788	3.620
Multivariate					23.984	21.347

Table 4. Linearity

Model Summary and Parameter Estimates

Dependent Variable: CA

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.343	263.219	1	505	.000	1.764	.761		
Logarithmic	.335	253.972	1	505	.000	.806	2.940		
Inverse	.291	206.929	1	505	.000	7.320	-9.352		
Quadratic	.343	131.453	2	504	.000	1.516	.884	-.015	
Cubic	.343	87.609	3	503	.000	.709	1.572	-.198	.016
Compound	.345	265.663	1	505	.000	2.387	1.184		
Power	.351	273.696	1	505	.000	1.891	.665		
S	.323	241.076	1	505	.000	2.125	-2.176		
Growth	.345	265.663	1	505	.000	.870	.168		
Exponential	.345	265.663	1	505	.000	2.387	.168		
Logistic	.345	265.663	1	505	.000	.419	.845		

The independent variable is norms.

Model Summary and Parameter Estimates

Dependent Variable: AA

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.485	475.567	1	505	.000	1.962	.964		
Logarithmic	.490	484.563	1	505	.000	.656	3.787		
Inverse	.443	401.204	1	505	.000	9.105	-12.290		
Quadratic	.492	243.620	2	504	.000	.365	1.754	-.094	
Cubic	.492	162.570	3	503	.000	-.833	2.776	-.367	.023
Compound	.485	476.342	1	505	.000	2.781	1.196		
Power	.518	542.497	1	505	.000	2.122	.721		
S	.504	514.001	1	505	.000	2.382	-2.430		
Growth	.485	476.342	1	505	.000	1.023	.179		
Exponential	.485	476.342	1	505	.000	2.781	.179		
Logistic	.485	476.342	1	505	.000	.360	.836		

The independent variable is norms.

Appendix D

Model Summary and Parameter Estimates

Dependent Variable: PBC

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.288	204.452	1	505	.000	1.193	.733		
Logarithmic	.279	195.111	1	505	.000	.290	2.818		
Inverse	.238	158.122	1	505	.000	6.517	-8.895		
Quadratic	.288	102.025	2	504	.000	1.164	.747	-.002	
Cubic	.288	67.904	3	503	.000	1.525	.440	.080	-.007
Compound	.287	203.229	1	505	.000	1.886	1.205		
Power	.289	204.924	1	505	.000	1.468	.732		
S	.260	177.412	1	505	.000	2.015	-2.370		
Growth	.287	203.229	1	505	.000	.634	.187		
Exponential	.287	203.229	1	505	.000	1.886	.187		
Logistic	.287	203.229	1	505	.000	.530	.830		

The independent variable is norms.

Model Summary and Parameter Estimates

Dependent Variable: ESE

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.303	219.746	1	505	.000	2.425	.474		
Logarithmic	.307	223.200	1	505	.000	1.782	1.862		
Inverse	.281	197.621	1	505	.000	5.945	-6.087		
Quadratic	.306	111.124	2	504	.000	1.774	.796	-.038	
Cubic	.310	75.315	3	503	.000	.054	2.262	-.429	.033
Compound	.304	220.073	1	505	.000	2.641	1.126		
Power	.322	239.651	1	505	.000	2.210	.479		
S	.315	232.225	1	505	.000	1.876	-1.617		
Growth	.304	220.073	1	505	.000	.971	.119		
Exponential	.304	220.073	1	505	.000	2.641	.119		
Logistic	.304	220.073	1	505	.000	.379	.888		

The independent variable is norms.

Appendix D

Model Summary and Parameter Estimates

Dependent Variable: AA

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.582	703.088	1	505	.000	1.410	1.044		
Logarithmic	.576	686.221	1	505	.000	-.001	4.116		
Inverse	.529	567.203	1	505	.000	9.390	-14.089		
Quadratic	.583	351.843	2	504	.000	.860	1.317	-.032	
Cubic	.588	239.242	3	503	.000	-3.240	4.726	-.923	.074
Compound	.581	700.686	1	505	.000	2.514	1.213		
Power	.603	765.770	1	505	.000	1.884	.780		
S	.586	716.040	1	505	.000	2.430	-2.747		
Growth	.581	700.686	1	505	.000	.922	.193		
Exponential	.581	700.686	1	505	.000	2.514	.193		
Logistic	.581	700.686	1	505	.000	.398	.824		

The independent variable is EEX.

Model Summary and Parameter Estimates

Dependent Variable: CA

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.408	348.089	1	505	.000	1.343	.821		
Logarithmic	.400	337.028	1	505	.000	.255	3.222		
Inverse	.364	288.674	1	505	.000	7.594	-10.972		
Quadratic	.408	173.711	2	504	.000	1.267	.859	-.004	
Cubic	.412	117.420	3	503	.000	-2.013	3.585	-.717	.059
Compound	.415	358.906	1	505	.000	2.164	1.201		
Power	.423	370.745	1	505	.000	1.664	.731		
S	.403	341.086	1	505	.000	2.187	-2.549		
Growth	.415	358.906	1	505	.000	.772	.183		
Exponential	.415	358.906	1	505	.000	2.164	.183		
Logistic	.415	358.906	1	505	.000	.462	.833		

The independent variable is EEX.

Appendix D

Model Summary and Parameter Estimates

Dependent Variable: PBC

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.463	434.816	1	505	.000	.200	.918		
Logarithmic	.432	384.089	1	505	.000	-.883	3.515		
Inverse	.366	291.874	1	505	.000	7.031	-11.562		
Quadratic	.470	223.409	2	504	.000	1.961	.046	.104	
Cubic	.470	148.650	3	503	.000	1.784	.194	.065	.003
Compound	.456	422.832	1	505	.000	1.474	1.262		
Power	.442	399.444	1	505	.000	1.092	.907		
S	.391	323.596	1	505	.000	2.144	-3.046		
Growth	.456	422.832	1	505	.000	.388	.233		
Exponential	.456	422.832	1	505	.000	1.474	.233		
Logistic	.456	422.832	1	505	.000	.679	.792		

The independent variable is EEX.

Model Summary and Parameter Estimates

Dependent Variable: EI

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.407	346.583	1	505	.000	.826	.893		
Logarithmic	.393	326.963	1	505	.000	-.315	3.474		
Inverse	.351	272.564	1	505	.000	7.573	-11.721		
Quadratic	.408	173.520	2	504	.000	1.430	.593	.036	
Cubic	.412	117.424	3	503	.000	-2.263	3.664	-.767	.067
Compound	.409	350.157	1	505	.000	1.835	1.233		
Power	.413	355.552	1	505	.000	1.367	.832		
S	.390	322.260	1	505	.000	2.220	-2.887		
Growth	.409	350.157	1	505	.000	.607	.209		
Exponential	.409	350.157	1	505	.000	1.835	.209		
Logistic	.409	350.157	1	505	.000	.545	.811		

The independent variable is EEX.

Appendix D

Model Summary and Parameter Estimates

Dependent Variable: ESE

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.542	598.751	1	505	.000	1.631	.627		
Logarithmic	.537	586.020	1	505	.000	.784	2.469		
Inverse	.494	492.943	1	505	.000	6.420	-8.459		
Quadratic	.543	299.758	2	504	.000	1.261	.810	-.022	
Cubic	.546	201.430	3	503	.000	-.478	2.256	-.400	.031
Compound	.536	583.939	1	505	.000	2.174	1.169		
Power	.553	625.588	1	505	.000	1.726	.629		
S	.537	584.869	1	505	.000	1.994	-2.213		
Growth	.536	583.939	1	505	.000	.776	.156		
Exponential	.536	583.939	1	505	.000	2.174	.156		
Logistic	.536	583.939	1	505	.000	.460	.855		

The independent variable is EEX.

Model Summary and Parameter Estimates

Dependent Variable: ESI

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.745	1474.736	1	505	.000	-.432	.818		
Logarithmic	.728	1352.923	1	505	.000	-3.256	4.366		
Inverse	.664	999.158	1	505	.000	8.099	-20.677		
Quadratic	.745	736.000	2	504	.000	-.534	.855	-.003	
Cubic	.745	491.003	3	503	.000	.886	.001	.159	-.010
Compound	.716	1270.511	1	505	.000	1.222	1.234		
Power	.728	1351.254	1	505	.000	.567	1.147		
S	.695	1153.026	1	505	.000	2.436	-5.559		
Growth	.716	1270.511	1	505	.000	.200	.211		
Exponential	.716	1270.511	1	505	.000	1.222	.211		
Logistic	.716	1270.511	1	505	.000	.818	.810		

The independent variable is AA.

Appendix D

Model Summary and Parameter Estimates

Dependent Variable: ESI

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.493	490.288	1	505	.000	1.025	.708		
Logarithmic	.500	505.004	1	505	.000	-.565	3.233		
Inverse	.479	463.436	1	505	.000	7.337	-13.155		
Quadratic	.501	252.713	2	504	.000	-.544	1.391	-.071	
Cubic	.501	168.251	3	503	.000	-1.227	1.877	-.180	.008
Compound	.462	433.111	1	505	.000	1.799	1.197		
Power	.485	475.751	1	505	.000	1.173	.837		
S	.483	471.213	1	505	.000	2.218	-3.471		
Growth	.462	433.111	1	505	.000	.587	.180		
Exponential	.462	433.111	1	505	.000	1.799	.180		
Logistic	.462	433.111	1	505	.000	.556	.835		

The independent variable is CA.

Model Summary and Parameter Estimates

Dependent Variable: ESI

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.364	288.741	1	505	.000	2.087	.579		
Logarithmic	.361	285.427	1	505	.000	1.353	2.263		
Inverse	.328	246.253	1	505	.000	6.460	-7.492		
Quadratic	.366	145.287	2	504	.000	1.529	.860	-.033	
Cubic	.366	96.738	3	503	.000	1.103	1.210	-.123	.007
Compound	.333	252.327	1	505	.000	2.374	1.157		
Power	.344	264.637	1	505	.000	1.942	.580		
S	.326	244.251	1	505	.000	1.983	-1.963		
Growth	.333	252.327	1	505	.000	.865	.146		
Exponential	.333	252.327	1	505	.000	2.374	.146		
Logistic	.333	252.327	1	505	.000	.421	.864		

The independent variable is PBC.

Appendix D

Model Summary and Parameter Estimates

Dependent Variable: ESI

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.203	128.435	1	505	.000	1.552	.687		
Logarithmic	.199	125.202	1	505	.000	.601	2.708		
Inverse	.181	111.394	1	505	.000	6.805	-9.478		
Quadratic	.203	64.124	2	504	.000	1.322	.800	-.014	
Cubic	.203	42.681	3	503	.000	1.903	.323	.111	-.010
Compound	.188	117.085	1	505	.000	2.065	1.190		
Power	.190	118.153	1	505	.000	1.600	.695		
S	.178	109.382	1	505	.000	2.071	-2.472		
Growth	.188	117.085	1	505	.000	.725	.174		
Exponential	.188	117.085	1	505	.000	2.065	.174		
Logistic	.188	117.085	1	505	.000	.484	.840		

The independent variable is ESE.

Model Summary and Parameter Estimates

Dependent Variable: ESI

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.658	973.722	1	505	.000	.940	.752		
Logarithmic	.670	1023.973	1	505	.000	-.446	3.247		
Inverse	.629	857.478	1	505	.000	7.249	-12.075		
Quadratic	.672	516.432	2	504	.000	-.710	1.514	-.083	
Cubic	.672	343.646	3	503	.000	-.904	1.661	-.117	.003
Compound	.620	823.553	1	505	.000	1.757	1.211		
Power	.659	973.859	1	505	.000	1.199	.846		
S	.651	941.209	1	505	.000	2.204	-3.226		
Growth	.620	823.553	1	505	.000	.563	.192		
Exponential	.620	823.553	1	505	.000	1.757	.192		
Logistic	.620	823.553	1	505	.000	.569	.825		

The independent variable is EI.

Table 5. Multicollinearity (VIF<3.0)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.631	.181		3.491	.001		
1 norms	.498	.046	.360	10.816	.000	.608	1.644
EEX	.736	.046	.538	16.158	.000	.608	1.644

a. Dependent Variable: AA

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.722	.213		3.390	.001		
1 norms	.397	.054	.305	7.297	.000	.608	1.644
EEX	.576	.054	.448	10.715	.000	.608	1.644

a. Dependent Variable: CA

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.190	.220		-.862	.389		
1 norms	.249	.056	.183	4.445	.000	.608	1.644
EEX	.764	.055	.566	13.778	.000	.608	1.644

a. Dependent Variable: PBC

Appendix D

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	(Constant)	1.433	.128				11.158
1 norms	.127	.033	.147	3.868	.000	.608	1.644
EEX	.548	.032	.644	16.922	.000	.608	1.644

a. Dependent Variable: ESE

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	(Constant)	-.271	.211				-1.285
1 norms	.701	.054	.496	13.028	.000	.608	1.644
EEX	.458	.053	.328	8.613	.000	.608	1.644

a. Dependent Variable: EI

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	(Constant)	.117	.135				.866
ESE	-.251	.041	-.164	-6.065	.000	.471	2.122
EI	.318	.039	.343	8.193	.000	.198	5.063
1 CA	-.436	.042	-.432	10.304	.000	.197	5.083
AA	.946	.044	.999	21.492	.000	.160	6.235
PBC	.101	.028	.106	3.569	.000	.396	2.527

a. Dependent Variable: ESI

Table 6. Homogeneity of Variance (Levene's test)

		Sum of Squares	df	Mean Square	F	Sig.
ESE	Between Groups	.654	1	.654	1.643	.200
	Within Groups	200.980	505	.398		
	Total	201.634	506			
EI	Between Groups	1.030	1	1.030	.955	.329
	Within Groups	544.422	505	1.078		
	Total	545.452	506			
CA	Between Groups	.123	1	.123	.135	.713
	Within Groups	460.515	505	.912		
	Total	460.638	506			
AA	Between Groups	2.195	1	2.195	2.132	.145
	Within Groups	520.074	505	1.030		
	Total	522.269	506			
PBC	Between Groups	1.774	1	1.774	1.770	.184
	Within Groups	506.224	505	1.002		
	Total	507.998	506			
ESI	Between Groups	1.807	1	1.807	1.954	.163
	Within Groups	467.056	505	.925		
	Total	468.863	506			

Table 7. Harman's single factor test

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	17.510	31.837	31.837	17.510	31.837	31.837
2	4.329	7.870	39.707			
3	3.489	6.343	46.050			
4	3.085	5.610	51.659			
5	2.199	3.998	55.657			
6	1.630	2.963	58.620			
7	1.459	2.652	61.272			
8	1.256	2.284	63.556			
9	1.167	2.122	65.678			
10	1.087	1.976	67.654			
11	1.035	1.881	69.535			
12	.874	1.590	71.125			
13	.773	1.405	72.529			
14	.735	1.336	73.866			
15	.723	1.315	75.181			
16	.698	1.269	76.450			
17	.667	1.213	77.663			
18	.638	1.160	78.824			
19	.621	1.129	79.953			
20	.580	1.055	81.008			
21	.561	1.020	82.028			
22	.538	.979	83.007			
23	.533	.970	83.976			
24	.502	.912	84.888			
25	.473	.860	85.749			
26	.445	.810	86.558			
27	.431	.783	87.341			
28	.420	.763	88.105			
29	.402	.731	88.836			
30	.390	.708	89.544			
31	.376	.684	90.228			
32	.370	.673	90.901			
33	.336	.610	91.512			

Appendix D

34	.325	.591	92.103			
35	.315	.573	92.676			
36	.308	.559	93.235			
37	.291	.529	93.764			
38	.282	.513	94.277			
39	.276	.502	94.779			
40	.261	.475	95.254			
41	.253	.460	95.714			
42	.242	.439	96.153			
43	.234	.425	96.579			
44	.223	.406	96.984			
45	.210	.382	97.366			
46	.190	.346	97.712			
47	.185	.337	98.049			
48	.176	.320	98.369			
49	.156	.284	98.653			
50	.155	.281	98.935			
51	.140	.254	99.189			
52	.132	.241	99.430			
53	.114	.208	99.638			
54	.102	.186	99.824			
55	.097	.176	100.000			

Extraction Method: Principal Component Analysis.

Table 8. Correlations test

Correlations: (Group number 1 - Default model)

		Estimate
Expectancym	<--> SocialNormss	.490
Expectancym	<--> Effortt	.516
ESEffic	<--> Expectancym	.609
AFF	<--> Expectancym	.645
COG	<--> Expectancym	.524
PBContr	<--> Expectancym	.582
Expectancym	<--> ESInten	.512
Effortt	<--> SocialNormss	.601
ESEffic	<--> SocialNormss	.422
AFF	<--> SocialNormss	.601
COG	<--> SocialNormss	.492
PBContr	<--> SocialNormss	.445
ESInten	<--> SocialNormss	.564
ESEffic	<--> Effortt	.332
AFF	<--> Effortt	.729
COG	<--> Effortt	.734
PBContr	<--> Effortt	.619
Effortt	<--> ESInten	.722
AFF	<--> ESEffic	.529
COG	<--> ESEffic	.460
PBContr	<--> ESEffic	.489
ESEffic	<--> ESInten	.351
AFF	<--> COG	.804
AFF	<--> PBContr	.523
AFF	<--> ESInten	.783
COG	<--> PBContr	.534
COG	<--> ESInten	.611
PBContr	<--> ESInten	.502
e30	<--> e31	.245