UNIVERSITY OF KWAZULU-NATAL

The entrepreneurial orientation and intention of UKZN MBA students

By

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Abstract

The global economy is in a state of uncertainty and not forecasted to grow at a rate that will realise economic prosperity for all. Entrepreneurship is recognised as a potential remedy to this problem as it is posited to offer stimulus to economic growth. However the actualisation levels of entrepreneurial activity has been low, especially in South Africa. MBA students are identified as a segment of the population that can stimulate entrepreneurial activity since the tendency to pursue entrepreneurship is positively correlated with maturity, education, experience and corporate exposure. This study examines the entrepreneurship profile of the 2012 cohort of MBA students enrolled at the University of Kwa-zulu Natal (UKZN). There is no evidence of a study of this nature having been conducted at UKZN and as such the study represents new research. By evaluating the entrepreneurship profile of the MBA students the study seeks to identify how the actualisation of entrepreneurship may be enhanced. The entrepreneurship profile of the students is established by measuring the extent of Entrepreneurial Intention (EI) and Entrepreneurial Orientation (EO). Both EI and EO impact on the likelihood of entrepreneurial actualisation. A census survey is administered to evaluate EO (as measured by self-efficacy) and EI (as measured by the dimensions of risk-taking, innovativeness and proactivity). Statistical analysis reveals high levels of EO and EI and strong correlations between the two factors. Variances in EI are accounted for by the dimensions of risk-taking, innovativeness and proactivity. Proactivity is found to be the best predictor of EI followed by innovativeness and risk-taking. No significant differences are noted in gender, age, race and entrepreneurial awareness. The study benefits students and organisations as it provides an assessment of the likelihood of entrepreneurial actualisation, which is a source of competitiveness and economic prosperity. UKZN benefits from the creation of a benchmark study for future research on evaluating the propensity of students to engage in entrepreneurial activity. In addition to high EI and EO, the study identifies that external factors in the environment, the preparation of individuals for entrepreneurship and the availability of entrepreneurial opportunities positively impact on the actualisation of entrepreneurship. Consequently UKZN, local industry and government must devise strategies that positively influence these factors in order to stimulate entrepreneurial activity.

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CHAPTER ONE

Introduction

1.1 Introduction

Entrepreneurship has been recognised as a key source of economic prosperity in economies around the globe (Bosma, Wennekers & Amoros, 2012). Despite this accolade the actualisation levels of entrepreneurship as measured by entrepreneurial activity has been low, especially in South Africa (Herrington, M., Kew, J. & Kew, P., 2011). A key segment of the population for entrepreneurship has been identified as graduates since the tendency to pursue entrepreneurship is positively correlated with education (Herrington et al., 2011). This study will seek to examine the entrepreneurship profile of one important segment of graduates, namely MBA students. Chapter 1 presents the problem statement and the justification for the study. It identifies those stakeholders that will benefit and elaborates upon the benefits to be derived. The objectives of the study are identified and an overview of the proposed methodology is presented. The chapter concludes with an outline of the remaining chapters of the dissertation which is focused on understanding the entrepreneurship profile of the subjects in the study.

1.2 Problem Statement

Kumara and Sahasranam (2009, p.8) noted that "the global economy is not generating enough decent work for all, nor is anyone predicting a scenario where such growth will occur in the foreseeable future". The consequences of this scenario are dire when one considers that the global population is projected to exceed 8 billion people by 2025. South Africa has also not responded well to job creation as the unemployment rate in Quarter 2, 2012 was reported to be 23.9% (Statistics SA, 2012). Furthermore, moderate economic growth is forecasted for an

economy that despite the interventions of the public and private sectors has failed to create jobs (Gordhan, 2012).

Academics, government and industry agree that entrepreneurship has a pivotal role to play in the economic growth and societal well-being of both current and future generations. However studies on the extent of entrepreneurship in South Africa have indicated low activity and actualisation rates (Simrie, Herrington, Kew & Turton, 2011) implying that Africa's largest and arguably most powerful economy is lagging behind. In the context of a repressed global economic climate, low levels of entrepreneurship are concerning especially when one considers that poor economic growth can fuel problems such as unemployment, poverty and crime.

The 2011 Global Entrepreneurship Monitor (Bosma et al., 2012) indicates that individuals with high levels of maturity, education, experience and corporate exposure exhibit high entrepreneurial tendencies. Academics and researchers advocate that MBA students are a good source of entrepreneurship as they have acquired the necessary capabilities and networks that foster entrepreneurial success (Thandi & Sharma, 2004). However no local studies, to the author's knowledge, have been undertaken to examine the entrepreneurship profile of MBA students enrolled at the University of Kwa-Zulu Natal (UKZN). The aim of this study is to address this lack of research by examining the pertinent factors that contribute towards the actualisation of entrepreneurship. Thus the study begs the question: What is the entrepreneurship profile of UKZN MBA students?

1.3 Focus of the Study

The entrepreneurship profile is established by investigating the extent of entrepreneurial orientation and self-efficacy exhibited by the subjects in the study. Entrepreneurial orientation is evaluated along the dimensions of risk-taking, innovativeness and proactivity. Self-efficacy is measured to assess entrepreneurial intention. Based on the extent of orientation and intention, the likelihood of entrepreneurial actualisation is assessed. The study will focus on the 2012 cohort of MBA students enrolled at the UKZN Graduate School of Business and Leadership

(GSBL) in Westville, Durban. The population comprises of 191 students located in and around the Durban metropolitan area. The majority of students are corporate employees; however some individuals have pursued entrepreneurship as a career choice and are self-employed.

1.4 Motivation for the Study

At present no research exists that has measured the entrepreneurship profile of UKZN MBA students. The study will close this gap. It will evaluate the entrepreneurial tendencies of students engaged in corporate employment as well as those who have chosen entrepreneurship as a career. The following benefits are envisaged:

- An understanding of the likelihood of entrepreneurial actualisation based on an assessment of the extent of entrepreneurial orientation and intention
- The creation of a benchmark study that will form the platform for future longitudinal studies that measure the impact of the MBA curriculum on the propensity towards entrepreneurship

Orientation is a good predictor of entrepreneurial intentions. Intentions are a good predictor of entrepreneurial actualisation and success. Thus the following parties will benefit from the study:

- Corporates and students who have aggregated data regarding the extent of entrepreneurial orientation and intention of the subjects and an assessment of the likelihood of entrepreneurial actualisation
- The University of KwaZulu-Natal in that the study can be replicated in other faculties to assess the impact of course curricula on the entrepreneurial tendencies of students

Whilst the outcome of this study may be of limited generalisability, it provides a benchmark for longitudinal studies to assess the impact of course curricula on entrepreneurial tendencies. These studies need not be confined to the GSBL and

can also be replicated at other faculties. Taking it a step further, the study may be replicated across tertiary institutions. The benefit of this exercise is the cross comparison of programmes in so far as establishing their impact on entrepreneurial tendencies is concerned. Researchers, industry and government may also be interested in administering the study and using the outcomes to positively enhance entrepreneurship potential in the locality of the respective study.

An understanding of the extent of entrepreneurship will provide industry with better insight into the entrepreneurial tendencies of the professionals employed within organisations. In particular there will be a better level of understanding regarding the orientation and intention of students to start up new ventures or actualise entrepreneurship within organisations. In so doing competitiveness and innovativeness may be enhanced and the longevity of organisations positively impacted. Finally the study is unique in that it will seek to understand the entrepreneurial constructs of orientation, intention and actualisation on a cohort of students where these dimensions have not been previously evaluated.

1.5 Research Questions

The sub questions that support the main research question identified in the problem statement include the following:

- What is the level of entrepreneurial orientation exhibited as measured by the dimensions of risk-taking, innovativeness and proactivity?
- What is the level of entrepreneurial intention exhibited as measured by self-efficacy?
- Is there a correlation between entrepreneurial orientation and self-efficacy?
- Which dimensions of entrepreneurial orientation, if any, impact on self-efficacy?
- Are there any correlations between entrepreneurial tendencies and the variables of gender, age, race and entrepreneurial awareness?

1.6 Objectives

The objectives of the study are as follows:

- To determine the entrepreneurship profile of the UKZN MBA students by examining the extent of entrepreneurial orientation and entrepreneurial intention exhibited
- To examine the relationship between entrepreneurial orientation and self-efficacy
- To ascertain which of the dimensions of entrepreneurial orientation is the best predictor of self-efficacy
- To examine the relationship between entrepreneurial tendencies and the variables of gender, age, race and entrepreneurial awareness

1.7 Proposed Methodology

Research is conducted via a literature survey to identify the factors that are pertinent to entrepreneurial orientation and intention. Importance is placed on fundamental psychoanalysis and its impact on entrepreneurial tendencies. Based on the outcome of this research, the study is designed to effectively and accurately measure the variables of interest. A quantitative approach is applied as the study is intended to be objective, conclusive and to enable the drawing of conclusions based on statistical data.

A census survey is conducted to ensure the high accuracy and reliability of results. Questionnaires are personally administered to the full cohort of 2012 MBA students including first, second and third year students. Once the data is collected and analysed, the extent of entrepreneurial orientation and intention is measured and conclusions drawn on the entrepreneurship profile of the respondents. The research methodology is discussed in detail in Chapter 3.

Whilst numerous models exist to measure entrepreneurial orientation, this study applies the Individual Entrepreneurial Orientation (IEO) instrument (Bolton & Lane, 2012) to measure entrepreneurial orientation. In so far as entrepreneurial intention is concerned, the New General Self-Efficacy (NGSE) scale is employed (Chen et al., 2001). Both studies exhibit high construct validity and reliability. In the study at UKZN, the IEO and NGSE studies are consolidated into one study.

1.8 Chapter outline

Chapter One: is the study overview and outlines the problem statement, research questions and objectives, and identifies the parties that benefit from the study.

Chapter Two: is the literature review used to formulate the conceptual framework. It examines the extent and impact of entrepreneurship; explains the psychoanalytical theories and models that underpin entrepreneurial tendencies and identifies the important factors that culminate in the actualisation of entrepreneurship.

Chapter 3: is an outline of the research methodology and the quantitative techniques employed to conduct the study.

Chapter 4: is the presentation of the results obtained via statistical analysis.

Chapter 5: is the interpretation of the results against the backdrop of the literature review and the conceptual framework.

Chapter 6: is the discussion of the research findings including the recommendations and conclusions drawn relative to the problem, aims and objectives of the study.

1.9 Summary

This chapter provided an outline of the research proposal and the justification for the study. It was established that a number of stakeholders will benefit including students, industry, government and the University of Kwa-Zulu Natal. The study is quantitative in nature. A census survey is administered to the 2012 cohort of MBA students enrolled at the GSBL. In order to establish the entrepreneurship profile of the students and assess their entrepreneurial tendencies, the factors that impact on entrepreneurship are investigated and the conceptual framework for the study is developed.

CHAPTER TWO

Conceptual Framework

2.1 Introduction

This chapter evaluates the need for entrepreneurship in a global economy that is uncertain and not poised to grow at a rate that will effectively reduce unemployment. The impact and extent of entrepreneurship is evaluated in the South African arena where entrepreneurship is posited to offer stimulus to economic growth and job creation. Various psychoanalytical theories and models are explored to understand and assess the factors that foster entrepreneurial behaviour. Personality traits and attitudes that are characteristic of the entrepreneur and the entrepreneurship paradigm are presented. The constructs of entrepreneurial orientation and intention which are deeply rooted in social cognitive theory are investigated to identify the causal factors of entrepreneurial actualisation. Other pertinent factors including gender, age, race and entrepreneurial awareness are also investigated. Based on the outcome of the literature review and the development of the conceptual framework, the propositions and hypotheses for the study are conceptualised.

2.2 A global dilemma

The United Nation's Development Policy and Analysis Division (2012) cautions in the World Economic Situation and Prospects (WESP) report that as a consequence of the turbulent global environment, economic growth is delicately poised to grow at a moderate rate of 2.5 percent per annum in 2012 and 3.1 percent per annum in 2013. This is largely underpinned by the economic tension in Europe and the United States and the proliferation of this tension into the various economies around the globe. This state of global uneasiness is further exacerbated by the presence of financial vulnerability and trade imbalances. Economies such as Japan

and Germany are guilty of siphoning global demand instead of contributing to global growth resulting in a repressed economic outlook (Akyuz, 2011). At best the Internal Monetary Fund World Economic Outlook (2012) indicates that lower than forecasted growth in emerging market economies will optimistically result in an improved global economic growth rate of 3.5 percent per annum in 2012 and 3.9 percent in 2013. However these predictions are based upon eased financial tension in the Eurozone, as well as banking and fiscal policy prudence in the United States.

The WESP report cites many reasons for the tepid economic growth forecast including restrained credit flows, moderate demand by consumers, high levels of public debt and a frail financial sector. Kumara & Sahasranam (2009) indicated that one of the major consequences of this situation is that the global economy is not generating sufficient work and that there is no evidence of such growth materialising in the foreseeable future. Unemployment is both a cause and consequence of this restrained growth and one of the main obstacles hindering an economic rebound. This situation is not unfamiliar to South Africa.

South Africa is not immune to the repressed global economic climate with gross domestic product forecasted to grow at a rate of 2.7 percent per annum in 2012 (Gordhan, 2012). This is largely attributed to the turmoil in Europe which is one of South Africa's main trading partners. The International Monetary Fund (2012) projects that South African exports into Europe will be compromised as the European economy is forecasted to contract by as much as 0.5 percent in 2012. This contracting growth rate has consequences for the current state of the local economy as well as for the South African population looking into the future.

2.3 The need for entrepreneurship

Entrepreneurship is described as a process that has the "potential to open new markets and create new industries" (Viviers, Solomon & Venter, 2011, p.1). The positive spinoffs of entrepreneurship are identified as the stimulation of economic growth, reduction in unemployment and the fostering of innovation.

2.3.1 Economic growth

Turker & Selcuk (2008) asserted that entrepreneurship accelerates economic development and Carree & Thurik (2010) found that economic growth is positively impacted by entrepreneurial activity. The notion that entrepreneurship has a stimulating effect on economic growth is further supported by Acs (2006), van Praag & Versloot (2007), Stam & Elfring (2008), Nystrom (2009) and Aghazamani & Roozikhah (2010). Nystrom (2008) found empirical evidence indicating a positive relationship between aggregate economic growth and entrepreneurship for periods longer than ten years. Thurik (2007) noted a positive correlation between economic growth and the speed with which entrepreneurship is embraced by economies. Literature thus provides strong evidence which substantiates that entrepreneurship is a significant enabler of economic growth.

2.3.2 Employment

Timmons & Spinelli (2009) described entrepreneurship as a value creation engine that not only drives economic growth but also spurs on job creation. Entrepreneurship is conjectured to penetrate through the different levels of an economy i.e. the individual level, community level and country as a whole (Co, Gorenewald, Mitchell, Nayagar, van Zyl, Visser, Train & Emanual, 2007). On the individual level, the immediate impact of entrepreneurial activity manifests in the creation of employment. The knock-on effect of this outcome is the social and economic upliftment of communities. Thus the benefits of entrepreneurship and the emergence of entrepreneurs extend beyond economic gains and into societal one's (Mathur, 2012).

2.3.3 Innovation and competitiveness

According to Oosterbeek, van Praag & Ijsselstein (2007) increased entrepreneurial activity results in increased innovation which stimulates economic growth. Turker & Selcuk asserted that innovation through entrepreneurship accelerates economic development through the generation of new ideas and profitable ventures which are described as "incubators for technological innovation" (2008, pp. 142 – 143). Van Praag & Versloot (2007) noted that entrepreneurs, as compared to non-

entrepreneurs, stimulate growth in productivity and positively impact innovation. Co et al. (2007) presented that the innovation resulting from entrepreneurship provides more choice for consumers and creates more opportunities within economies. Li & Liu (2011) asserted that entrepreneurship also increases competition which in turn improves firm performance. Nystrom (2009) asserted that the increase in competition forces firms to improve efficiencies and reallocate resources in order to remain viable. The downside is that this results in the reduction of employment in the short-term. However despite this transitory loss, entrepreneurial activity has a positive impact on long-term economic growth. Thus the relationship between entrepreneurship and increased employment is a function of time.

2.4 The value of entrepreneurship to South Africa

The Global Competitiveness Report (Schwab, 2012) indicated that South Africa displays the highest national microeconomic and macroeconomic competitiveness in sub-Saharan Africa with a 50th position placing out of 142 countries across the globe. However despite this accolade poverty and unemployment are unusually high when compared to emerging economies. Statistics SA (2012) reports unemployment (at the end of Quarter 2) at 24.9 percent in a population of 50.59 million people, of which close to 50 percent live below the poverty line. South Africa is also reported to exhibit one of the worst Gini coefficients in the world highlighting the high level of economic inequality prevalent. The forecasted GDP growth rate of 2.7 percent per annum falls significantly short of the 6 percent per annum target that is considered to be fundamental for economic progress (Gordhan, 2012). As a consequence numerous social problems such as poverty and crime have manifested out of the shortfall between actual and required economic growth.

From a population growth perspective the South African Institute of Race Relations (2011) reported that as a consequence of HIV, AIDS and reduced fertility rates the population is forecasted to grow at a declining rate over the next thirty years. The population growth rate was 0.6 percent in 2010, is forecast to decline to 0.3 percent in 2020 and is then expected to trend negatively beyond 2030. But the potential

decline in the population growth rate does not mean that there is eased pressure on the local economy to grow. In fact significant growth is required to address existing problems including high unemployment, crime and poverty that will go unchecked should meagre economic growth materialise. A means of realising positive and sustained growth is required to address these problems. Given the impact of entrepreneurship on employment, innovation, competitiveness and economic growth it is palpable that entrepreneurship can add value in a developing economy such as South Africa.

Herrington, Kew, J. & Kew, P. (2011) submitted that in the South African context entrepreneurship may be the answer to the failed attempts of the public and private sectors to stimulate economic growth and alleviate unemployment. Academics, government and industry collectively agree that entrepreneurship has an instrumental role to play in the economic and societal well-being of both present and future generations. Levenburg & Schwarz (2008) asserted that entrepreneurship is important in the economic and political contexts of developing economies. This view is shared by Akyuz (2011) who proposed that some of the solutions to tackle moderate economic growth is policy making aimed at full employment levels and increased consumer consumption.

Thandi & Sharma (2004) reinforced the importance of entrepreneurship as a means of creating and preserving wealth, particularly in the context of a volatile global economy where organisations are susceptible to threats from both within and beyond country borders. This is important as the entwined fates of economies means that they are all susceptible to shock and deterioration. It is therefore prudent that appropriate mechanisms are devised to provide immunity to economic turmoil. Entrepreneurship may be the answer.

2.5 The current state of entrepreneurship in South Africa

Wennekers, van Stel & Carree (2010) explored the relationship between economic development and entrepreneurship. Early stage entrepreneurial activity is an important and effective measure of entrepreneurship. The Global Entrepreneurship

Monitor (Bosma, Wennekers & Amoros, 2012) used Total Entrepreneurship Activity (TEA) scores to measure and compare entrepreneurial activity rates across countries. In addition to measuring the participation rates of individuals in early stage entrepreneurial activity, TEA scores indicate the percentage of individuals (aged 18 – 64 years) that either started a business or are in the process of doing so.

The Global Entrepreneurship Monitor (Bosma et al., 2012) focuses on the nature and extent of entrepreneurship, the differences in entrepreneurship across different economies and policy implications for the entrepreneurship paradigm. According to the study, the TEA score for South Africa of 9.1% for 2011 was below the average of 14.1% as exhibited by other efficiency driven economies including Brazil, Russia and India. In fact since the participation of South Africa in the survey in 2001, the country has consistently scored below par in so far as TEA is concerned. In order to assess the extent of entrepreneurial activity within organisations, Entrepreneurial Employee Activity (EEA) rates are measured in the Global Entrepreneurship Monitor study. EEA is defined as a measure of the percentage of individuals involved in entrepreneurial activity (Herrington et al., 2011). The EEA rate for South Africa of 0.32% is reported to be one of the lowest of the 142 countries that participated in the survey (Bosma et al., 2012). Thus the low TEA and EEA scores indicate that South Africans have a poor tendency to engage in entrepreneurial activity. A similar pattern has emerged in individuals with tertiary education.

The Global University's Entrepreneurial Spirit Survey (Viviers et al., 2011) investigates the behaviour and intent of students across 26 countries to actualise entrepreneurship by starting ventures. It found that five years after the completion of studies, the intention of South African students to become entrepreneurs lead that of their international counterparts by as much as 9.4%. However when compared to 2008/09 there is a lower conversion rate of entrepreneurial intention into actualisation. Consequently the South African entrepreneurial index is reported to be below the international benchmark. This indicates a lack of entrepreneurial activity and hinders any positive spinoffs that can be realised from entrepreneurship such as the reduction in poverty, unemployment and crime.

2.6 Factors hindering entrepreneurship

The Global Entrepreneurship Monitor (Simrie et al., 2011) undertook an investigation into the factors affecting the current state of entrepreneurship in South Africa. The findings are indicated in Table 2.1.

Constraining factor	Percentage of South African experts citing this factor	Average percentage of GEM 2011 experts citing this factor
Financial support	**59.5**	**49.1**
Government policies	**70.3**	**46.6**
Government programmes	16.2	14.5
Education and training	**35.1**	**27.1**
R&D Transfer	0	5.6
Commercial and professional infrastructure	10.8	8.1
Market openness	10.8	10.0
Access physical infrastructure	5.4	7.2
Cultural and social norms	10.8	27.4
Capacity for entrep.	16.2	11.5
Economic climate	2.7	13.3
Workforce features	10.8	10.5
Perceived pop. composition	0	1.6
Political, institutional and social context	18.9	28.7

Table 2.1 Factors constraining entrepreneurship in South Africa

Source: Adapted from Simrie, M., Herrington, M., Kew, J., & Turton, N. 2011. *Global Entrepreneurship Monitor 2011 South Africa*. [Online].
Available at: http://www.gemconsortium.org
[Accessed 30 April 2012].

It is evident from Table 2.1 that the main factors hindering entrepreneurship are government policies, education and training and financial support. According to the study, government policies are very bureaucratic, legislative compliance is onerous, labour legislation is restrictive and administration requirements are demanding resulting in low entrepreneurship activity. Government programmes are failing to stimulate entrepreneurial activity as the individuals providing entrepreneurial support are inexperienced and lack practical insight. Problems are also experienced by potential entrepreneurs in that it is difficult to gain access to funding. The lack of angel investors and venture capital also results in a lack of finance. Education is compromised due to low school completion rates and poor rates of enrolment in tertiary studies. Since education positively impacts the intention to pursue and realise entrepreneurship success (Herrington et al., 2011), low levels of education result in low levels of entrepreneurial activity. South Africa when compared to other efficiency driven economies such as Brazil, Russia and India was found to be lagging in cultural support, government policies and market place dynamics. On the positive side, however, the country infrastructure is favourable for entrepreneurial activity and legal and commercial policies are also supportive.

Simrie et at. (2011) reported that the lack of entrepreneurial activity extends beyond the factors of government policies, financial support and education and training. The dynamics of the South African market place are not conducive to entrepreneurial activity as larger firms outperform smaller and emerging enterprises which are unable to compete in so far price, quality and the availability of goods and services are concerned. South Africans also exhibit a fear of failure and as a result of cultural entrenchments prefer to find a job as compared to embarking on their own business ventures. An expectation is placed on government to provide employment, as compared to individuals actively pursuing employment generation opportunities. This has resulted in a poor entrepreneurial mindset and the lack of an affinity towards entrepreneurship as the source of one’s livelihood.

2.7 Defining entrepreneurship and the entrepreneur

Schumpeter (1949) in the acclaimed theory of creative destruction presented entrepreneurship as a phenomenon that transforms the way in which people live and operate. Timmons & Spinelli (2009) defined entrepreneurship as a marvel that penetrates the globe and where the obsession with opportunities creates and captures value and benefits all the constituents involved in the process. The entrepreneurial process culminates in the creation of "new technologies, products, processes and services that become the next wave of new industries" (p.28). In this regard entrepreneurship transgresses beyond traditional boundaries and involves a fresh and dynamic approach to business. Schumpeter (1949) emphasised that the defining characteristics of an entrepreneur are the aptitude and proclivity to innovate. Entrepreneurs are creators who serve as catalysts for the growth and evolution of economies. Opportunity identification and idea obsession are the key defining traits of entrepreneurs accompanied by the quest for new and novel ideas.

Co et al. (2007) postulated that the entrepreneurial process is characterised by the following elements:

- The value added creation of something new
- Financial risks and rewards
- Personal satisfaction and independence
- The ability to deal with emotional stress (associated with achieving success)
- The ability to deal with social stress (associated with being responsible for the people who are dependent on the business as a means of survival)

Co et al. (2007) developed a societal view, an economist's view and a psychologist's view of entrepreneurship. In the societal view entrepreneurship is defined as activities that generate employment. The economist's view presents entrepreneurship as the synchronisation of the four factors of production (human, financial, physical and information resources) to produce and sell market offerings. The psychologist's view of entrepreneurship is concerned with personality traits and entrepreneurs are viewed as individuals that are driven to "experiment, perform

and succeed" (2007, p.4). The quest for independence and the power to influence others underpins the psychological view of entrepreneurship. In all of these descriptions of entrepreneurship the key theme that resonates is the drive to create and add value by exploiting resources while benefiting the constituencies involved in the process.

The pursuit of entrepreneurship may be necessity or opportunity driven. Herrington et al. (2011) presented that opportunity driven entrepreneurship is the exploitation of new or existing business opportunities. Necessity driven entrepreneurship is the pursuit of entrepreneurship when no other choice of employment is available. The latter construct is posited to lack the dexterity and foresight that is fundamental to entrepreneurial success. It lacks the rigour of identifying a high potential opportunity upfront and then exploiting it to the full potential. Thus more success has been realised by opportunity driven entrepreneurship as compared to necessity driven entrepreneurship. Viviers et al. (2011) indicated that ventures created with a focus on the opportunity are characterised by high differentiation and therefore face less intensive competition. In contrast necessity driven ventures are less differentiated and more susceptible to competition, resulting in them being vulnerable. Consequently fewer jobs were created as a result of opportunity driven entrepreneurship.

Entrepreneurship versus corporate entrepreneurship

When considering the boundaries of entrepreneurship it must not be confined only to the creation of new ventures since the obsession with opportunity manifests in all areas of the business environment. Driessen & Zwart (2005), Co et al. (2007) and Bosma et al. (2012) presented that entrepreneurship materialises within organisations via the pursuit of new opportunities. Timmons & Spinelli (2009) presented that entrepreneurship exists on the corporate level (corporate entrepreneurship) and penetrates all stages of an organisation's business cycle (start-up, growth, maturity, rebirth, and decline). It occurs in organisations of all ages (old and new), sizes (big and small) and growth rates and in private, public and not-for-profit sectors. Co et al. (2007) presented that corporate entrepreneurship is an important ingredient for business success in a continually changing business environment. It is a phenomenon that improves profitability and

enables the achievement of continuous advantage due to the conceptualisation and actualisation of new ideas which renew businesses and increase competitiveness.

According to Co et al. (2007) there are many differences between the traditional view of entrepreneurship and corporate entrepreneurship. In the corporate entrepreneurship setting the entrepreneur is the driving force and the organisation assumes the risks. The organisation also provides the resources required and the decision making authority of the entrepreneur is limited. In the conventional entrepreneurial setting the individual starts and owns the business, has decision making authority and takes full responsibility for success or failure. In so doing it is the entrepreneur that assumes the risk.

Bosma et al. (2012) presents that corporate entrepreneurship is a top down approach driven by a management strategy to foster innovation and new business activities. Intrapreneurship on the other hand is a bottom up approach concerned with individuals in the organisation who innovate and undertake new business activity. The current study does not seek to differentiate between the traditional venture seeking entrepreneur, the corporate entrepreneur or the intrapreneur and is focused on exploring the entrepreneurial tendencies of all individuals. Herrington et al. (2011) presented that entrepreneurial flair is impacted upon by the contributions of individuals, irrespective of whether or not they own the business. Individuals are the core of the entrepreneurial process. Thus in order to evaluate the entrepreneurship paradigm it is necessary to explore the factors that influence individual entrepreneurial activity.

2.8 Factors influencing entrepreneurial activity

Luethje & Franke (2004) asserted that the entrepreneurial decision making process is influenced by external and internal factors as illustrated in Figure 2.1.

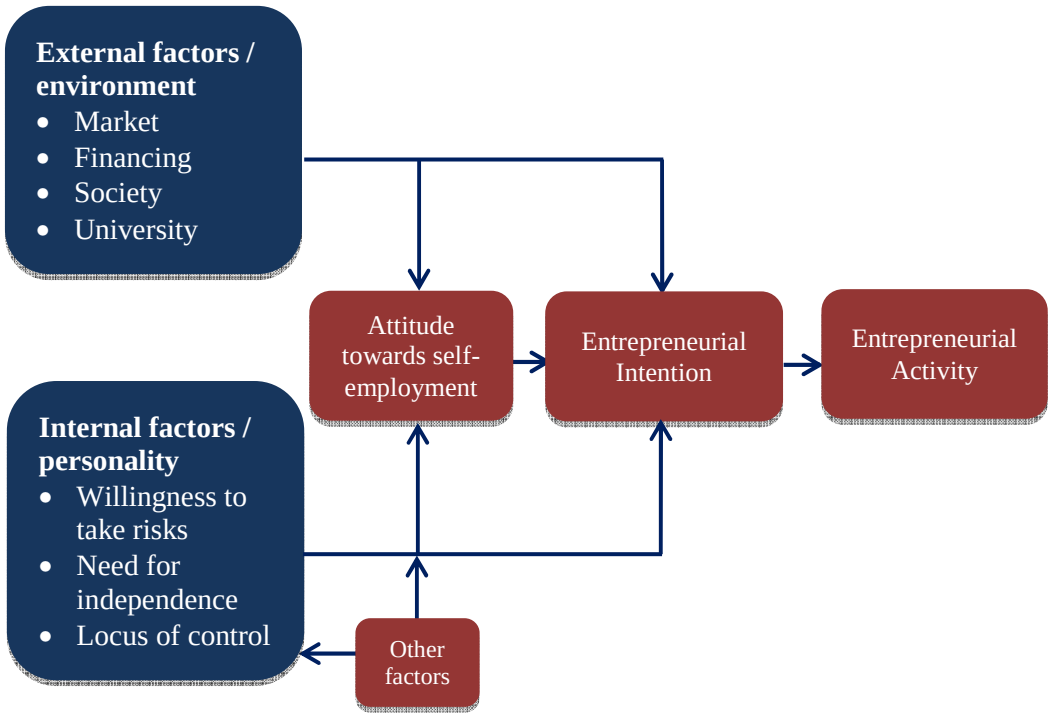


Figure 2.1 Conceptual model of the entrepreneurial decision process

Source: Adapted from Luethje, C. & Franke, N., 2004. Entrepreneurial Intentions of Business Students: A Benchmarking Study. *International Journal of Innovation and Technology Management*, [Online]. 1 (3), pp. 269 - 288.

It is evident from Figure 2.1 that entrepreneurial activity is impacted upon by the attitude towards self-employment and the extent of entrepreneurial intention. External influences in the environment such as market conditions, the availability of finance and society influence the willingness of individuals to pursue entrepreneurial activities. In addition there are various other factors that have a bearing on entrepreneurial attitudes and intentions. In this regard Turker & Selcuk (2008) point to culture, economics, politics, society, demographics and technology as being pertinent factors. Levenburg & Schwarz (2008) indicated tax advantages, culture and education as factors and Herrington et al. (2010) indicated that the conditions for entrepreneurship are underpinned by contextual economic, social and political conditions. Veciana, Aponte & Urbano (2005) reiterated the importance of formal forces (political and economic) and informal forces (attitudes, values and norms of behaviour).

Figure 2.1 stresses the importance of internal factors on the entrepreneurial decision making process. Personality traits including the willingness to take risks, the need for independence and locus of control influences the attitude towards entrepreneurship. Literature indicates that the effect of personality on the entrepreneurship paradigm is supported by a plethora of academics and researchers including Shapero (1982), Luthje & Franke (2003), Levenburg and Schwarz (2008), Turker & Selcuk (2008), Urban & Van Vuuren (2008), Athayde (2009), Timmons & Spinelli (2009), and Zhao, Seibert & Lumpkin (2009). Thus personality traits must be evaluated to assess the likelihood of entrepreneurial actualisation. This study focuses on the personality traits (internal factors) impacting upon entrepreneurial attitudes and intentions. The external factors lie beyond the battery limits of the study.

2.9 Personality Trait Theory and Attitudes

The Five Factor Model of personality provides a frugal yet comprehensive view of personality and consolidates more than four decades of research on the "emotional, interpersonal, experiential, attitudinal, and motivational style of an individual" (Zhao & Seibert, 2006, p.260). The construct is grounded on an extensive sphere of psychology and narrows down the dimensions of personality to five distinctive traits characterised by different behavioural variations as indicated in Table 2.2.

Trait	Behavioural variations
Conscientiousness (Mount & Barrick, 1995)	Degree of organisation, persistence, accomplishment, achievement motivation and dependability
Extraversion (Barrick & Mount, 1991)	Assertiveness, energetic, dominant, enthusiastic and talkative
Agreeableness (Costa & McCrae, 1992 and Digman, 1990)	Interpersonal orientation, trusting, forgiving, caring, altruistic, gullible
Openness to experience (McCrae, 1987)	Intellectually curious, seeks new experiences, explores novel ideas
Neuroticism (Costa & McCrae, 1992)	Emotional stability and adjustment

Table 2.2 Five Factor Model Personality Traits

Source: Adapted from Zhao, H. & Seibert, S., 2006. The big five personality dimensions and entrepreneurial status: A meta-analytic review. *Journal of applied psychology*, [Online]. 91 (2), pp. 259-271.

It is evident from Table 2.2 that the key personality traits underpinned by the Five Factor Model of personality are conscientiousness, extraversion, agreeableness, openness to experience and neuroticism. Conscientiousness is characterised by persistence, accomplishment and achievement motivation. Extraversion is characterised by assertion and an outward sense of self and energy. Agreeableness is biased towards interpersonal orientation and openness to experience manifests in curiosity that seeks new and novel experiences and ideas. Neuroticism correlates with emotional stability. Literature suggests that high and low scores for the various traits manifests in different types of behaviours as indicated in Table 2.3.

Trait	High scoring behaviours	Low scoring behaviours
Extraversion (Barrick & Mount, 1991)	- Cheerful and like people - Seek excitement and stimulation	- Spend more time alone - Reserved, quiet and independent
Agreeableness (Costa & McCrae, 1992; Digman, 1990)	- Co-operative values - Prefer positive, interpersonal relationships	- Self-centred - Suspicious - Ruthless - Manipulative
Openness to experience (McCrae, 1987)	- Creative - Innovative - Imaginative - Reflective - Untraditional	- Conventional - Narrow in interests - Not analytical
Neuroticism (Costa & McCrae, 1992)	- Experience negative emotions such as hostility, depression and vulnerability	- Calm, confident, relaxed and even tempered

Table 2.3 Variation in Traits

Source: Adapted from Zhao, H. & Seibert, S., 2006. The big five personality dimensions and entrepreneurial status: A meta-analytic review. *Journal of applied psychology*, [Online]. 91 (2), pp. 259-271.

It is evident from Table 2.3 that the behavioural variations on different ends of the spectrum of personality traits form polar opposites e.g. high openness to experience is characterised by innovation and creativity as compared to low extraversion which is characterised by narrow interests and convention. Similar patterns prevail with regards to extraversion, agreeableness and neuroticism. Seibert & Zhou (2009) by applying meta-analyses that compared entrepreneurs to managers found that entrepreneurs score higher on the traits of openness to experience and conscientiousness. Lower scores are realised on the traits of agreeableness and neuroticism. No significant differences are noted in so far as extraversion is concerned. Based on these findings and the behavioural variations presented in Table 2.2 it is conjectured that individuals displaying high entrepreneurial personality traits actively seek stimulation, enjoy positive relationships, are

innovative and creative, display confidence and are not tempestuous by nature. In contrast, low scoring entrepreneurial personality traits are characterised by reservation, manipulation, self-centredness, narrow mindedness, convention and tempestuousness.

Bolton & Lane (2012) summarise recent research on the individual traits that are pertinent to measuring entrepreneurial attributes as indicated in Table 2.4.

Variables / traits	Authors	Results
• Need for achievement • Locus of control • Tolerance for ambiguity	Okhomina (2007)	Traits correlated with entrepreneurial orientation for 90 used car salesman.
• Perseverance • Entrepreneurial alertness • Self-efficacy • Creativity	Gelderen, Brand, van Praag, Bodewes, Poutsma & Gils (2008)	Entrepreneurial alertness correlated with entrepreneurial intention.
• Achievement • Personal control • Innovation • Self Esteem	Harris & Gibson (2008)	Correlation between entrepreneurial attitudes and past entrepreneurial experience
• Risk-taking • Creative thinkers • Internal locus of control	Levenburg & Schwarz (2008)	Students with entrepreneurial intentions scored higher on creativeness not risk-taking

Table 2.4 Variables to measure entrepreneurial attributes in individuals

Source: Adapted from Bolton, D.L. & Lane, M.D., 2012. Individual Entrepreneurial Orientation: Development of a Measurement Instrument. *Education and Training*, 54(2/3), pp. 219-233.

It is evident from Table 2.4 that the need for achievement, locus of control, risk-taking propensity and innovativeness are all positively correlated with entrepreneurial tendencies. Alertness, past experience and creativity also feature prominently in the entrepreneurial attributes of individuals. Harris & Gibson (2008)

found that there is a correlation between the entrepreneurial attitudes of achievement, personal control, self-esteem and innovation and the following personality traits: creativity, openness to experience, self-efficacy, perseverance, strong judgment and variety seeking.

Trait research, however, provides mixed results and does not define a specific set of traits that epitomise entrepreneurial success. Traits are also static i.e. they do not change over time. Entrepreneurial attitudes on the other hand are dynamic. Thus while there appears a resurgence of interest in personality, it is clear from the many studies cited that the research findings on personality are mixed. Hence Bolton & Lane (2012) recommend a focus on entrepreneurial orientation rather than on personality and this has been applied in the current study.

2.10 Entrepreneurial Orientation (EO)

On the organisational level Rauch, Wiklund, Lumpkin & Frese (2009) presented that Entrepreneurial Orientation (EO) is rooted in strategy making laying the foundation for decisions and actions that are entrepreneurial in nature. The positive spinoffs of this approach are the realisation of competitive advantage and improved business performance. Lumpkin & Dess (1996) identified five dimensions of EO including innovativeness, risk-taking, proactivity, autonomy and competitive aggressiveness. These dimensions were defined by Rauch et al. (2009) as indicated in Table 2.5.

Dimension	Definition
Autonomy	Independent action directed at conceiving a new venture and seeing it to maturity
Competitive aggressiveness	Intensity to outperform rivals
Innovativeness	Predisposition to creativity and experimentation
Proactivity	Forward-looking perspective, acting in anticipation of future demand
Risk-taking	Venturing into the unknown, committing significant resources to ventures in uncertain environments

Table 2.5 Entrepreneurial orientation dimensions and definitions

Source: Rauch, A., Wiklund, J., Lumpkin, G.T. & Frese, M., 2009. Entrepreneurial orientation and business performance: an assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice,* [Online]. 33 (3), pp. 761-768.

It is evident in Table 2.5 that the dimensions of EO are characterised by independence, the intensity to perform, creativity, foresight and an appetite for uncertainty. In the organisational context, Co et al. (2007) presented that innovation, proactivity and risk-taking are important in organisations that are confronted with a state of flux and instability. Innovation involves doing new things or doing existing things in different ways. Proactivity is defined along the dimension of competition in terms of initiating action that results in competitors responding to the organisation rather than vice versa. It involves being first off the starting blocks at introducing new offerings into the market place. Risk-taking is the willingness and appetite to undertake projects that can potentially result in losses.

Bolton & Lane (2012) present that the EO construct applies on the individual level i.e. Individual Entrepreneurial Orientation (IEO) since the entrepreneurial nature of an organisation is the outcome of the individual behaviours exhibited within the organisation. An exploratory factor analysis of IEO was conducted on 1,100 university students in the United States and empirical data suggested that three

distinct factors exhibit validity and reliability in so far as IEO is concerned. These factors are:

1. Innovation
2. Proactivity
3. Risk-taking

This study aims to evaluate entrepreneurial orientation at the individual level by measuring the three IEO factors identified by Bolton and Lane (2012). But Luethje & Franke (2004) also stressed the importance of intention in the conceptual model of the entrepreneurial decision making process. Hence it is important to explore the entrepreneurial intention construct in order to gain a holistic view of the factors that contribute towards the actualisation of entrepreneurship.

2.11 Entrepreneurial Intention (EI)

Zhao et al. (2009) asserted that there is a direct correlation between the intention to pursue entrepreneurship and the actualisation of entrepreneurship. Personality is posited to play a pivotal role in entrepreneurial intention (EI) and the emergence of entrepreneurs. Many theories explore EI and the extent of commitment to actualise entrepreneurship. These include the Theory of Reasoned Action (Fishbein & Ajzen, 1975), Theory of Planned Behaviour (Ajzen, 1991), Self-efficacy theory (Bandura, 1997), Model of the Entrepreneurial Event (Shapero, 1982), Model of the Entrepreneurial Potential (Krueger & Brazeal, 1994) and Competence Theory (Driessen & Zwart, 2005).

2.11.1 Reasoned Action and Planned Behaviour

The Theory of Reasoned Action (TRA) presents that individual decision making is a rational process that takes cognisance of the consequences of one's actions (Fishbein & Ajzen, 1975). It is deeply rooted in social cognitive theory which emphasises the pivotal role played by intentions on behaviour as illustrated in Figure 2.2.

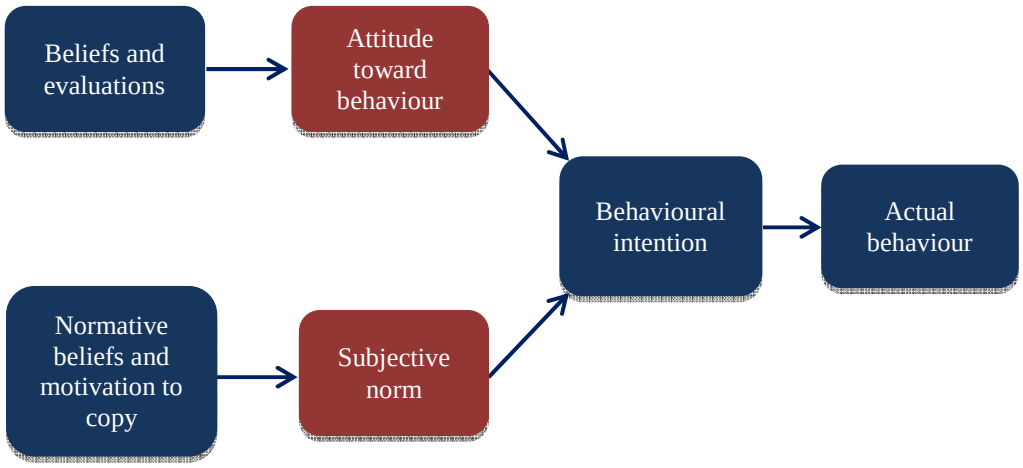


Figure 2.2 Theory of Reasoned Action (TRA)

Source: Adapted from Fishbein, M. & Ajzen, I., 1975. Belief, Attitude, Intention and Behaviour: An introduction to theory and research, [Online]. *Psychological Bulletin 84 (5), pp. 888-918*

It is evident from Figure 2.2 that the attitudes towards the behaviour and subjective norms are instrumental in the transformation of behavioural intention into actual behaviour. Werner (2004) defined attitude as the individual's perception towards specific behaviour. Ajzen (1991) presented that the attitude towards behaviour was influenced by one's beliefs and evaluations. Thus every belief is associated with outcomes perceived by the individual to be either positive or negative. Favourable attitudes are formed towards behaviours deemed to have positive outcomes. Unfavourable outcomes on the other hand solicit negative attitudes.

The subjective norm variable takes cognisance of the preference and support of normative influences (Ajzen, 1991). Normative beliefs are based on the individual's perception of how certain influences such as family, friends and mentors react to the different types of behaviours displayed. Of particular importance, the TRA construct is concerned with the perceived importance of the reactions of normative influences towards behaviour and whether or not they approve. This has an impact on the motivation to copy the behaviour. Shapero (1982) posited that the mother or father has the greatest influence on an individual and this impacts the desirability and feasibility of actions undertaken by potential entrepreneurs.

Ajzen (1991) introduced another dimension to TRA to tackle the concern that it neglected the impact of social factors which also impact on individual behaviour. A third antecedent to behavioural intention i.e. perceived behavioural control was introduced in the Theory of Planned Behaviour (TPB) as illustrated in Figure 2.3.

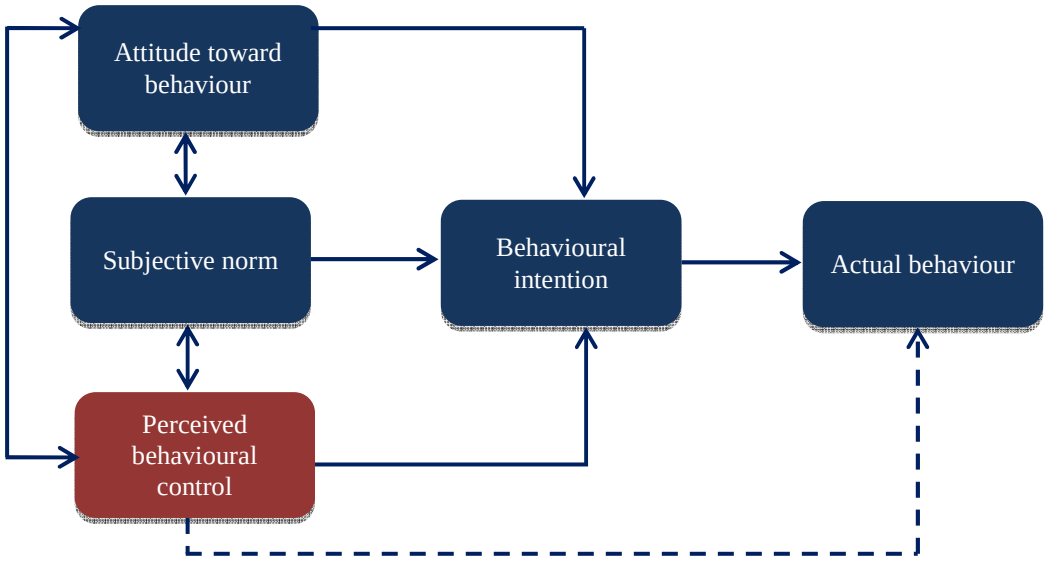


Figure 2.3 Theory of Planned Behaviour (TPB)

Source: Adapted from Ajzen, I., 1991. The theory of planned behaviour. *Organisational behaviour and Human Decision Processes* 50 (2), pp. 179-211.

It is evident from Figure 2.3 that the inclusion of perceived behavioural provides a more exhaustive view of behavioural intention. It is premised upon the psychoanalytical constructs that aim to predict and explain human behaviour. Perceived behavioural control is concerned with a perception of the ease or difficulty of performing a specific behaviour. It is preoccupied with psychological perception as compared to actual control. Dispositions that are general in nature are not accurate in predicting specific behaviour and emphasis is placed on cognitive self-regulation. Control beliefs are concerned with resources and capabilities and are influenced by previous experiences. These experiences may be directly acquired or indirectly acquired e.g. via the experiences of friends and impacts on the perceived ease or difficulty of executing actions.

Criticisms of TRA and TPB

Werner (2004) argued that TRA and TPB exhibit the following shortcomings:

- The models are predictive in nature and based upon antecedents that are inadequate in providing a comprehensive explication of behaviour
- Empirical studies reveal that less than 40 percent of behavioural variance is explained
- The models do not consider that intentions can change between the time that the behavioural intention is assessed and the time of behavioural actualisation

Whilst these criticisms are noted, TRA and TPB are conjectured to possess some confidence in the prediction of EI since they are rooted in social cognitive theory and also consider the impact of normative influences on beliefs. These constructs have time and time again been referenced as fundamental theory to explain behavioural intention by a plethora of academics and researchers. However one of the shortcomings of TRA and TPB is that these theories ignore the question of venture feasibility. The model of the Entrepreneurial Event addresses this shortcoming.

2.11.2 Model of the Entrepreneurial Event

Shapero (1982) in the model of the Entrepreneurial Event asserted that the intention to pursue entrepreneurship is predicated upon by perceived venture desirability and feasibility. The desirability element, involving attractiveness or appeal, is impacted upon by culture and the social environment. This theme draws interesting parallels with TPB when one considers the impact of normative influences and the motivation to copy on behavioural intention. Simply stated, both constructs consider the impact of society on EI. From a feasibility perspective, the model of the Entrepreneurial Event places emphasis on the perceived availability of financial support, education and advice. This emphasises the importance of the external environment on the entrepreneurial decision making process. Veciana et al. (2005) drew parallels between the model of the Entrepreneurial Event and TPB as indicated in Table 2.6.

Entrepreneurial Event	TPB
Perceived venture desirability	Attitude towards the behaviour
	Subjective norm
Perceived venture feasibility	Perceived behavioural control

Table 2.6 Model's equivalencies: EE vs. TPB

Source: Adapted from Veciana, J.M., Aponte, M. & Urbano, D., 2005. University's students attitudes towards entrepreneurship: a two countries comparison. *International entrepreneurship and management journal*, 1 (1), pp. 165-182.

It is evident from Table 2.6 that the attitude towards behaviour and subjective norm which impact behavioural intention as per TPB draws parallels with the perceived desirability of a venture in the model of the Entrepreneurial Event. Similarly the perceived behavioural control variable in TPB draws equivalency with perceived venture feasibility. Thus the actualisation of intention is an outcome of venture desirability and feasibility. Both TPB and the model of the Entrepreneurial Event were consolidated into the model of Entrepreneurial Potential (Krueger & Brazeal, 1994).

2.11.3 Entrepreneurial Potential

The model of Entrepreneurial Potential is grounded in social psychology and highlights the importance of social norms, attitudes and self-efficacy in the potential for entrepreneurial activity as illustrated in Figure 2.4.

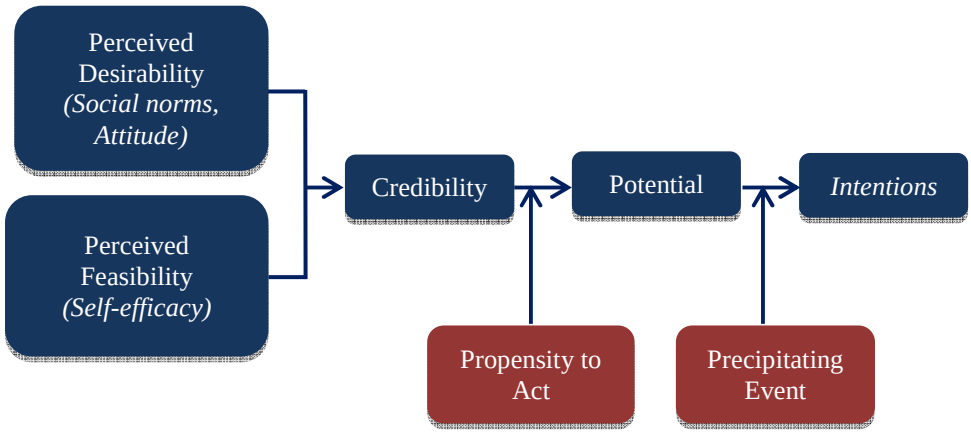


Figure 2.4 Model of entrepreneurial potential

Source: Krueger, N.F. & Braezeal, D.V. 1994. Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice*, 18 (3), pp. 91-104

According to Figure 2.4 perceived desirability and feasibility are instrumental in spurring on intentions. Krueger & Braezeal (1994) provided evidence that these factors are significant predictors of variances in entrepreneurial intentions. In the model of Entrepreneurial Potential, perceived desirability adopts the attractiveness dimensions of TRA and TPB in so far as social norms and attitudes are concerned. Perceived feasibility is underpinned by self-efficacy which is also posited to play an important role in influencing EI.

2.11.4 Self-Efficacy

Urban et al. (2008) studied the attitudes, beliefs and intentions of entrepreneurs and found empirical results substantiating a positive relationship between self-efficacy and entrepreneurship. Self-efficacy posits that the likelihood of pursuing entrepreneurial tasks is based on the beliefs in one's capabilities. Self-efficacy and self-beliefs impact the actualisation of entrepreneurial activity since self-efficacy influences intentions which in turn influence actualisation. Bandura (1997) also asserted that self-efficacy is a key determining factor of intention. The reason is that actualisation is driven by the belief in one's capability to perform and being psychologically equipped to do so. Thus self-efficacy is an important antecedent of entrepreneurial intention.

Bandura (1986) noted that the self-efficacy paradigm is rooted in social cognitive theory. Self-efficacy is the belief that one has in their capability to marshal behavioural and cognitive resources and perform in given situations (Bandura, 1997). Urban et al. (2008) stressed the importance of the will to succeed and personal motivation in achieving entrepreneurial success. Individuals with high levels of self-efficacy pursue challenging goals, are persistent and rebound quickly from failure. Thus high self-efficacy is an indication of a greater likelihood to pursue tasks as compared to low self-efficacy. Chen, Gully & Eden (2004) supported this view by positing that self-efficacy is useful in explaining behaviour. Zhao, Seibert & Hills (2005) also stressed the importance of self-efficacy as antecedents to the intention to pursue entrepreneurial activities.

McGee, Peterson, Mueller & Sequeira (2009) presented that entrepreneurial self-efficacy is value adding as it incorporates both environmental and personality variables. Chen et al. (2004) asserted that self-efficacy is instrumental in affecting the choices made by individuals and the levels of perseverance that are applied. This applies to the entrepreneurs both within and beyond organisational boundaries. The theme of perseverance is also an integral element of the drive and motivation that accompanies entrepreneurial success and the ability to handle emotional and social stress associated with entrepreneurship. This view is supported by Hmieleski & Corbett (2008) who stressed that high levels of self–efficacy translates into entrepreneurs setting and persisting in the achievement of challenging goals. Judge, Shaw, Jackson & Rich (2007) presented that self-efficacy is "proven to be one of the most focal concepts in contemporary psychology research" (p.107)

Barbosa, Gerhardt & Kickul (2007) presented four types of self-efficacy tasks that exemplified individual entrepreneurial self-efficacy. These include:

1. Opportunity-identification self-efficacy: perception to identify and develop new market offerings
2. Relationship self-efficacy: perception of the ability to build investor relationships
3. Managerial self-efficacy: perception of economics and financial management capabilities
4. Tolerance self-efficacy: perception of the ability to cope with stress and change

These self-efficacy dimensions reinforce the importance of personality and the ability to interact with the forces at play within the environment. Judge, Shaw, Jackson et al. (2007) posited that self-efficacy and work-related performance are the outcomes of numerous factors as illustrated in Figure 2.5.

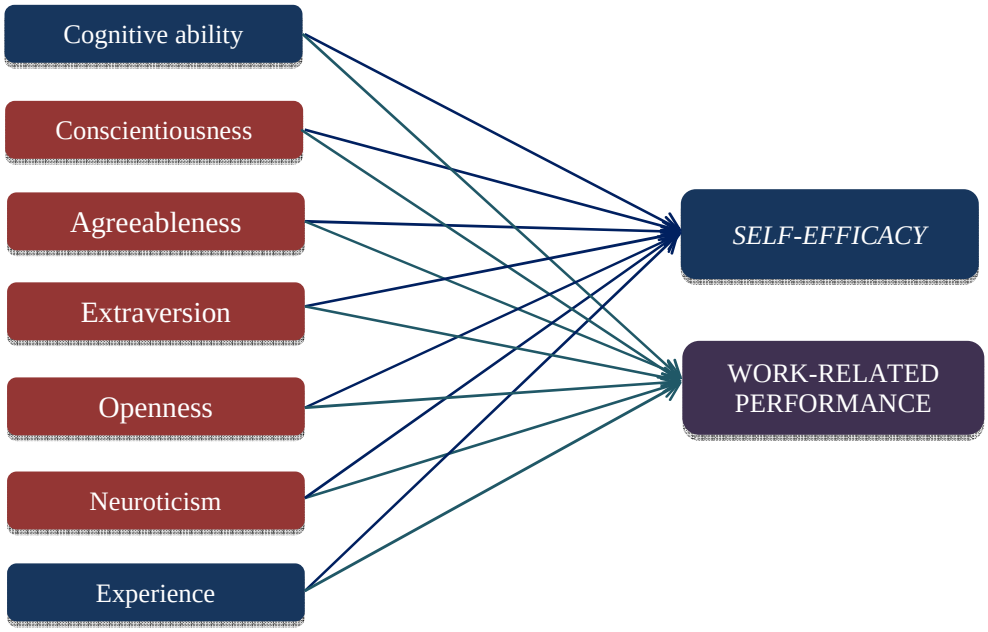


Figure 2.5 Conceptual path model

Source: Adapted from Judge, T.A., Jackson, C.L., Shaw, J.C., Scott, B.A. & Rich, B.L., 2007. Self-efficacy and work related performance: The integral role of individual differences. *Journal of Applied Psychology*, 92 (1), pp. 107-127.

It is evident from Figure 2.5 that cognitive ability, the personality traits contained in the Five Factor Model of personality and experience all have a bearing on self-efficacy. Judge & Ilies (2002) undertook a meta-analysis on the relationship between conscientiousness, agreeableness, extraversion, openness and neuroticism to performance motivation and found a positive correlation between these constructs. Thus personality factors are found to be important for entrepreneurial success.

General self-efficacy (GSE) extends the perception of capacity from performance within specific situations to performance in a variety of situations (Judge, Erez & Bono, 1998). Entrepreneurial self-efficacy (ESE) was defined by Krueger &

Brazeal (1994) as the antecedent to the creation of new ventures. Baum, Locke & Smith (2001, 2004) and Forbes (2005) found positive relationships between new venture growth and entrepreneurial self-efficacy. However, McGee et al. (2009) presented that the following factors prevented ESE from being effectively applied:

- There is a lack of consensus on whether or not ESE was more appropriate than GSE
- There are inconsistencies in how the ESE construct and its dimensionality are captured
- An overreliance on empirical data collected from a limited source (entrepreneurs and university students) is prevalent

In contrast to ESE, GSE is more stable and representative of the capacity to perform in different task-orientated situations (McGee et al., 2009). This is because it accepts that a diverse set of skills is required to achieve success. It explores a variety of capabilities as compared to the limited study of ESE that focuses only on students and entrepreneurs. This view was supported by Markman, Balkin & Baron (2002). Practically, GSE is also much easier and simpler to measure as compared to ESE which is specific and lacks generalisability. However Chen, Gully & Eden (2001) presented that GSE has limited construct validity and problems such as multidimensionality and low content validity are evident. They developed and validated the New General Self-Efficacy (NGSE) to measure self-efficacy.

The NGSE scales indicates that goal setting, resilience when tackling difficult tasks, the belief in achieving desired outcomes, succeeding, overcoming challenges, and confidence are the key dimensions of self-efficacy (Chen at al., 2001). The study was conducted on undergraduates in both mid-Atlantic and Israeli universities and exhibited high construct validity and reliability. The NGSE scale was also employed by Urban et al. (2008) to test for measurement invariance across ethnic groupings in so far as cultural values, attitudes and beliefs regarding self-efficacy were concerned. This study employs the NGSE scale to assess the extent of self-efficacy in the subjects. Based on the relationship identified between self-efficacy and EI (Bandura, 1997, Zhao et al., 2005 and Urban et al., 2008), self-efficacy is measured to assess the extent of EI.

2.12 The actualisation of entrepreneurship

Thandi and Sharma (2004) posited that drivers (antecedents) combine with facilitators (intervening variables) to produce an entrepreneurial outcome as illustrated in Figure 2.6.

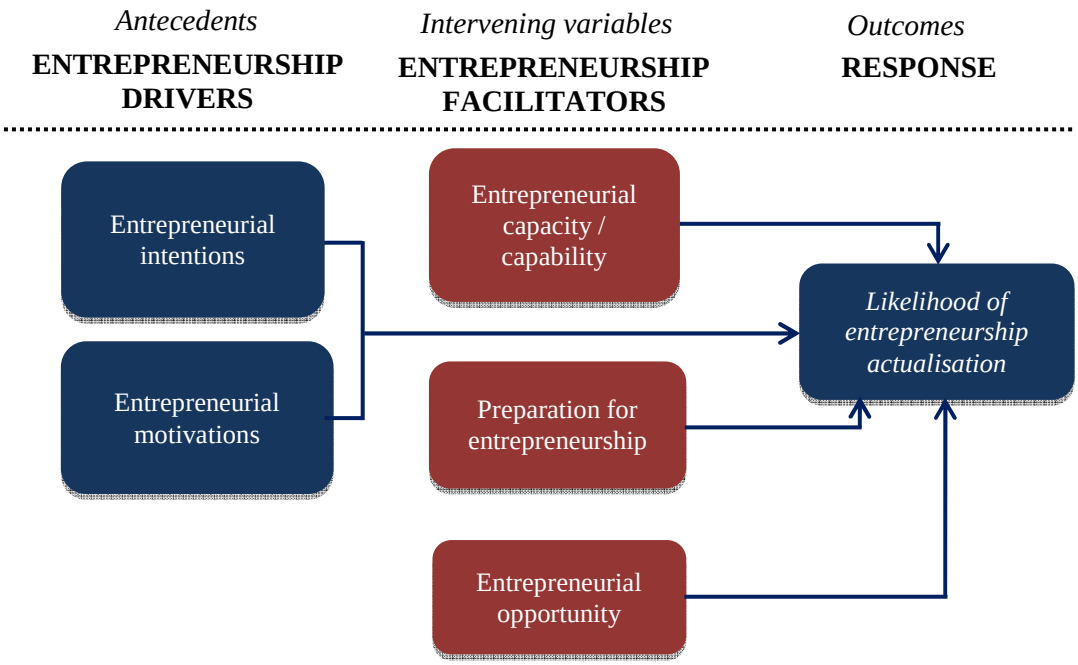


Figure 2.6 Conceptual framework for entrepreneurship actualisation

Source: Adapted from Thandi, H. & Sharma, R., 2004. MBA students' preparedness for entrepreneurial efforts. *Tertiary Education and Management*, 10 (1), pp. 209-226.

It is evident from Figure 2.6 that the drivers of entrepreneurship include intentions and motivations. When these drivers are facilitated by entrepreneurial capacity, entrepreneurial preparedness and the entrepreneurial opportunity, the actualisation of entrepreneurship is realised. It is presented that entrepreneurial capacity is correlated with entrepreneurial orientation since personality traits fuel entrepreneurial tendencies. Entrepreneurial capability is conjectured to draw parallels with self-efficacy as asserted by Barbosa et al. (2007). The preparation for entrepreneurship is impacted by knowledge, attitude, skills and experience (Thandi & Sharma, 2004). The entrepreneurial opportunity is the outcome of external factors in the environment including market and finance conditions, culture,

economics, politics, society and technology. The underlying theme is that the likelihood of entrepreneurial actualisation is dependent upon the individual (intentions, motivations, capacity and capability) and the entrepreneurial opportunity itself.

2.13 Development of the conceptual framework

A consolidation of the theories and empirical studies in the literature review results in the formulation of the conceptual framework for entrepreneurial actualisation as illustrated in Figure 2.7.

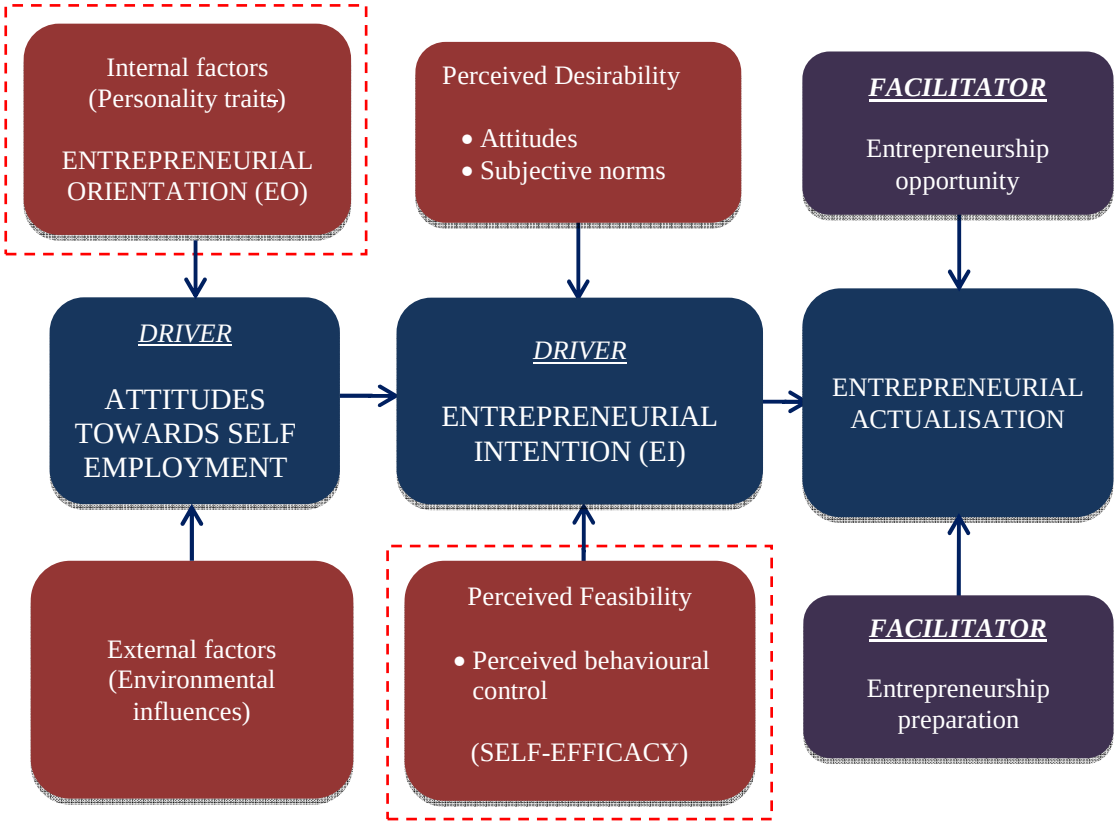


Figure 2.7 Conceptual framework for the study

According to Figure 2.7, the drivers of entrepreneurship are the attitude towards self-employment and entrepreneurial intention. When combined with the facilitators of the entrepreneurship opportunity and entrepreneurship preparation, they culminate in entrepreneurial actualisation.

In so far as the drivers of entrepreneurship are concerned, research indicates that the attitudes towards self-employment are impacted upon by internal factors (personality traits) that impact on EO and external factors (environmental influences). EI is impacted by perceived venture desirability and feasibility. Perceived desirability is influenced by an individual's attitudes and subjective norms and perceived feasibility is impacted upon by self-efficacy (Chen et al., 2001).

This study focuses on the EO and EI constructs and their impact on the actualisation of entrepreneurship. The external factors, perceived desirability and facilitators presented in the conceptual framework are beyond the scope of this study. Bolton & Lane (2012) present that the key measures of EO are risk-taking, innovativeness and proactivity. These factors are measured in the current study to assess the extent of EO. Chen et al. (2001) asserted that self-efficacy is an effective measure of EI. Self-efficacy is evaluated to assess the extent of EI in the population chosen for the study.

2.14 A viable source of entrepreneurs

Researches and academics advocate that education has a pivotal role to play in the achievement of entrepreneurial success. Smith et al. (2005) found that education has a moderating impact on entrepreneurial orientation and psychological traits. Given the importance of orientation and traits on entrepreneurship, it is postulated that education thus directly impacts the success of failure of the entrepreneurial initiatives. Herrington et al. (2011) noted an adverse relationship between individuals with lower levels of education and the tendency to pursue entrepreneurship. This indicates that education has an impact on the likelihood of entrepreneurship actualisation.

Laukannen (2000) indicated that the objective of education for entrepreneurship is to "develop and stimulate the entrepreneurial process, providing all the necessary tools for the start-up of a new venture". The impact of education on entrepreneurship is not limited solely to the confines of organisations but also

influences the extent of entrepreneurship beyond organisational boundaries. Friedrich & Visser (2006) presented that entrepreneurship education is valuable in developing economies and that tertiary institutions are obligated to provide entrepreneurship education and training to industry. The relationship between the university, industry and government forms the backbone of enterprise success. The importance of education as a facilitator of entrepreneurship means educated individuals are a potential source of successful entrepreneurs. However education alone is inadequate and needs to be supplemented by various other factors.

Thandi & Sharma (2004) and Driessen & Zwart (2005) presented that successful behaviour is influenced by individual motivation, characteristics, capabilities, knowledge and experience. Motivation is intrinsic and grounded on one's value system. Characteristics comprise traits that impact on one's ability to handle activities. Motivations and traits are related to internal factors and are interchangeable with personality trait theory. Capabilities can be learnt and are prone to change over time and feature orientation of the market, creativity, flexibility and management attributes. Knowledge and experience form the final dimension of successful behaviour and experience is acquired over time. Thus it is evident that education needs to be supplemented by capability and experience to realise entrepreneurial success.

Researchers and academics indicate that skills and capabilities acquired through corporate exposure are positively correlated with the preparedness to embark upon entrepreneurial activities. Luethje & Franke (2004) presented that experience was enhanced by mentorship, training and networking. Corporate exposure and experience is postulated to supplement knowledge and instil confidence and know-how that that equips an individual with the necessary tools to tackle a multi-faceted environment (Thandi & Sharma, 2004). Given the balance struck between education and experience, Urban et al. (2008) presented that MBA students are more likely to embark on entrepreneurial careers as compared to individuals with no work experience. They are also more likely to realise entrepreneurial success since the exposure of these individuals to the corporate environment means that the requirements of experience, inspiration, training and networking are fulfilled. Bosma et al. (2012) indicated a higher inclination towards entrepreneurship

amongst individuals who possess high levels of maturity, education, experience and corporate exposure. Thus MBA students provide an ideal source of entrepreneurs since they possess the necessary attributes important for entrepreneurial success. In this regard the subjects in the current study comprise of MBA students. The propositions and hypotheses developed as a result of the literature review and conceptual framework are tested on these subjects.

2.15 Propositions and Hypotheses

The conceptual framework for the study (Figure 2.7) presents that Entrepreneurial Orientation (EO) and Entrepreneurial Intention (EI) impact the likelihood of entrepreneurial actualisation. Thus these factors are evaluated to establish the entrepreneurship profile of the subjects in the study.

2.15.1 Proposition 1: Entrepreneurial Intention (EI)

Self-efficacy is measured to establish if the subjects in the study exhibit high or low levels of EI. Self-efficacy is underpinned by an individual's belief in their capability to marshal behavioural and cognitive resources and perform in situations (Bandura, 1997). Given the dynamics of the corporate environment that enhance the capabilities and competencies of individuals, MBA students operating in this context are likely to have strong beliefs in their abilities. This culminates in high self-efficacy and EI. Thus the following proposition is conceptualised: The 2012 cohort of UKZN MBA students display a high level of entrepreneurial intention.

2.15.2 Proposition 2: Entrepreneurial Orientation (EO)

Bolton & Lane (2012) identify three personality traits that exhibit validity and reliability in so far as the measurement of EO is concerned. These include risk-taking, innovativeness and proactivity. In the study these dimension are measured to establish if the subjects exhibit high or low levels of EO. The exposure of MBA

students to the dynamics of the corporate environment is likely to enhance these dimensions and consequently EO. Thus the following proposition is conceptualised: The 2012 cohort of UKZN MBA students display a high level of entrepreneurial orientation.

2.15.3 Hypothesis 1: Correlation of EO and EI

The study has identified EO and EI as drivers of entrepreneurial behaviour and factors that positively impact the likelihood of entrepreneurial actualisation. Hence it is pertinent to evaluate the relationship that exists between these factors. In this regard the following hypotheses are conceptualised:

- Null hypothesis (H_o): There is no statistically significant relationship between overall EO and its dimensions (risk-taking, innovativeness and proactivity) and EI

- Alternative hypothesis (H_a): There is a statistically significant relationship between overall EO and its dimensions (risk-taking, innovativeness and proactivity) and EI

2.15.4 Hypothesis 2: Variation in EI

An establishment of the factors that account for variances in EI is important to further assess the relationship that exists between EI and EO. Hence the study evaluates if the dimensions of EO account for variances in EI. The following hypotheses are conceptualised:

- Null hypothesis (H_o): The variance in EI is not significantly explained by the EO dimensions of risk-taking, innovativeness and proactivity

- Alternative hypothesis (H_a): The variance in EI is significantly explained by the EO dimensions of risk-taking, innovativeness and proactivity

Finally, research indicates that gender, age, race and entrepreneurial awareness impact the entrepreneurship profile of individuals and often accounts for differences in entrepreneurial tendencies. These factors are considered in the study.

2.16 Demographics and entrepreneurship

2.16.1 Gender

Herrington et al., (2011) presented that although the involvement of females in entrepreneurship has a greater impact on economies; males are more likely to pursue entrepreneurial activities. In South Africa for example, 11.3 percent of males versus 6.9 percent of females in SA are reported to be involved in early stage entrepreneurial activities. Similar trends, although with less disparity are reported in other developing economies such as Brazil, Russia and China. Males are also found to have higher levels of self-esteem and creativity in so far an entrepreneurship is concerned (Harris, Gibson & Mick, 2009).

Regarding the impact of gender and personality on the tendency to pursue entrepreneurial activities, Zhang, Zyphur, Narayanan, Arvey, Chaturvedi, Lichtenstein & Larsson (2009) found that females have a strong genetic influence but no environmental influences. Males exhibit the alternative pattern i.e. no genetic influence but large environmental influences. Furthermore, the tendency of females to become entrepreneurs is impacted by extraversion and neuroticism. In the case of males extraversion has a mediating impact on environmental influences and the pursuit of entrepreneurship. Thus it is of interest to evaluate the entrepreneurial orientation dimensions of risk-taking, innovativeness and proactivity of males versus females as well as the levels of EO and EI exhibited.

2.16.2 Age

Levesque & Minniti (2011) presented that age has an impact on the tendency to pursue entrepreneurship. In South Africa entrepreneurial activity (at early-stages) is greatest in the 25 – 34 year old bracket (Herrington et al., 2011). Low activity is noted in the 18 – 24 year old bracket. Simrie et al. (2011) and Bosma et al. (2012)

indicated that individuals in the 25 – 44 year old age group display a much higher level of entrepreneurial activity as compared to younger individuals as a result of the extent of corporate exposure acquired. This enables the development of networks, skills and capabilities that are important facilitators of entrepreneurship and increase one's appetite for entrepreneurial risk. While the underlying paradigm is that there is a direct relationship between age and experience, and the appetite for entrepreneurial risk, individuals greater than 54 years of age exhibit low entrepreneurial activity (Herrington et al., 2011). This is attributed to a lower propensity for risk.

The statistics in the United States follow very different trends. Stangler (2009) indicated that in the United States, the 55 – 64 year old age bracket exhibits the greatest entrepreneurial activity rates. The lowest rate is evident in the 20 – 34 year old age bracket. This trend is evident consistently for the period 1996 – 2007. These individuals are high-risk takers as compared to their older counterparts who are more experienced and have more to lose from failed entrepreneurial ventures. The older bracket of individuals also experience higher success rates with entrepreneurial initiatives.

2.16.3 Race

Urban et al. (2008) found that there was a difference in entrepreneurial intention across the various cultural groups in South Africa, when applying the ESE and NGSE scales. Veciana et al. (2005) presented that the cultural and social environment has a key role to play in the perceptions of desirability and feasibility of new venture creation. In this regard Herrington et al. (2011) indicated that Whites and Indians are more likely to start businesses as compared to Coloured and Blacks. This is attributed to the largely to the legacy of apartheid which has resulted in limited access to markets, lower levels of skills and education and a lack of role of models in the population groups exhibiting low levels of entrepreneurial activity. Overall there is a difference in entrepreneurial activity rates when measured across the various race groups in South Africa.

2.16.4 Entrepreneurial Awareness

Harris & Gibson (2008) presented that strong entrepreneurial attitudes correlate with prior family business experience. Co et al. (2007) supported the notion that family exposure to entrepreneurship has a direct impact on the attitude towards entrepreneurship. Dombrovsky & Welter (2006) noted that individuals with the strongest entrepreneurial tendencies have siblings and parents as entrepreneurs. Thus exposure to entrepreneurship impacts the decision to pursue entrepreneurial activities. It is further conjectured that this exposure has a positive impact on attitudes and the readiness of individuals to become entrepreneurs as well as the success rates experienced.

The demographic factors of gender, age, race and entrepreneurial awareness are important in the analysis and comparison of entrepreneurial tendencies. Hence the extent of EO, EI and likelihood of entrepreneurial actualisation will be evaluated against these factors.

2.17 Summary

This chapter provided an overview of entrepreneurship and the importance of this phenomenon in a global context. The benefits of entrepreneurship are identified as increased employment and economic growth, and enhanced competitiveness and innovation. The state of entrepreneurship in South Africa is presented to be concerning, especially in the context of high unemployment and economic disparity. Thus a need for the stimulation of entrepreneurial activity is identified. The literature review presents that the likelihood of entrepreneurship actualisation is impacted by EO and EI. The assessment of EO involves measuring risk-taking, innovativeness and proactivity. In so far as EI is concerned, the measurement of self-efficacy is pertinent. Research also indicates that MBA students as a consequence of their knowledge, skills, capabilities, experience and networking abilities are potentially good entrepreneurs. Demographic factors such as gender, age, race and entrepreneurial awareness are also relevant. The research has been designed to investigate these factors and establish the entrepreneurial profile of the subjects in the study.

CHAPTER THREE

Research Methodology

3.1 Introduction

This chapter outlines the research methodology employed and elaborates upon the research design, population and the survey process chosen for the study. The chapter also discusses the tools, tests and techniques used to analyse and interpret data against the backdrop of the conceptual framework.

3.2 Aim of the Study

The aim of the study is to assess the entrepreneurship profile of the 2012 cohort of UKZN MBA students.

3.3 Respondents and Location of the Study

Sekaran & Bougie (2010) indicated that the research objectives and scope of a study are critical when identifying the target population. In the present study MBA students have been chosen as the aim is to examine entrepreneurship in a population that exhibits the characteristics required for success. MBA students have been identified as individuals who are more likely to embark on entrepreneurial careers than those without the necessary education or work experience (Urban et al., 2008).The basis for this claim is that a good balance has been struck between theoretical know-how and practical application. Thandi & Sharma (2004) asserted that the exposure of individuals to the working dynamics of the corporate environment results in the acquisition of the necessary skills, capabilities, pragmatism and maturity that is required for success This is supplemented by mentorship, training and networking (Bosma et al., 2012).

This study is administered on MBA students at the UKZN's Westville campus in Durban. The reasons that the 2012 cohort of UKZN MBA students have been chosen is twofold. Firstly there is readily available access to a population that exhibits the necessary requirements for entrepreneurial success. Secondly there is no evidence of a study of this nature having been conducted at the GSBL. As a result the study represents new research that forms the basis for future studies of a similar nature.

The population comprises of students from a diverse educational background with qualifications in Arts, Science, Medical Science, Engineering, Social Science, Commerce, Education and Law. Students are located in and around the Durban metropolitan area and the majority are employed in corporates. Some individuals have also pursued entrepreneurship as a career choice and are self-employed. The total population comprises of 191 students (Year 1 = 73 students, Year 2 = 71 students and Year 3 = 47 students). The minimum age required for admission onto the MBA programme is 25 years old. A minimum of 5 years working experience is also mandatory to ensure that potential candidates have acquired the necessary work experience to be able to benefit from the programme.

3.4 Research Approach

Render, Stair & Hanna (2009) described quantitative research as the process of collecting, manipulating and interpreting raw data to acquire information that supports the decision making process. Since it is based on fact, quantitative research is scientific, precise and justifiable (Jonker & Pennink, 2010). Consequently it produces valid and reliable results based on statistical analysis. On the other hand qualitative research is often subjective, explorative and emerges as the study begins to unfold. It is often used in the early stages of research projects and lacks the scientific rigour and precision that accompanies quantitative research.

In the current study a quantitative approach has been chosen since scientific and statistical evidence is used to examine the variables of interest and the relationships that ensue. The study builds upon previous research and there is no need to develop an initial understanding of the issues. There is also no need to explore new ideas as is the case in qualitative analysis. Based on the outcomes of prior research the study is employed to test the relationships between variables, not to determine if relationships exist. For example the study seeks to assess the strength of the relationship between the risk-taking propensity of students and their extent of entrepreneurial orientation, not to determine what factors determine entrepreneurial orientation or if a relationship exists.

The quantitative approach has been chosen for the following reasons:

a. The aim of the study is to measure entrepreneurial orientation and intention via statistical models as compared to investigative or descriptive research
b. The researcher is not aiming to become immersed in engaging with the respondents but to be objective and obtain scientific and conclusive outcomes
c. An objective analysis of data is required as compared to a subjective interpretation e.g. via in depth interviews.
d. All elements of the study including the measurement instrument (questionnaire) have been developed upfront and are well defined, prior to the process of data collection
e. There is substantial prior research available on the items of interest and the relationships to be explored

The study is conducted via a questionnaire administered to the full 2012 cohort of MBA students. The questionnaire is developed based on previous studies that have employed quantitative research techniques to measure individual entrepreneurial orientation (Bolton & Lane, 2012) and self-efficacy (Chen et al., 2001). A questionnaire is the instrument of choice due to low cost, fast data collection, high quality and accuracy. The research process is illustrated in Figure 3.1.

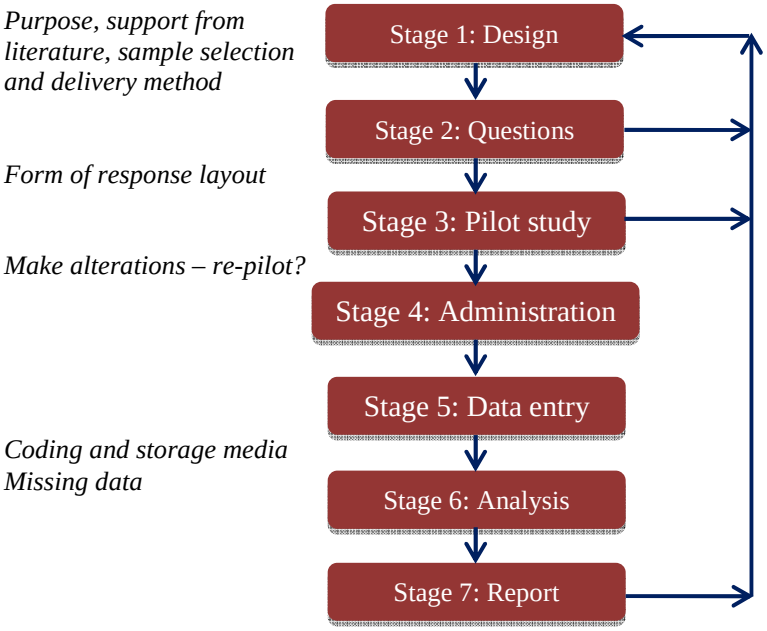


Figure 3.1 The Survey Process

Source: Adapted from Adams, J., Khan, H.T.A., Raeside, R. & White, D., 2007. *Research Methods for Graduate Business and Social Science Students.* California: Sage Publications.

It is evident from Figure 3.1 that the design of the study (Stage 1) is based on the outcomes of the literature review and the development of the conceptual framework. The conceptual framework (Figure 2.7) identifies that in the case of entrepreneurial orientation, the pertinent dimensions to be measured are internal factors viz. risk-taking, innovativeness and proactivity (Bolton & Lane, 2012). Self-efficacy is a pertinent measure of entrepreneurial intention (Chen et al., 2001). Other factors of interest include gender, age, race and entrepreneurial awareness. The outcome of the design stage was the identification of the UKZN MBA students as an ideal population. Furthermore, as per the studies conducted by Bolton & Lane and Chen at al., a quantitative approach via a questionnaire was chosen as the delivery method for the study at UKZN. The detailed development of the questionnaire formed Stage 2 of the survey process.

Once the questionnaire was finalised, and prior to administration, a pilot study (Stage 3) was conducted on five previous MBA students for the following reasons:

- To test the sequencing and layout of the questionnaire
- To test if the questions were simple, clearly articulated and easily understandable
- To assess the uniqueness and unambiguous nature of the options presented
- To assess if the questionnaire adequately explained the purpose of the study and the benefit to be derived
- To evaluate the respondents confidence of assured anonymity and confidentiality
- To gauge the potential for a high response rate based on the questionnaire being simple, concise and efficient

No issues were raised by the pilot study participants with regards to layout, sequencing, uniqueness of options, length of survey or perceptions of anonymity and confidentiality. The participants advised that the survey was unambiguous and the purpose clearly articulated.

One of the concerns raised during the pilot study was that the response rate would be low if the questionnaire was administered via e-mail. Keller (2009) describes response rate as the proportion of people selected to participate who actually complete the survey. Adams et al. (2007) indicated that the response rate of mailed or electronic surveys is less than twenty percent. The participants in the pilot study recommended that the survey should be administered in person either on a one-to-one basis or to larger groups of 10 - 20 students. However, due to the excessive time required in this approach, the decision was taken to administer the survey separately to each one of the MBA classes (MBA 1, MBA 2 and MBA 3). This formed Stage 4 of the survey process. A response rate of 61% was achieved based on 117 students completing the questionnaire out of a total of 191 students. Upon collection of the questionnaires the data entry phase (Stage 5) of the survey process was followed and the data obtained was coded for analysis (Stage 6). Once the data was analysed and interpreted, the final report was prepared (Stage 7).

3.5 Census Survey

A census survey is described as a survey where the intention of the researcher is to involve the entire population in the study (Adams, Khan, Raeside & White, 2007). Sampling on the other hand is defined as the process of selection of a sufficient number of elements from a population in a manner that enables the generalisation of certain characteristics to the entire population (Sekaran & Bougie, 2010). While the benefits of sampling are lower cost and higher efficiency due to reduced data collection and processing (Keller, 2009), the census survey has been favoured for the current study because of the higher accuracy and more reliable data obtained as compared to a sampling approach. The readily available access to the population of only 191 students also means that no major additional cost is incurred when opting for the census survey.

Sekaran & Bougie (2010) reported that the downside of sampling is the potential non-representativeness of the sample due to the smaller number of respondents in the study However in the case of a census survey this concern is irrelevant since the intention of the researcher is to involve all elements of the population. For the present study the census survey is applied to the population comprising the full cohort of 191 MBA students. The survey is cross-sectional in nature as it involves the gathering of information from the population at a single point in time.

3.6 Data Collection

Sekaran & Bougie (2010) refer to primary data as data obtained specifically for the area of interest and secondary data as information gathered from existing sources. No secondary sources such as existing surveys or statistical compilations are able to provide the data required as the study is peculiar to the 2012 cohort of MBA students enrolled at UKZN. Consequently, primary sources of data are employed to evaluate the variables of interest. First-hand information is obtained from the respondents via the administration of the questionnaire in Appendix 1.

Keller (2009) indicated that low survey response rates and high rates of incorrect responses are attributable to the misunderstanding of respondents regarding certain questions or statements. This was mitigated through personal administration of the questionnaire. The questionnaires were distributed and the purpose and benefits of the study were communicated. Respondents were assured of anonymity and were informed that the survey was entirely voluntary. They were also informed of their right to withdraw from the questionnaire at any time, if so desired. Respondents were allocated 15 minutes completion time before the collection of questionnaires.

The researcher was also available to field any questions during the process. In addition to the clarification of ambiguous or uncertain issues, the benefit of this approach was the collection of responses within a short space of time (Sekaran & Bougie, 2010). No additional costs were incurred also making the process cost-effective. Furthermore it was an ideal opportunity to introduce the research content and establish rapport with the respondents in order to enable improved response rates. It was also utilised as an opportunity to highlight the importance of frank and honest answers to the integrity and credibility of the study.

3.7 Development of the Instrument

The conceptual framework for the study (Figure 2.7) identifies that entrepreneurial orientation and entrepreneurial intention are important in determining the likelihood of entrepreneurial actualisation. Since these constructs are well defined there is no need to explore any nuances or vaguely defined areas of interest. Consequently closed-ended questions are employed in the research instrument and in the assessment of the variables of interest. Keller (2009) describes variables as the characteristics of samples or populations. In the study the variables include the demographics of the participants, as well as the entrepreneurial intention and self-efficacy scores.

According to Adams et al. (2007), the benefits of closed-ended questions include the easier completion of surveys by respondents (resulting in higher response rates), simpler and more efficient processing, and reduced variability in the analysis of

results. These benefits are contrasted to open ended questions that are characteristic of qualitative research and which are more time intensive, subject to misinterpretation and tedious to process. Consequently closed-ended questions were chosen for the questionnaire (see Appendix 1). The questionnaire consists of three broad areas of evaluation viz. demographics, measurement of entrepreneurial intention and measurement of self-efficacy.

3.7.1 Demographics

The responses of participants are profiled according to the following variables: gender, age, race, year of study, professional qualification, field of employment, working experience, employment status, job status and entrepreneurial awareness. In terms of professional qualification, field of employment and entrepreneurial awareness, respondents were able to select more than once option presented e.g. an individual may have entrepreneurial influences that are not only limited to a partner or spouse but that also includes relatives and friends. Singular responses were solicited for the remaining variables i.e. only one option could be selected when completing the questionnaire.

3.7.2 Measurement of EI

Chen et al. (2001) asserted that self-efficacy is an effective measure of entrepreneurial intention and developed and validated the New General Self-Efficacy (NGSE) scale. The scale was formulated in response to concerns that there was limited research on general self-efficacy measures which were multidimensional and exhibited low content validity. The study was conducted on undergraduates in mid-Atlantic and Israeli universities and exhibits high internal consistency, content validity and predictive validity. Thus the NGSE scale is an effective measure of self-efficacy.

The self-efficacy measures employed in the NGSE scale are replicated to measure self-efficacy in the UKZN MBA students as indicated in Table 3.1.

Item	Description
Q11	I will be able to achieve most of the goals that I have set for myself
Q12	When facing difficult tasks, I am certain that I will accomplish them
Q13	In general, I think that I can obtain outcomes that are important to me
Q14	I believe I can succeed at most any endeavour to which I set my mind
Q15	I will be able to successfully overcome many challenges
Q16	I am confident that I can perform effectively on many different tasks
Q17	Compared to other people, I can do most tasks very well
Q18	Even when things are tough, I can perform quite well

Table 3.1 New General Self-Efficacy (NGSE) Scale

Source: Adapted from Chen, G., Gully, S.M. & Eden, D. 2001. Validation of a New General Self-Efficacy scale. *Organisational Research Methods*, [Online]. 4 (1), pp. 62-83.

It is evident from Table 3.1 that the key features of the NGSE scale are the beliefs that individuals possess to achieve difficult goals and tasks, to successfully accomplish important outcomes and to overcome challenges. Other themes that feature include confidence in the ability to perform and resilience to perform when the going gets tough. The level of disagreement, neutrality or agreement with these statements is tested in the current study at UKZN based on responses to a five-point Lickert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree).

3.7.3 Measurement of EO

The current study replicates the Individual Entrepreneurial Orientation (IEO) instrument developed by Bolton & Lane (2012). The tool was tested and validated on 1,102 students at a regional university in the United States of America. Exploratory factor analysis resulted in measures that exhibit high validity and reliability for the dimensions of risk-taking, innovativeness and proactivity. Furthermore there was a statistical correlation with these dimensions and entrepreneurial orientation. The items used in the IEO study are indicated in Table 3.2.

Item	Dimension	Description
Q19	Risk-taking	I like to take bold action by venturing into the unknown
Q20	Risk-taking	I am willing to invest a lot of time and/or money on something that might yield a high return
Q21	Risk-taking	I tend to act "boldly" in situations where risk is involved
Q22	Innovativeness	I often like to try new and unusual activities that are not typical but not necessarily risky
Q23	Innovativeness	In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before
Q24	Innovativeness	I prefer to try my own unique way when learning new things rather than doing it like everyone else does
Q25	Innovativeness	I favour experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems
Q26	Proactivity	I usually act in anticipation of future problems, needs or changes
Q27	Proactivity	I tend to plan ahead on projects
Q28	Proactivity	I prefer to 'step-up' and get things going on projects rather than sit and wait for some else to do it

Table 3.2 Items measuring Individual Entrepreneurial Orientation (IEO)

Source: Adapted from Bolton, D.L. & Lane, M.D., 2012. Individual Entrepreneurial Orientation: Development of a Measurement Instrument. *Education and Training*, [Online]. 54(2/3), pp. 219-233.

It is evident from Table 3.2 that the risk-taking dimension is assessed by evaluating responses to statements involving venturing in the unknown, taking bold action where risk is involved and investing in activities with the potential to yield high returns. The innovativeness dimension is assessed by evaluating responses related to trying new and unusual activities, trying unique approaches and favouring experimentation above convention. In so far as proactivity is concerned, the questionnaire tests responses to acting in anticipation of future problems, planning forward and initiating action on projects. The level of disagreement, neutrality or

agreement with these statements in the current study is tested according to a five-point Lickert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree).

3.8 Pre-testing and Validation of previous studies

The pilot study was utilised to pre-test the questionnaire designed for the UKZN study as described in section 3.5 Census Survey. The NGSE scale and IEO instrument both exhibited high construct validity and reliability as described in sections 3.7.1 and 3.7.2 respectively.

3.9 Analysis of the Data

3.9.1 Data coding and interpretation

Data editing is described as the process of "detecting and correcting illogical, inconsistent, or illegal data and omissions" (Sekaran & Bougie, 2010, p. 308). Once the data was collected it was analysed for completeness and integrity. During this process no responses were edited or corrected, however two responses were illegible and exhibited inconsistent responses. In the latter case, Lickert scale scores were not within the 1 – 5 point scale prescribed in the questionnaire. These two responses did not indicate any underlying patterns that would enable the editing of data for analysis while retaining the integrity of the study. Thus they were omitted.

Sekaran & Bougie (2010) describe coding as the assignment of numbers to responses, for entry onto a database. The remaining 117 responses were consolidated onto a Microsoft Excel database and the data coded. During the coding process unique numerical values were assigned to each one of the options presented in the questionnaire. An example of the coding methodology for the age group demographic is indicated in Table 3.3.

Age group	Code allocated
25 - 34 years	1
35 - 44 years	2
45 - 54 years	3
55 - 64 years	4
Over 64 years	5

Table 3.3 Coding allocation for the Age Group variable

It is evident from Figure 3.3 that each option in the age group category is allocated a unique code ranging from 1 to 5 that differentiates it from the other possible options. The assignment of codes enables the cross comparison of data and the assessment of relationships that exist between variables. A similar approach is applied for the other variables in the study. In so far as the items measuring entrepreneurial orientation and self-efficacy are concerned (Q11 – Q28) responses to the Lickert type scale are coded in a similar manner. A full set of data codes allocated during the coding process is presented in Appendix 3.

Once the coding process was completed, the data was input into SPSS (Statistical Package for the Social Sciences) Version 19 for detailed analysis. The SPSS software tool was utilised because of the capability to manipulate and compare data via a wide range of relationships and testing tools (Landau & Everitt, 2004). Various tests administered via the tool form the basis for the detailed analysis of data.

3.9.2 Tests used for the study

The IEO study (Bolton & Lane, 2012) and NGSE scale (Chen et al., 2001) used many statistical tests for the analysis of data including Cronbach's Coefficient Alpha, Factor Analysis and Principle Component Analysis. Frequency analysis and the Lickert scale were also utilised. The current study also makes use of these tests to analyse the data obtained from the survey.

Tavakol & Dennick (2011) described the application of an internal consistency test as fundamental to ensuring the validity and reliability of the measurement instrument and the data obtained. Validity is a measure of how well the instrument measures what it is intended to measure. In terms of reliability, this is concerned with the ability of the instrument to consistently measure the variables of interest. It is also a measure of the inter-relatedness of the various items of measure within the test concerned. Reliability and validity are closely related. In the current study Cronbach's Coefficient Alpha is used to test for internal consistency. This is achieved by measuring the correlations between the different items in the IEO and NGSE tests. Cronbach's Coefficient Alpha has been described as the "correlation of a test with itself" (Tavakol & Dennick, 2011, p.53). The typical values for Cronbach's Alpha Coefficient range from zero (0) to one (1). Higher scores indicate higher reliability.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity is used to assess the suitability of data for factor analysis. In the case of KMO, sampling adequacy is the measure that is used to determine the appropriateness of factor analysis (Williams, Onsman & Brown, 2010). Typical values for sampling adequacy ranging between 0.5 and 1.0 are an indication that factor analysis can be performed. Any values below 0.5 indicate that factor analysis is inappropriate. Bartlett's Test of Sphericity is a statistical procedure used to test for the equality of variances (Keller, 2009). It is used to check the correlation of variables in a population. Should the variables be correlated, factor analysis may be performed. Values of $p < 0.5$ indicate suitability for factor analysis.

Factor analysis is valuable in uncovering patterns that exist in data, thereby reducing data complexity (Landau & Everitt, 2004). It is used to reduce a large number of variables into a few pertinent factors. It is also used to establish the underlying dimensions and relationships that exist between variables (Williams et al., 2010). In Exploratory Factor Analysis (EFA) an explorative approach is employed to identify the main dimensions that underpin a theory. By comparison in Confirmatory Factor Analysis (CFA) there are certain expectations upfront regarding key dimensions. These are tested for the theory in question.

In the case study concerned, EFA is utilised to assess the structure and dimensionality of the items in the two questionnaires. Williams et al. (2010) presented that EFA has the following benefits:

- It enables the reduction in the number of variables and helps to examine the relationships between variables
- It examines the correlation of variables
- Is useful in validating or disproving theories and constructs
- Enables simple (parsimonious) analysis and the interpretation of variables
- Is useful in establishing construct validity

As part and parcel of EFA, Principle Component Analysis using Quartimax Rotation is utilised in the current study to reduce a large number of items into a small number of factors (Williams et al., 2009). The aim is to provide a simpler factor structure so that the dimensions and relationships between the variables of interest can be analysed.

Descriptive Statistics is used to understand and summarise data collected (Adams at al., 2007). Keller (2009) presented that descriptive statistics involves the organisation, summarisation and presentation of data in a "convenient and informative way" (p. 2). Descriptive statistics takes the form of graphs to extract information or numerical techniques such as frequency analysis to present the distribution of data. Some of the benefits of descriptive analysis techniques include the recognition of patterns and distribution of data along the variables of interest. Sekaran & Bougie (2010) presented that frequencies consider the "number of times various subcategories of a certain phenomenon occur".

In the current study frequency analysis is used to examine the demographics of the students and responses to items Q11 – Q28. Data is also analysed in terms of min, max, mean and standard deviation scores. The mean and standard deviation is applied to ascertain the extent to which subjects perceive the study variables and dimensions and the extent of variation in their responses. Keller (2009) indicates that the mean is used to describe the centre of a data and hence is a measure of

central tendency (Sekaran & Bougie, 2010). The standard deviation measures the amount of variability in the observations recorded. The minimum and maximum data represent the smallest and largest values of the data observed respectively.

The Kolmogorov-Smirnov test is used to decide on the use of either parametric or non-parametric tools in the further analysis of data. The test is conducted to check for the presence of normal distribution. Normal distribution is described as an approximation to describe random variables and their clustering around a mean value and takes the shape of a bell curve. Should the bell curve become evident then parametric tools may be employed. If not, then non-parametric tools will be employed. Parametric tests enable the drawing of a higher number of conclusions that can be mathematically described based on the results of the bell curve. Non-parametric testing occurs when the bell shaped curve is not prevalent. The results of the Kolmogorov-Smirnov test are indicated in Table 3.4.

Dimension	N	Z	p
Risk-taking	117	1.745	0.005
Innovativeness	117	1.964	0.001
Proactive	117	1.946	0.001

Table 3.4 One-sample Kolmogorov Smirnov Test Results

It is evident in Table 3.4 that in the present case study, the Kolmogorov-Smirnov test did not reveal a normal distribution or bell shaped curve since $p < 0.05$. Consequently non-parametric tests are conducted. The advantage is increased simplicity and the models are less impacted any outliers that exist (Cox, 2006). The non-parametric tests utilised in the study include the Spearman's Correlation, Man Whitney test and the Kruskal-Wallis test.

The Spearman's rank correlation coefficient is used to compare the linear relationships between entrepreneurial intention, risk-taking, innovativeness, proactivity and self-efficacy and to establish if there is a statistically significant relationship between these variables. The Man-Whitney test is used to test for differences in mean scores in the gender variable. The Kruskal-Wallis is used to test

for differences in mean scores in the remaining demographic variables. These tests are used to check for any significant differences in the mean ranks of the dimensions between the various categories of the variables on interest. Based on this outcome certain conclusions are drawn e.g. if there is a difference in entrepreneurial orientation across males and females or across the different age groups of the respondents.

Inferential statistics is a method that is used to draw certain "conclusions or inferences about characteristics of populations" (Keller, 2009, p. 4). Statistical interference is the process of predicting or estimating based on sample data of the population. While it is more cost effective drawing inferences based on a sample as compared to evaluating an entire population, the downside is that the estimations and conclusions drawn were not always correct. For this purpose the confidence level metric is used in the study to indicate the level of assurance that an estimate is correct.

Multiple regression analysis enables the identification of the relationships between variables (Adams et al., 2007). As there are several potential independent variables as compared to only one, multiple regression analysis is employed to understand which factors impact most on entrepreneurial intention (identified as the dependent variable). The test is employed to indicate to what extent entrepreneurial intention is predicted by each independent variable (risk-taking, innovativeness, proactivity and self-efficacy). The Analysis of Variance (ANOVA) is used to assess if the regression model has explanatory power (for $p = 0$ the results and the regression are significant). The beta coefficient is utilised to understand which independent variables have the greatest influence on the dependent variable of entrepreneurial intention.

3.10 Summary

This chapter provided an overview of the quantitative research methodology applied in the study. The IEO model (Bolton & Lane, 2012) and NGSE scale (Chen et al., 2001) are consolidated and replicated to assess the entrepreneurial profile of the MBA students at UKZN's Westville campus. Descriptive and inferential statistics are employed to evaluate the variables of interest and the relationships that exist between variables.

CHAPTER FOUR

Presentation and Analysis of Results

4.1 Introduction

This chapter presents and analyses the results of the study in accordance with the aims and objectives. The outcomes of the validity and reliability tests are presented. Frequency and descriptive statistics are used to analyse demographics, self-efficacy and entrepreneurial orientation trends. An in-depth analysis is conducted via statistical tools including Spearman's correlation, Factor Analysis and Multiple Regression Analysis. These tools are used to uncover patterns and relationships between the dimensions of interest and the variables in the study. Based on the outcomes of the analysis the propositions and hypotheses are either accepted or rejected.

4.2 Reliability and Validity

4.2.1 Reliability

Chronbach's Coefficient Alpha was used to establish Internal Consistency Reliability for the questionnaires used in this study. Table 4.1 shows the reliability for the NGSE scale measuring self-efficacy. Table 4.2 shows the reliability for the entrepreneurial orientation (EO) questionnaire.

Cronbach's Alpha	No. of items
0.909	8

Table 4.1 Reliability statistic for Self-Efficacy

The results show a reliability statistic of 0.909 which indicates that this questionnaire has very high internal consistency reliability.

Cronbach's Alpha	No. of items
0.866	10

Table 4.2: Reliability Statistic for Entrepreneurial Orientation

The results show a reliability statistic of 0.866 which indicates that this questionnaire has very high internal consistency reliability.

It is evident from Tables 4.1 and 4.2 that the measurement tools are able to consistently measure the variables of interest. This also indicates a high level of inter-relatedness of the various items of measure. Thus the measurement tools are able to offer useful insight into the study.

4.2.2 Validity

Factor Analysis was used to assess the structure and dimensionality of the items in the two questionnaires.

4.2.2.1 Entrepreneurial Intention (EI)

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is equal to 0.904 indicating confidence that the instrument is able to effectively measure the extent of entrepreneurial intention. Since the KMO measure is close to 1.0, there is a strong indication that factor analysis can be performed. The results for the Bartlett's Test of Sphericity (581.297; $p < 0.01$) supports the view that the items in the measurement tool are well correlated. Consequently factor analysis can be performed. The 9 item questionnaire was subjected to a Principle Component Analysis using Quartimax Rotation. The results are shown in Table 4.3.

Item	Component 1
Q12	0.894
Q15	0.863
Q11	0.820
Q16	0.813
Q13	0.807
Q14	0.798
Q17	0.649
Q18	0.595

Table 4.3 Component Matrix for Self-Efficacy

It is evident from Table 4.3 that the Principle Component Analysis yielded one component (factor). The component is labelled self-efficacy and is concerned with achieving the goals one has set, being resilient and accomplishing difficult tasks. It is also concerned with obtaining important outcomes, succeeding in tasks and overcoming challenges. The self-efficacy construct is underpinned by the confidence in one's ability to perform effectively. The self-efficacy factor is able to explain any variances that exist in the EI scores resulting from the study.

4.2.2.2 Entrepreneurial Orientation (EO)

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was equal to 0.850 indicating strongly that the instrument is able to effectively measure entrepreneurial orientation. The results for the Bartlett's Test of Sphericity (453.647; $p < 0.01$) indicate that the items in the measurement tool are well correlated with the entrepreneurial orientation construct. Both tests indicate that factor analysis can be performed. The 10 items was subjected to a Principle Component Analysis using Quartimax Rotation. The results are shown in Table 4.4.

Item	Components		
	Factor 1	Factor 2	Factor 3
Q21	0.856		
Q20	0.754		
Q19	0.725		
Q22	0.631		
Q27		0.856	
Q28		0.739	
Q26		0.664	
Q25			0.771
Q24			0.724
Q23			0.645

Table 4.4 Rotated Component Matrix for Entrepreneurial Orientation

According to Table 4.4 the Principle Component Analysis yielded 3 components (factors) identified as Risk-taking (factor 1), Proactivity (factor 2) and Innovativeness (factor 3). In so doing a simpler and more concise factor structure was arrived at. These factors were found to be relevant when evaluating variances in EO.

Component 1 (Factor 1)

This component is labelled Risk-taking and deals with items relating to acting boldly in situations where risk is involved (highest loading), investing a lot of time and money on initiatives that yield high returns and taking bold action by venturing into the unknown. Items Q21 – Q23 loaded onto this factor however Item Q22 was considered to be more appropriate under Component 3 based on the findings in established studies such as the IEO study by Bolton & Lane (2012).

Component 2 (Factor 2)

This component is labelled Innovativeness and deals with the trial of new and unusual activities, the application of one-of-a-kind approaches, unique ways of learning new things and favouring experimentation as compared to applying methods generally used by others. Items Q26 – Q28 loaded onto this factor.

Component 3 (Factor 3)

The final component of the entrepreneurial orientation factor analysis is labelled Proactivity. This component involves acting in anticipation of future problems, planning ahead on projects and stepping-up and getting things done as compared to waiting for someone else to do so. Items Q23 – Q25 loaded onto this factor.

It is evident that the Principle Component Analysis was able to reduce the 10 measures on entrepreneurial orientation into three factors. The items that loaded on these factors are consistent with the results of the IEO study by Bolton & Lane (2012).

4.3 Descriptive Statistics

Descriptive statistics in the form of frequencies and percentages was computed to establish the profile of the respondents as well as responses to the entrepreneurial intention and entrepreneurial orientation statements in the questionnaire.

4.3.1 Profile of the respondents

Gender

Gender	N	%
Male	80	68.4
Female	37	31.6
Total	**117**	**100**

Table 4.5 Gender distribution of respondents

It is evident that the majority of respondents are males who comprise 68.4% of respondents with females comprising only 31.6%. There is not much that can be attributed to this difference which is expected since the percentage of males and females enrolled at the GSBL are approximately 60% and 40% respectively.

Age

Age	N	%
25 - 34 years	58	49.6
35 - 44 years	49	41.9
45 - 54 years	9	7.7
55 - 64 years	1	0.8
Over 64 years	0	0
Total	**117**	**100**

Table 4.6 Age distribution of respondents

In terms of age, the majority of respondents fall into the age group 25 – 34 years old (49.6%), followed by the 35 – 44 year old age group (41.9%) and 9 subjects (7.7%) in the 45 – 54 year old age group. Only one (1) individual falls in the 55 – 64 year age group. This distribution is expected since the majority of MBA students (90%) enrolled on the MBA programme fall in the 25 – 44 year old age group.

Race

Race	N	%
Black	54	46.2
Indian	49	41.9
White	12	10.2
Coloured	2	1.7
Total	**117**	**100**

Table 4.7 Race distribution of respondents

In so far as race is concerned, the majority of the respondents are Black (46.2%), followed by Indian (41.9%), White (10.3%) and Coloured (1.7%). These statistics are expected as the majority of students enrolled on the MBA programme are Black and Indian who account for 90% of the population.

Year of study

The study considered the split of students across the different years of study as illustrated in Figure 4.1.

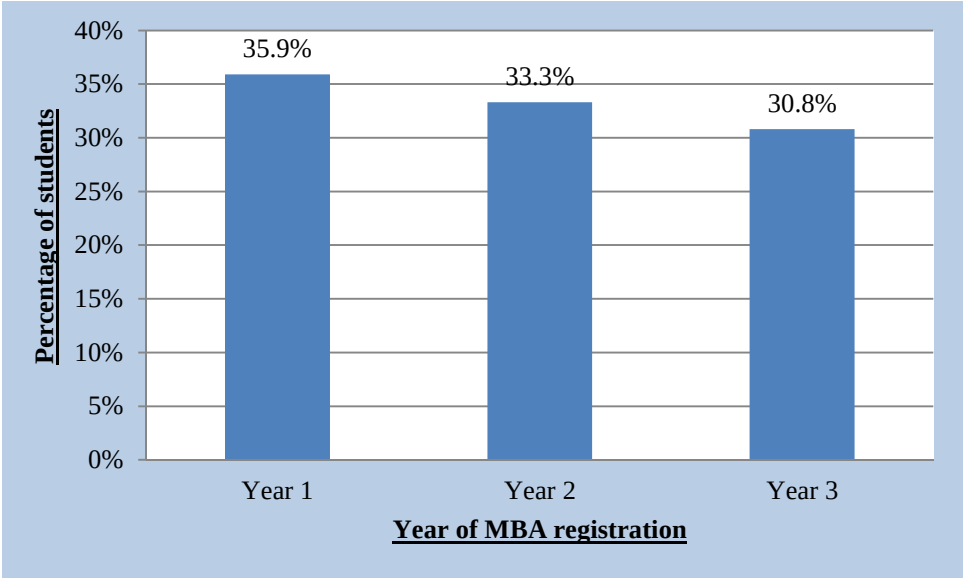


Figure 4.1 Year of MBA registration

It is evident from Figure 4.1 that there is an approximately even split in the number of respondents across the different years of study. Respondents from Year 1 comprise 35.9% of the students surveyed, Year 2 comprises 33.3% and Year 3 comprises the remaining 30.8% of the respondents. There is not much that can be attributed to this distribution. In terms of the entire population of 191 students that is presently enrolled on the MBA programme, Year 1 comprises 38.2%, Year 2 comprises 37.2% and Year 3 comprises 24.6%. Thus the distribution obtained in Figure 4.1 is expected.

It must be noted that the Year 3 MBA respondents excluded students from previous years of study enrolled solely for the dissertation module. All respondents were enrolled for part-time study.

Employment status

The study considered the employment status of the students ranging from full time employees, part-time employees and those individuals who were either unemployed or in-between jobs as illustrated in Figure 4.2.

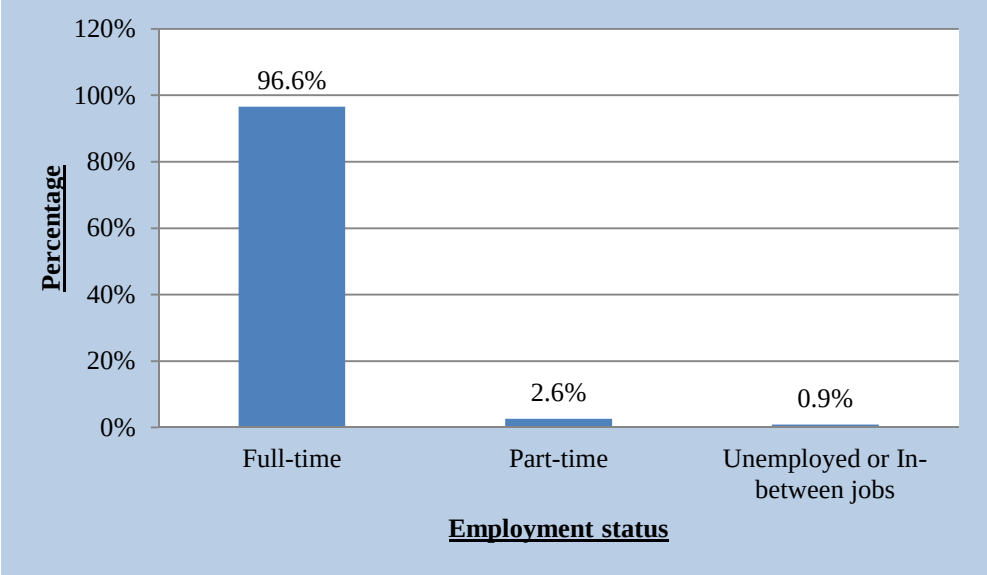


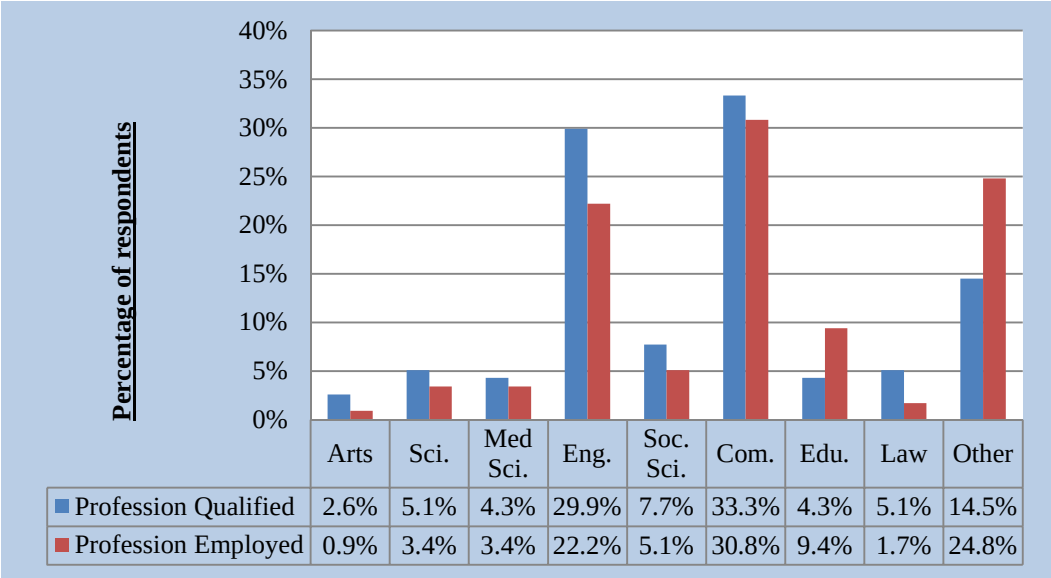
Figure 4.2 Category of employment

It is evident from Figure 4.2 that the majority of the respondents (96.6%) are employed on a full time basis, either within organisations or in self-employment. This statistic is expected as the majority of the students registered on the MBA programme are employed full time and are studying on a part-time basis.

Only a small percentage is either employed part time (2.6%) or unemployed / in-between jobs (0.9%). A total of 113 respondents were employed on a full-time basis with only 3 respondents being employed part-time. One (1) respondent was unemployed / in-between jobs.

Professional qualification and field of employment

The study also considered the tertiary education and field of employment of the respondents as illustrated in Figure 4.3.



	Arts	Sci.	Med Sci.	Eng.	Soc. Sci.	Com.	Edu.	Law	Other
Profession Qualified	2.6%	5.1%	4.3%	29.9%	7.7%	33.3%	4.3%	5.1%	14.5%
Profession Employed	0.9%	3.4%	3.4%	22.2%	5.1%	30.8%	9.4%	1.7%	24.8%

*Note: These statistics include students with qualifications / jobs in more than one field.

Figure 4.3 Profession

It is evident from Figure 4.3 that most of the respondents in the study graduated in the Commerce (33.3%) and Engineering (29.9%) disciplines. The Social Science field comprised 7.7% of respondents followed by Science (5.1%), Law (5.1%), Education (4.3%), Medical Science (4.3%) and Art (2.6%). "Other" professions accounted for 14.5% of the respondents surveyed. Out of the 117 respondents in the study, 4 students have embarked on careers as entrepreneurs. It is also evident that most of the respondents are employed in the Commerce and Engineering fields with the statistics being 30.8% and 22.2% respectively. The other fields feature less predominantly.

The Global University's Entrepreneurship Spirit Survey (Viviers et al., 2011) indicates that the majority of tertiary students in South Africa are in the Business and Economics fields (55.8%). Social Sciences comprise 4% of students. Arts and Law comprise 2.6%. The current study reveals similar trends.

Years of experience

The number of years of working experience of the respondents was measured and the results are illustrated in Figure 4.4.

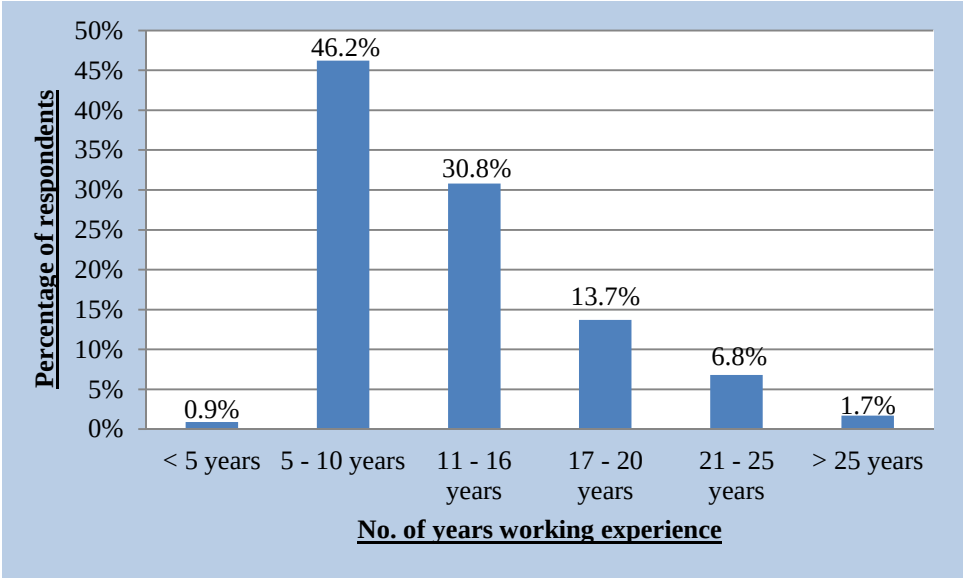


Figure 4.4 Number of years working experience

It is evident in Figure 4.4 that most of the respondents (46.2%) have between 5 – 10 years working experience, with 30.8% having 11 – 16 years working experience. This distribution is expected since the majority of MBA students (90%) enrolled on the MBA programme fall in the 25 – 44 year old age group and are therefore expected to have 5 – 16 years of working experience

Employment level in organisation

The job status of the respondents was classified according to five categories including top management, middle management, supervisor, non-managerial and other. The results of the frequency distribution are illustrated in Figure 4.5.

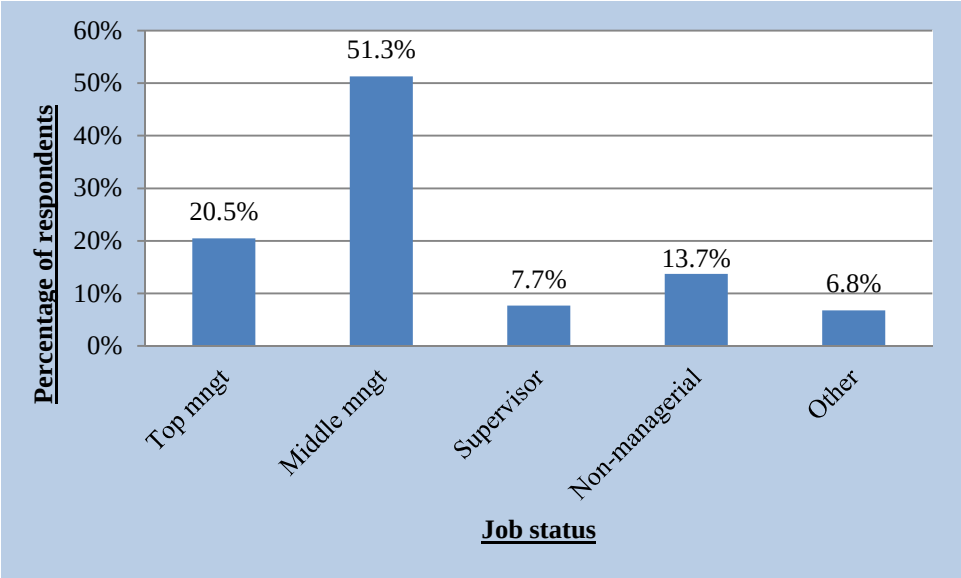
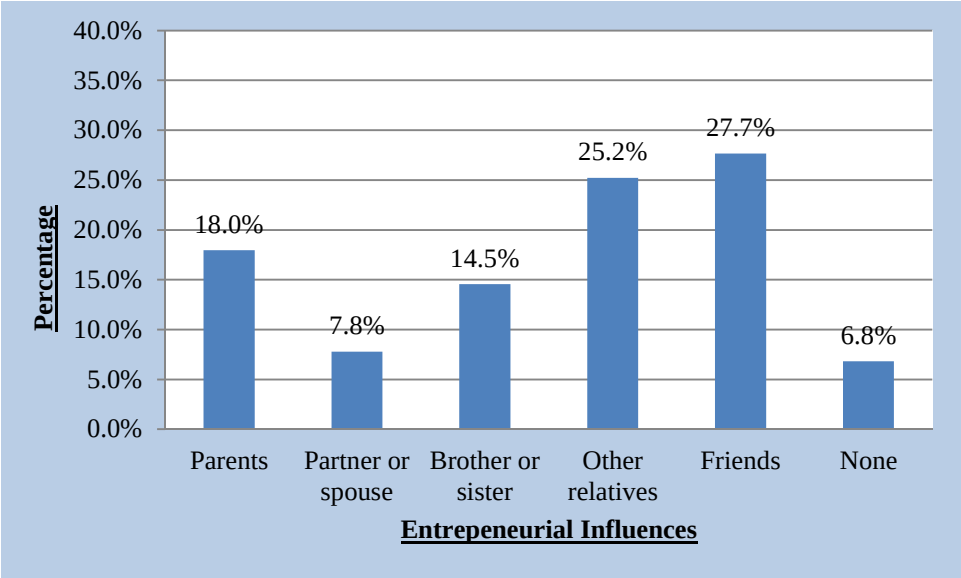


Figure 4.5 Job status

It is evident from Figure 4.5 that most of the respondents are top and middle management employees in their organisations with a total percentage of 71.8% of the respondents falling into this category. Supervisory, non-managerial and other positions comprised 28.2% of the respondents with non-managerial comprising 13.7% and supervisor comprising 7.7%. The highest statistic was that of middle management which accounted for more than half (51.3%) of the respondents. These statistics are expected since one of the requirements for acceptance onto the MBA programme is management experience.

Entrepreneurial Awareness

The survey investigated the level of entrepreneurial awareness of respondents as measured by exposure to entrepreneurial influences. The results are illustrated in Figure 4.6.



Note: These statistics include more than one entrepreneurial influence per participant.

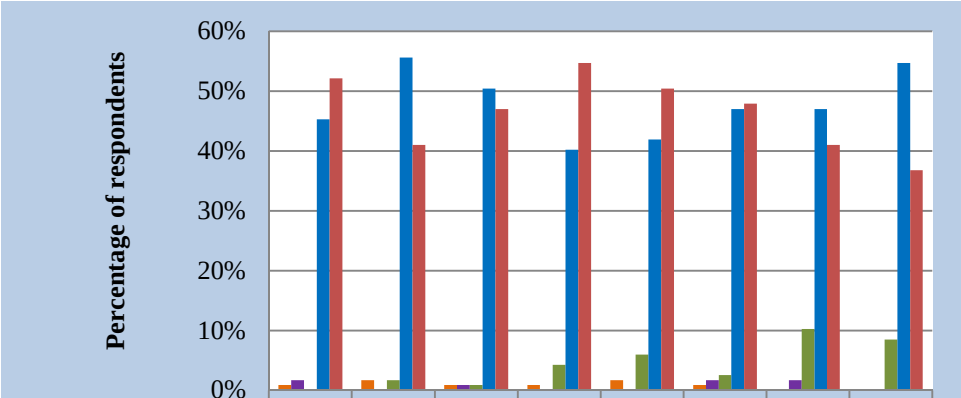
Figure 4.6 Entrepreneurship Influences

It is evident from Figure 4.6 that a large number of the respondents in the study have entrepreneurial influences in the form of friends (27.7%), other relatives (25.2%), parents (18.0%) and brothers and sisters (14.5%). Only 6.8% of the respondents did not indicate any entrepreneurial influences. If one considers that entrepreneurial influences that are directly related to the respondents including parents, partners or spouses, brothers or sisters and relatives, this accounts for 65.5% of entrepreneurial influences. In total 93.2% of the respondents in the study had some form of entrepreneurial influence.

4.3.2 Responses to the EI and EO tests

4.3.2.1 Self-Efficacy results

The conceptual framework for the study identifies self-efficacy as an antecedent of entrepreneurial intention. Thus responses to the self-efficacy items (Items Q11-Q18) are analysed to test the proposition that the 2012 cohort of UKZN MBA students display a high level of entrepreneurial intention. The results are indicated in Table 4.7.



	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18
Strongly disagree	0.9%	1.7%	0.9%	0.9%	1.7%	0.9%	0.0%	0.0%
Disagree	1.7%	0.0%	0.9%	0.0%	0.0%	1.7%	1.7%	0.0%
Neutral	0.0%	1.7%	0.9%	4.3%	6.0%	2.6%	10.3%	8.5%
Agree	45.3%	55.6%	50.4%	40.2%	41.9%	47.0%	47.0%	54.7%
Strongly agree	52.1%	41.0%	47.0%	54.7%	50.4%	47.9%	41.0%	36.8%

Figure 4.7 Responses to self-efficacy items

Q11 – I will be able to achieve most of the goals that I have set for myself

An overwhelming majority of 97.4% of the respondents agree / strongly agree that they will achieve most of the goals they have set for themselves. Only 2.6% disagree / strongly disagree.

Q12 – When facing difficult tasks, I am certain that I will accomplish them

In this case, 96.6% of the respondents agree / strongly agree that they can accomplish difficult tasks with 1.7% who strongly disagree and a similar percentage is neutral.

Q13 - In general, I think that I can obtain outcomes that are important to me

A large number of respondents (97.4%) in the study agree / strongly agree that they think they are able to obtain important outcomes and only 1.8% either strongly disagree/disagree. A small percentage (0.9%) is neutral.

Q14 - I believe I can succeed at most any endeavour to which I set my mind

The majority of respondents (94.9%) agree / strongly agree that they will believe that they can achieve success with the endeavours that they set their minds as compared to 0.9% who disagree / strongly disagree. Neutral responses accounted for 4.7% of respondents.

Q15 - I will be able to successfully overcome many challenges

In this case, 92.3% of the respondents agree / strongly agree that they have the ability to successfully overcome challenges, with 6% being neutral. A small percentage of 1.7% strongly disagreed.

Q16 - I am confident that I can perform effectively on many different tasks

An overwhelming majority of 94.9% of the respondents agree / strongly agree that they confident of their ability to effectively perform on different tasks. Only 2.6% were neutral and 2.6% disagree / strongly disagree.

Q17 - Compared to other people, I can do most tasks very well

A large number of respondents (88.0%) in the study agree / strongly agree that they are able to execute most tasks well as compared to other people. No respondents strongly disagree, 1.7% disagree and 10.3% of the respondents are neutral.

Q18 - Even when things are tough, I can perform quite well

In this case, 96.6% of the respondents agree / strongly agree that they are able to perform well in tough situations and 8.5% are neutral. No respondents strongly disagree / disagree.

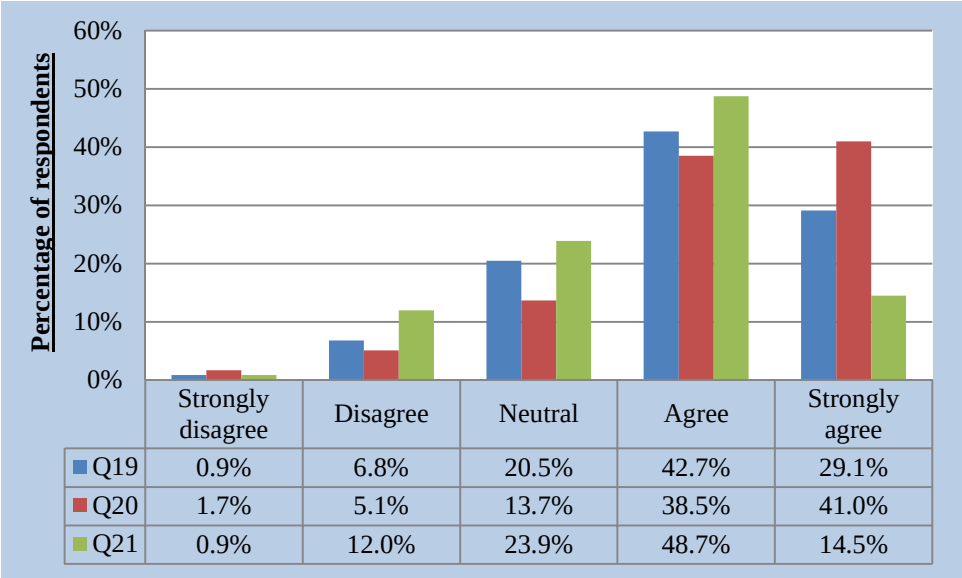
The majority of the respondents indicated high levels of agreement with all of the items measuring self-efficacy. More than 90% of the respondents either agreed or strongly agreed with Items Q11 – Q16 and Item Q18. In the case of Item Q17, 88% of the respondents either agreed or strongly agreed. Based on these results respondents have a strong belief in their abilities to overcome difficult challenges and achieve goals. They also have a strong belief in their ability to succeed when faced with adversity and to perform successfully on different tasks. Finally respondents are likely to pursue challenging goals, are persistent and rebound quickly from failure as exhibited from their self-efficacy scores.

4.3.2.2 EO Results

Respondent scores to the dimension of risk-taking, innovativeness and proactivity are evaluated to measure the extent of entrepreneurial orientation. The responses are shown in Tables 4.8, 4.9 and 4.10 respectively.

Risk-taking

This dimension was measured by evaluating the responses of participants to items Q19, Q20 and Q21. The results are presented in Table 4.8.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q19	0.9%	6.8%	20.5%	42.7%	29.1%
Q20	1.7%	5.1%	13.7%	38.5%	41.0%
Q21	0.9%	12.0%	23.9%	48.7%	14.5%

Figure 4.8 Responses to Risk-Taking dimension of EO

Q19 - I like to take bold action by venturing into the unknown

It is evident from Table 4.8 that a large number of the respondents in the study (71.8%) enjoy taking bold action and venturing into the unknown. In comparison, a small number of respondents (7.7%) strongly disagree / disagree with the statement concerned. A significant number of respondents (20.5%) are neutral.

Q20 – I am willing to invest a lot of time and / or money on something that might yield a high return

In this case, 79.5% of the respondents agree / strongly agree that they are willing to invest time and / or money on activities with the potential of high returns while 6.8% of the either strongly disagree / disagree and are therefore unwilling to do so. The neutral number of respondents was 13.7%.

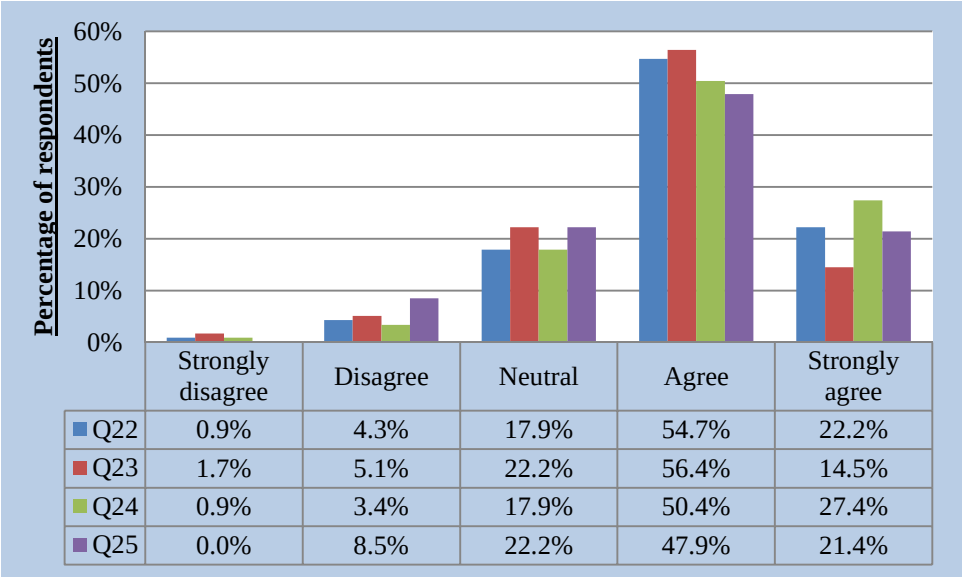
Q21 – I tend to act "boldly" in situations where risk is involved

In terms of acting boldly in situations of risk, 63.2% of the respondents either agree / strongly agree with the statement. A large number of respondents were neutral (23.9%) with 12.9% who strongly disagreed/disagreed with the statement.

The majority of the respondents either agreed or strongly agreed with the items measuring risk-taking (Item Q19 = 71.8% and Item Q20 = 79.5%). In the case of item Q21, 63.2% of the respondents either agreed or strongly agreed. Based on these results it is evident that the students display a strong appetite for risk-taking. Thus the respondents in the study enjoy bold action by venturing into unknown territory, are willing to invest in initiatives with potentially high returns and act boldly in situations of risk.

Innovativeness

The Innovativeness dimension of EO was measured by evaluating the responses of participant to items Q22, Q23, Q24 and Q25. The results are presented in Table 4.9.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q22	0.9%	4.3%	17.9%	54.7%	22.2%
Q23	1.7%	5.1%	22.2%	56.4%	14.5%
Q24	0.9%	3.4%	17.9%	50.4%	27.4%
Q25	0.0%	8.5%	22.2%	47.9%	21.4%

Figure 4.9 Responses to Innovativeness dimension of EO

Q22 – I often like to try new and unusual activities that are not typical but not necessarily risky

It is evident from Table 4.9 that a large number of the respondents in the study (76.9%) agree / strongly agree that they enjoy new and unusual activities that are not necessarily risky. In comparison, a small number of respondents (4.2%) strongly disagree / disagree with the statement indicating a lack of interest in trying new activities. Neutral responses comprised 17.9% of the response.

Q23 – In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before

In this case, 70.9% of the respondents agree / strongly agree that they prefer unique approaches to projects. However 6.8% either strongly disagree / disagree indicating the preference for conventional, tried and tested approaches. The neutral number of respondents was 22.2%.

Q24 – I prefer to try my own unique way when learning new things rather than doing it like everyone else does

In terms of trying unique ways of doing things, a large number of the respondents (77.8%) either agree strongly / agree with the statement. A much smaller percentage (4.3%) strongly disagree / disagree indicating the preference to conform to the standard ways of doing things and 17.9% are neutral.

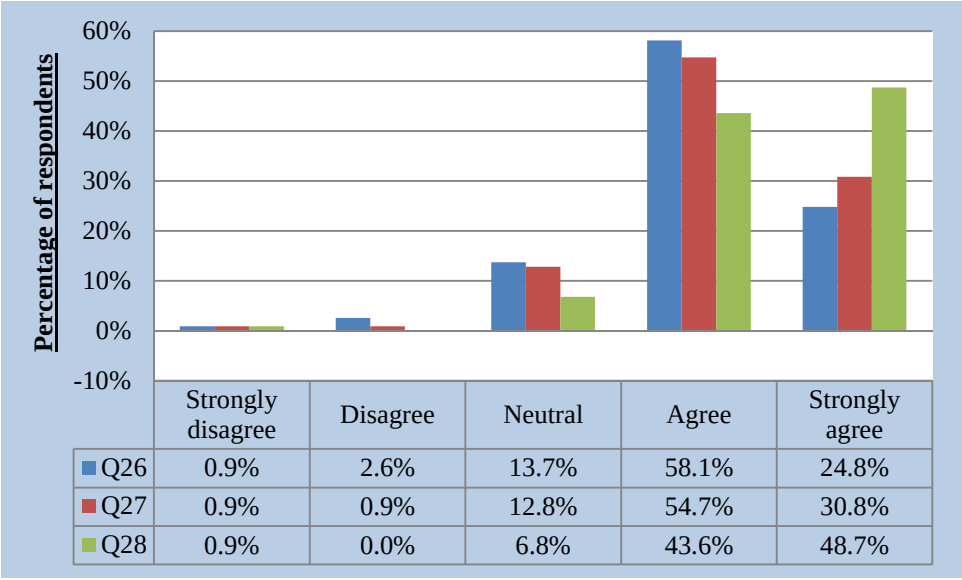
Q25 - I favour experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems

In so far as favouring original approaches to problem solving and experimentation was concerned, 69.3% of respondents either agree / strongly agree while 22.2% were neutral. No respondents strongly disagree and 8.5% disagree indicating the lack of appetite for experimentation.

The majority of the respondents indicated high levels of agreement / strong agreement with the four items measuring the innovativeness dimension of EI (Item Q22 = 76.9%, Item Q23 = 70.9% and Item Q24 = 77.8%). In the case of item Q25, 69.3% of the respondents either agreed or strongly agreed. Very low levels of respondents disagreed or strongly disagreed with the items (Item 22 = 5.2%, Item 23 = 6.8%, Item 24 = 4.3% and Item 25 = 8.5%). These results indicate that the respondents exhibit high levels of innovativeness. Consequently they enjoy new and unusual activities that are not necessarily risky, prefer unique approaches to projects and learning new things, and favour experimentation above traditional problem solving approached.

Proactivity

The Proactivity dimension of EO was measured by evaluating the responses to statements Q 26, Q 27 and Q 28. The results are presented in Table 4.10.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q26	0.9%	2.6%	13.7%	58.1%	24.8%
Q27	0.9%	0.9%	12.8%	54.7%	30.8%
Q28	0.9%	0.0%	6.8%	43.6%	48.7%

Figure 4.10 Responses to Proactivity dimension of EO

Q26 - I usually act in anticipation of future problems, needs or changes

It is evident from Table 4.4.2 (b) that a large number of the respondents in the study (82.9%) agree / strongly agree that they act in anticipation of future problems,

needs or changes. In comparison, a small number of respondents (3.5%) strongly disagree / disagree with the statement and 13.7% are neutral.

Q27 - I tend to plan ahead on projects

A majority of 85.5% of the respondents agree / strongly agree that they plan forward on projects. Only 1.8% disagree / strongly disagree indicating a lack of forward planning and 12.8% are neutral.

Q28 - I prefer to 'step-up'and get things going on projects rather than sit and wait for some else to do it

In terms of being proactive and getting things going on projects, an overwhelming majority of 92.3% of the respondents strongly agree / agree with the statement while only a very small grouping (0.9%) strongly disagree. No respondents disagree and 6.8% are neutral.

The majority of the respondents indicated high levels of agreement / strong agreement with the items measuring the proactivity (Item Q26 = 82.9%, Item Q27 = 85.5% and Item Q28 = 92.3%). Based on these results the respondents exhibit high levels of proactivity. Thus they act in anticipation of the future, plan ahead and prefer to get things going rather than to take a backseat.

4.3.2.3 Comparison with other studies

A study on entrepreneurial intention and actualisation was undertaken by Thandi & Sharma (2003) on MBA students enrolled at the Australian Graduate School of Entrepreneurship. Although the study did not focus directly on self-efficacy, certain themes emerged that bear reference to the current study at UKZN. The Australian students displayed high levels of agreement with taking responsibility for their ideas and working under pressure and conflict. They also indicated high scores for stamina, hard work, sacrifice and persistence with problems until these are solved. These themes resonate with those identified in the self-efficacy dimensions of the

NGSE scale. Both the UKZN and Australian students exhibit high scores on these items indicating high self-efficacy beliefs in MBA students.

In terms of the propensity to take risks, while the UKZN respondents scored very highly, their Australian counterparts scored moderately. This pattern is repeated for the measures of innovation. The Australian students indicated a low to moderate propensity towards developing new business ideas indicating a low propensity towards innovativeness. There is no evidence of the proactivity dimension being measured in the Australian study.

The differences in scores on risk-taking and innovativeness may be attributed to a variety of reasons. Veciana et al. (2005) presented that the cultural and social environment impacts on entrepreneurial tendencies. The vast differences in the socio-economic dynamics of the Australian and South African economies may have contributed to different levels of entrepreneurial orientation as exhibited by risk-taking and proactivity. Another factor identified is that quite a large number of respondents in the Australian study were unemployed or in-between jobs (39.6%) as compared to the UKZN respondents where less than 0.9% are unemployed. The reduced levels of corporate exposure due to unemployment amongst the Australian student could have adversely affected risk-taking and innovativeness scores. Luethje & Franke, 2004, Thandi & Sharma, 2004 and Urban et al., 2008 indicated that corporate exposure enhances entrepreneurial tendencies, supporting this claim. In both studies the number of years working experience and male to female ratio are similar, thus any differences in scores are not attributable to these variables.

The Australian students also indicated that they were more likely to be intrapreneurial and actualise entrepreneurship within organisations as compared to actualising entrepreneurship beyond organisational boundaries. This item was not considered in the study at UKZN.

4.3.3 Perception of study variables and dimensions

The mean and standard deviation was applied to ascertain the extent to which subjects perceive the study variables and dimensions and the extent of variation in their responses. The results are illustrated in Table 4.8.

Variables and Dimensions	N	Min	Max	Mean	Std. Deviation
Risk-taking	117	2	5	3.89	0.769
Innovativeness	117	2	5	3.88	0.635
Proactivity	117	1	5	4.19	0.598
EO	117	1	5	3.98	0.559
EI (self-efficacy)	117	2	5	4.38	0.534

Table 4.8 Deviations and Scores for the study variables and dimensions

The results show that subjects agree that they take risks (M = 3.89), are innovative (M = 3.88) and have an overall entrepreneurial orientation (M = 3.98). They have a stronger level of agreement on being proactive (M = 4.19) as well as on entrepreneurial intention as measured by self-efficacy (M = 4.38). There is some variation in the respondents' perceptions of risk-taking, innovativeness and entrepreneurial intention / self-efficacy. Here some subjects disagree (min = 2) while others strongly agree (max = 5). There is a slightly wider variation in their perceptions on being proactive and having an overall entrepreneurial orientation. In this case some subjects strongly disagree (min = 1) while others strongly agree (max = 5).

4.3.3.1 Proposition 1: Entrepreneurial Intention (EI)

It is evident from Table 4.8 that the respondents exhibit very high levels of self-efficacy. Based on these high scores and the relationship identified between self-efficacy and EI (Zhao et al., 2005 and Urban et al., 2008) the following proposition is accepted: The 2012 cohort of UKZN MBA students display a high level of entrepreneurial intention.

4.3.3.2 Proposition 2: Entrepreneurial Orientation (EO)

Table 4.8 indicates that the respondents exhibit high levels of risk-taking, innovativeness and proactivity. These dimensions are effective measures of EO (Bolton & Lane, 2012). The overall EO score in Table 4.8 is also very high. Consequently the following proposition is accepted: The 2012 cohort of UKZN MBA students display a high level of entrepreneurial orientation.

4.3.3.3 EI, EO and the likelihood of entrepreneurial actualisation

Empirical evidence indicates that the 2012 cohort of UKZN MBA students exhibit high overall EO (M = 3.98) as measured by risk-taking (M = 3.89), innovativeness (M = 3.88) and proactivity (M = 4.19). High self-efficacy is also evident (M = 4.38) indicating a high level of EI. High EO and EI should positively impact on the likelihood of entrepreneurship actualisation as indicated in the conceptual framework for the study (Figure 2.7). However there are other factors including environmental influences and entrepreneurship facilitators that impact on the actualisation of entrepreneurship.

Simrie et al. (2011) identified that government policies, finance, education and training are factors that hinder the extent of entrepreneurial activity in South Africa. Another pertinent factor is the cultural entrenchment of South Africans who prefer to get a job and work for someone else as compared to pursuing entrepreneurship. Closely attached to this cultural embedding is the fear of failure. Thus in order to stimulate entrepreneurial activity, these issues need to be addressed to create an enabling environment that supports and drives the actualisation of entrepreneurial tendencies.

The extent of entrepreneurship actualisation is also influenced by individual value systems, motivations, skills, capabilities, knowledge and experience. However given the dynamics of the corporate environment that enhance the capabilities and competencies of individuals, MBA students operating in this context are likely to score strongly in these attributes, especially in so far as skills, capabilities,

knowledge and experience are concerned. Thus according to the conceptual framework in the study, the key to unlocking entrepreneurial actualisation is to focus on the external factors or environmental influences and the availability of entrepreneurial opportunities. In order to comprehensively assess the likelihood of entrepreneurial actualisation amongst the respondents in the study, further research to evaluate these factors is required. However the study has established that the entrepreneurship profile of the respondents is characterised by high EO as measured by risk-taking, innovativeness and proactivity and high EI as measured by self-efficacy. This positively impacts the likelihood of entrepreneurial actualisation.

4.4 Inferential Statistics

Inferential Statistics was also used to ascertain the relationship between the study variables and dimensions as well as to identify which dimension(s) is the best predictor of EI.

4.4.1 Hypothesis 1: Correlation of EO and EI

The hypothesis developed to examine the relationship between entrepreneurial orientation and entrepreneurial intention in the population of students is as follows:

- Null hypothesis (H_o): There is no statistically significant relationship between overall EO and its dimensions (risk-taking, innovativeness and proactivity) and EI

- Alternative hypothesis (H_a): There is a statistically significant relationship between overall EO and its dimensions (risk-taking, innovativeness and proactivity) and EI

Spearman's Rank Correlation

Spearman's rank correlation coefficient was used to compare the linear relationships between the EO, risk-taking, innovativeness, proactivity and EI. There is a statistically significant relationship between overall EO and its dimensions (risk-taking, innovativeness and proactivity) and EI (self-efficacy) as illustrated in Table 4.9.

Spearman's rho Correlation Coefficients	
Dimension	**EI**
EI	1.000
Risk-taking	0.592*
Innovativeness	0.583*
Proactivity	0.482*
EO	0.658*

*Correlation is significant at the 0.01 level (2-tailed)

Table 4.9 Spearman's Correlation between the study variables and dimensions

It is evident from Table 4.9 that there is a positive and fairly strong and significant relationship between risk-taking and EI as measured by self-efficacy ($r = 0.592$; $p < 0.01$). This indicates that subjects who are risk-takers have a high level of EI. There is also a positive and fairly strong significant relationship between being innovative and EI ($r = 0.583$; $p < 0.01$). This shows that subjects who are innovative have a high level of EI.

A positive and moderately significant relationship between proactivity and EI is evident ($r = 0.482$; $p < 0.01$). This reveals that subjects who are proactive have a high level of EI as measured by self-efficacy. Finally a positive and strong significant relationship between overall EO and EI is evident ($r = 0.658$; $p < 0.01$). This shows that subjects who are entrepreneurially orientated have a high level of entrepreneurial intention.

Based on these results the Null hypothesis (H_o) is rejected and the Alternative hypothesis (H_a) is accepted i.e. There is a statistically significant relationship between overall EO and its dimensions (risk-taking, innovativeness and proactivity) and EI.

4.4.2 Hypothesis 2: Variation in EI

The hypothesis used to examine the variation of EI scores in the respondents is as follows:

- Null hypothesis (H_o): The variance in EI is not significantly explained by the EO dimensions of risk-taking, innovativeness and proactivity

- Alternative hypothesis (H_a): The variance in EI is significantly explained by the EO dimensions of risk-taking, innovativeness and proactivity

Multiple Regression Analysis

As there are several potential independent variables as compared to only one, multiple regression analysis is employed to identify which factors impact most on EI (identified as the dependent variable). Multiple regression analysis is also employed to indicate how well the dependent variable is predicted by each independent variable viz. risk-taking, innovativeness and proactivity. In so doing it is possible to identify the most significant independent variable. The result of the Multiple Regression Analysis is illustrated in Table 4.10.

Dependent Variable	R	R^2	Adjusted R^2	Std. Error of the Estimate
EI	0.751	0.564	0.553	0.358

Table 4.10 Multiple Regression test results

Since R^2 = 0.564, the model has a moderate fit and therefore is a fairly good predictor. The R^2 value indicates that 56.4% of the variance in EI is explained by risk-taking, innovativeness and proactivity.

The Analysis of Variance (ANOVA) is utilised to assess if the regression model has explanatory power. The results are illustrated in Table 4.11.

ANOVA[d]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**P**
1	Regression	28.338	1	28.338	412.010	0.000[a]
	Residual	7.910	115	0.069		
	Total	36.248	116			
2	Regression	33.827	2	16.913	796.428	0.000[b]
	Residual	2.421	114	0.021		
	Total	36.248	116			
3	Regression	36.248	3	12.083	0.00	0.00[c]
	Residual	0.000	113	0.000		
	Total	36.248	116			

a. Predictors: (Constant), Innovative
b. Predictors: (Constant), Innovative, Risk
c. Predictors: (Constant), Innovative, Risk, Proactive
d. Dependent Variable: Orientation

Table 4.11 ANOVA test results

Since p = 0, the Analysis of Variance (ANOVA) is highly significant indicating that the regression model has explanatory power.

The beta coefficient is utilised to determine which independent variables have the greatest influence on entrepreneurial intention. The results are illustrated in Table 4.12.

Coefficients[a]						
		Unstandardised coefficients		Standardised coefficients		
Model		B	Std. Error	B	t	p
1	(Constant)	2.008	0.273		7.353	0.000
	Proactive	0.567	0.065	0.633	8.778	0.000
2	(Constant)	1.654	0.252		6.554	0.000
	Proactive	0.389	0.066	0.435	5.882	0.000
	Risk-taking	0.282	0.051	0.405	5.484	0.000
3	(Constant)	1.447	0.252		5.742	0.000
	Proactive	0.306	0.069	0.343	4.446	0.000
	Risk-taking	0.202	0.056	0.291	3.629	0.000
	Innovative	0.223	0.071	0.264	3.135	0.002

Table 4.12 Beta Coefficient results

According to Table 4.12 the Beta Coefficients show that all 3 dimensions are significant predictors of EI with proactivity being the best predictor (Beta = 0.306) followed by innovativeness (Beta = 0.223) and risk-taking (Beta = 0.202). Thus the null hypothesis (H_o) is rejected. The alternative hypothesis (H_a) is accepted i.e. The variance in EI is significantly explained by the EO dimensions of risk-taking, innovativeness and proactivity.

4.5 Demographic variables

The literature review indicated that age, gender, population group and entrepreneurial awareness have an impact on the entrepreneurial tendencies of individuals. In the current study, the Mann-Whitney test and Kruskal-Wallis test compared the differences in mean scores for these variables as well as qualification, field of employment and job status. The results indicate no significant differences in the mean ranks of the dimensions for these demographic variables at the 95% level since $p > 0.05$. This means that there is no significant difference in EO, the

dimensions of EO or EI in so far as the different dimensions of each one of these factors is concerned. The detailed results are presented in Appendices 5 and 6.

Gender

While literature indicates that males are more likely to pursue entrepreneurship as compared to females (Simrie et al., 2011 and Herrington et al., 2011) this is not evidenced in the study. Both genders exhibit similar scores in all entrepreneurship measures.

Age

Simrie et al. (2011) and Bosma et al. (2012) indicate that in South Africa individuals in the 25 – 44 year old age group display a much higher level of entrepreneurial activity as compared to individuals in the 55 – 64 year old age group. Stangler (2009) indicates that this trend is reversed in the United States. However in the survey at UKZN neither of these trends is evident since there are no significant differences in the scores of EO, dimensions of EO or EI. Thus all the age groups in the study exhibit the same entrepreneurship profile.

It must also be noted that out of the 117 respondents, 107 or more than 90% fell in the age group of 25 – 44 years old. In the age group of 55 – 64 years old, there was only a single respondent. Thus the study cannot draw credible conclusions that this age group has either high or low entrepreneurial tendencies or draw any comparisons across the 25 -44 year age group versus the 55 – 64 year age group.

It is also presented that the overall profile of the respondents in so far as age is concerned lacks variation and is indistinct due to more than 90% of the respondents falling in the 25-44 year age group. This age group of students were found to display very similar entrepreneurial tendencies (Simrie et al., 2011 and Bosma et al., 2012) and hence it is expected that the total scores will be high and monochromatic. Whilst literature indicates that EI and EO are enhanced with age as experience, confidence and maturity increase, the current study does not indicate

any significant differences in the mean ranks of the age dimensions at the 95% level since $p > 0.05$.

Race

Urban et al. (2008) found a difference in entrepreneurial intention across the different cultural groups in South Africa, when applying the ESE and NGSE scales. Veciana et al. (2005) indicated that the cultural and social environment has a key role to play in the perceptions of desirability and feasibility of new venture creation. However in the current study the results indicate no significant differences ($p > 0.05$) between mean scores of EO and EI scores of the respondents in the different race groups. Given the similarity of scores it appears that ethnic differences do not have a distinct impact on the entrepreneurial tendencies of the UKZN MBA students. Herrington et al. (2011) indicated that Whites and Indians are more likely to start businesses as compared to Coloured and Blacks as a result of the apartheid legacy. The results of this study do not show any statistically significant evidence of this pattern.

Entrepreneurial Awareness

Co et al. (2007) presented that family exposure to entrepreneurship has a direct impact on the willingness and attitude to becoming an entrepreneur. The correlation between strong entrepreneurial attitudes and prior family business experience was asserted by Harris & Gibson (2008) and Zampetakis et al. (2009). Whilst the results of the study indicate strong EO and EI scores for the respondents who had entrepreneurial influences, the same trend was observed for respondents who did not indicate any entrepreneurial influences. Dombrovsky & Welter (2006) indicated that the strongest influence on entrepreneurial tendencies is present in individuals who have siblings and whose parents are involved in entrepreneurial activity. However the results do not indicate any differences in the mean ranks of the different dimensions of entrepreneurial awareness at the 95% level since $p > 0.05$.

It must also be noted that due to respondents being able to choose more than one entrepreneurial influence, it is difficult to establish which entrepreneurial influence impacts most on entrepreneurial tendencies.

4.6 Summary

The results obtained from the study indicate high validity and reliability. Based on the outcomes of factor analysis, three factors load strongly on entrepreneurial orientation and are labelled as risk-taking, innovativeness and proactivity. In the case of entrepreneurial orientation, a single factor loads and is labelled self-efficacy. Respondent scores on these dimensions indicate that they exhibit high EI and EO. Strong correlations between EI and EO are also evident. A statistically significant relationship between overall EO and EI is found and variances in EI are found to be significantly explained by the EO dimensions of risk-taking, innovativeness and proactivity. In so far as gender, age, race and entrepreneurial awareness is concerned, no significant differences are noted. A similar pattern is evident for the demographic factors of qualification, field of employment and job status. Based on these outcomes the entrepreneurship profile of the MBA students at UKZN has been established. Notwithstanding the impact of environmental influences and the availability of entrepreneurial opportunities, the high levels of EO and EI are an indication that the students have a strong propensity towards entrepreneurial activity and the likelihood of entrepreneurship actualisation is high.

CHAPTER FIVE

Recommendations and Conclusions

5.1 Introduction

This chapter summarises the findings of the study and draws conclusions on the research aim and objectives. The benefits obtained are evaluated and the limitations of the study are assessed. The chapter concludes with recommendations for further research.

5.2 Outcomes of the study

The study has evaluated the entrepreneurship profile of local MBA students in so far as EI and EO are concerned. Empirical evidence indicates that the 2012 cohort of UKZN MBA students exhibit high overall EO (M = 3.98) as measured by risk-taking (M = 3.89), innovativeness (M = 3.88) and proactivity (M = 4.19). High self-efficacy is also evident (M = 4.38) indicating a high level of EI.

Spearman's rank correlation indicates strong correlations between EI and EO ($r = 0.658$, $p < 0.01$). A similar pattern is evident between EI and risk-taking ($r = 0.592$, $p < 0.01$), innovativeness ($r = 0.583$, $p < 0.01$) and proactivity ($r = 0.482$, $p < 0.01$). Multiple regression analysis reveals that 56.4% of the variance in EI is accounted for by risk-taking, innovativeness and proactivity. Proactivity is found to be the best predictor of EI (Beta = 0.306) followed by innovativeness (Beta = 0.223) and risk-taking (Beta = 0.202). No significant differences are noted in the mean ranks of the dimensions for demographic factors of gender, age, race and entrepreneurial awareness at the 95% level since $p > 0.05$.

5.3 Benefits of the research

This study closes the gap on the lack of research on the entrepreneurship profile of the 2012 cohort of UKZN MBA students. Consequently students, corporates and the university are provided with insight into the entrepreneurial tendencies of the respondents. An assessment of the extent of EI and EO indicate that UKZN MBA students have a strong propensity towards entrepreneurship and thus the likelihood of entrepreneurship actualisation is high (notwithstanding the influence of external factors and the availability of entrepreneurial opportunities). These tendencies if materialised can enhance innovation and competitiveness, and foster economic prosperity both at the individual and organisational level.

The study also indicates no differences in EI and EO scores when evaluating the impact of gender, age, race and entrepreneurial awareness, providing evidence of a somewhat homogenous population in so far as the likelihood of entrepreneurial actualisation is concerned. A similar pattern is noted for all other demographic factors. Thus students and organisations are equipped with the knowledge that initiatives to stimulate entrepreneurial activity must focus on positively impacting environmental influences and fostering entrepreneurial opportunities, rather than on addressing the impact of any demographic variables. The study also provides individuals with an appreciation of their entrepreneurship profile and this may lead to the progression of entrepreneurial tendencies into entrepreneurial actualisation beyond the confines of the organisation.

Whilst the outcome of the study may be of limited generalisability, it provides a benchmark for longitudinal studies that can be replicated at the University of KwaZulu-Natal to assess the impact of course curricula on the entrepreneurial tendencies of students. The study can also be replicated in other faculties and at other institutions to understand the impact of course curricula on EI and EO. Comparison of results across institutions may be insightful. Researchers, industry and government may be interested in replicating this study and utilising the outcomes to positively enhance entrepreneurship in the locality of future studies.

5.4 Recommendations to solve the business problem

The study indicates that UKZN MBA graduates exhibit high EI and EO and this should positively impact entrepreneurial actualisation. However Bosma et al. (2012) indicate low entrepreneurial activity and actualisation rates in South Africa. The conceptual framework for the study (Figure 2.7) identified that factors in the environment, the individual's preparedness for entrepreneurship and the availability of entrepreneurship opportunities all impact on entrepreneurship actualisation. Thus in addition to EI and EO, these factors are important when devising strategies to stimulate entrepreneurial activity. In this regard stakeholders have a role to play in creating an enabling environment by influencing the factors that either hinder or stimulate entrepreneurial activity, ensuring that individuals are well equipped with the skills and capabilities required and creating opportunities that will enable employees to actualise their entrepreneurial tendencies. Some of the potential initiatives that can be employed by the University of Kwa-Zulu Natal, local industry and government need to influence the likelihood of entrepreneurship actualisation include:

- Formulating strategies that influence external factors or environmental influences either within organisations or in the locality of the study e.g. improving access to finance and relaxing onerous administration requirements for entrepreneurial undertakings

- Focusing on improving the attributes and perceptions of individuals that positively impact on the preparedness to embark on entrepreneurial activities

- Creating opportunities within organisations and in the locality of the study that enable the actualisation of entrepreneurship

- Fostering a culture that embraces entrepreneurship both within and beyond organisational boundaries

- Conducting an investigation on the respondents at UKZN to identify what factors hinder entrepreneurial activity and actualisation despite high levels of intention and orientation, and then taking steps to address these issues

Thus in order to increase the extent of entrepreneurial actualisation it is necessary to focus on the external factors that influence entrepreneurship, the preparation of individuals to actualise entrepreneurship and the availability of entrepreneurial opportunities. These initiatives along with the high EO and EI scores measured can stimulate entrepreneurial activity in the locality of the study.

5.5 Limitations of the study

The following limitations have been identified in the study:

a. A homogenous population comprising solely of UKZN MBA students was surveyed and this is not fully representative, thus the results may lack variability in so far as the dimensions of entrepreneurship are concerned

b. The study is cross-sectional in nature and did not consider the impact of the MBA course curricula across the years of study. Thus it has not established if the MBA programme influences EI and EO scores, and the likelihood of entrepreneurship actualisation.

c. The study did not take into account the full cohort of factors that impact on the actualisation of entrepreneurship, including environmental influences and entrepreneurial opportunities. This information is required in order to devise strategies that are effective in increasing entrepreneurial activity rates.

d. The study did not investigate whether respondents intended on actualising entrepreneurship within their organisations or whether they intended on pursuing careers in entrepreneurship beyond organisational confines. This has a bearing on the types of initiatives to be employed to stimulate the extent of entrepreneurial activity.

e. The study did not probe what respondents viewed as barriers to entrepreneurial actualisation. An understanding of these factors can enable specific actions that realise tangible results.

f. The study neglected the respondent's perceptions of their own readiness to undertake entrepreneurial activities. This is important as beliefs in ones capabilities, along with skills, knowledge, experience and pragmatism have a direct impact on the success rates achieved in entrepreneurial ventures.

g. The study did not consider the impact of organisational culture on entrepreneurial actualisation. Since there are correlations between organisational culture and entrepreneurial activity, it is important to gain insight into this factor.

h. The design of the study did not enable the researcher to establish which entrepreneurial influences positively correlated the most with strong entrepreneurial intention and orientation. Research has indicated that higher entrepreneurial tendencies are positively correlated with different entrepreneurial influences e.g. individuals whose parents are entrepreneurs exhibit the highest propensity towards engaging in entrepreneurial activities.

i. The census survey was chosen as involvement of an entire population in research results higher accuracy and data reliability. However despite this, a response rate of 61% was realised.

5.6 Recommendations to overcome the limitations

The following recommendations are proposed to overcome the limitations identified in the study:

a. The current study focuses on a homogenous population comprising the 2012 cohort of MBA students at UKZN. A more heterogeneous sample may be appropriate where the population comprises of MBA students in all universities in Durban or in South Africa. A study that is conducted across more tertiary institutions and in a larger population could highlight differences amongst the demographics of gender, age, race and entrepreneurial awareness. The outcomes may also highlight certain trends that are common to South African MBA students or issues that are peculiar. Expansion of the study to other faculties at UKZN or at other institutions would enable the comparison of entrepreneurial tendencies across different fields of study and faculties e.g. a study of students in undergraduate degrees may reveal different patterns of entrepreneurial intention and orientation. In this case the census survey approach may have to be replaced with a sampling approach due to the larger population size.

b. The undertaking of longitudinal studies to measure entrepreneurship scores pre and post the MBA programme or across years of study would enable an assessment of the programme on the dimensions of entrepreneurship.

c. A redesign of the survey to go full circle and consider all aspects of entrepreneurial actualisation including environmental influences, entrepreneurial preparedness and entrepreneurial opportunities. This information is useful in devising effective strategies to stimulate entrepreneurship.

d. Additional questions could be included in the survey to investigate if students intended on actualising entrepreneurship within corporates or to choose entrepreneurship as a career. In this regard the Australian study on entrepreneurial intention and actualisation (Thandi & Sharma, 2003) could

be used as a basis to redesign the UKZN study. The positive spinoff is the development of actions that realise tangible results.

e. Explorative type investigation could be used to probe why entrepreneurial actualisation may be low despite high EO and EI scores and to identify the factors that hinder entrepreneurial activity. This research could be conducted on specific groups of interest e.g. to understand differences in entrepreneurial scores across gender, age or race.

f. A survey could be designed to evaluate the perceptions of individuals of their own levels of entrepreneurial awareness in so far as skills, knowledge, capabilities and experience is concerned. This study could focus solely on examining this facilitator of entrepreneurial actualisation as well as identifying what factors are the most pertinent in order to address specific areas of concern.

g. A survey could be designed to measure EI and EO scores in different companies and draw conclusions on what types of organisational culture positively or negatively impact on entrepreneurial tendencies. In so doing initiatives unique to different organisations could be developed, provided that there are sufficient respondents in each organisation to provide unbiased and statistically substantiated outcomes.

h. In order to effectively assess the impact of the different types of entrepreneurial influences on entrepreneurial awareness, the survey could be redesigned so that only a single entrepreneurial influence is chosen by respondents. This will enable the identification of which influences impact most on entrepreneurial tendencies. The outcomes could validate or reject claims by other research. Cross tabulations could also enable the comparison of EI and EO scores across multiple dimensions e.g. a comparison of which entrepreneurial influences impact most on entrepreneurial awareness across gender or race.

i. In order to increase the response rate the census survey could be conducted on smaller groups of students. This would be more time consuming, however the results would exhibit higher accuracy and data reliability.

5.7 Summary

The study has evaluated the entrepreneurship profile of the 2012 cohort of UKZN MBA students who are found to exhibit high entrepreneurial intention and entrepreneurial orientation. Notwithstanding the impact of environmental influences and the availability of entrepreneurial opportunities, the high levels of EO and EI are an indication to UKZN, industry and government that the students have a strong propensity towards entrepreneurial activity and the likelihood of entrepreneurship actualisation is high. Despite high EO and EI scores, further research is required to assess the impact of the full array of factors that impact on the actualisation of entrepreneurship, including environmental influences and entrepreneurial opportunities. This is required to devise strategies that are effective in increasing entrepreneurial activity rates and which realise tangible results.

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Appendix 1: Questionnaire

UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS & LEADERSHIP

MBA Research Project
Researcher: Mr. M. Ramkissor (083 297 8223)
Supervisor: Professor S. Cassim (031 260 1479)
Research Office: Ms. P. Ximba (031 260 3587)

The entrepreneurial orientation and intention of UKZN MBA students

Dear Participant,

I am a final year MBA student at UKZN and I am currently completing the dissertation module for the course under the guidance of Professor Shahida Cassim from the Graduate School of Business and Leadership.

This questionnaire is designed to study entrepreneurial orientation and intention amongst MBA students. The information you provide will help us understand the current entrepreneurial orientation and intentions of UKZN students enrolled for the 2012 year of study. The survey should take approximately 10 - 15 minutes to complete.

Please note that you are under no obligation to complete this questionnaire as it is voluntary. All responses will be treated with strict confidentiality and are completely anonymous. Please note that should you so desire, you are free to withdraw from the questionnaire at any time.

In this questionnaire, you are asked to indicate what is true for you, so there are no “right” or “wrong” answers. Work as rapidly as you can. If you wish to make a comment please write it directly on the booklet itself. Make sure not to skip any questions.

Thank you very much for your participation.

Please tick your selection from the options listed below:

1. Gender :

Male	☐	*Female*	☐

2. Age :

25 – 34	☐	*35 – 44*	☐
45 – 54	☐	*55 – 64*	☐
Over 64	☐		

3. Population group :

Black	☐	*Indian*	☐
Coloured	☐	*White*	☐

4. Year of MBA registration *(Year 3 if on track to complete MBA in 2012)* :

Year 1	☐
Year 2	☐
Year 3	☐

5. In what profession have you graduated?

Arts	☐	
Science	☐	
Medical Science	☐	
Engineering	☐	
Social Science	☐	
Commerce	☐	
Education	☐	
Law	☐	
Other (please specify)	☐	_____

6. In what field are you currently working?

Arts	☐	
Science	☐	
Medical Science	☐	
Engineering	☐	
Social Science	☐	
Commerce	☐	
Education	☐	
Law	☐	
Other (please specify)	☐	_____

7. No. of years working experience (since completing undergraduate studies) :

Less than 5 ☐
5 – 10 ☐
11 – 16 ☐
17 – 20 ☐
21 – 25 ☐
Greater than 25 ☐

8. Present employment status:

Full time employment ☐
Part time employment ☐
Unemployed / In-between jobs ☐

9. Job status :

Top management ☐
Middle management ☐
Supervisor ☐
Non-managerial ☐
Other (please specify) ☐ _____

10. Which of the following people close to you have owned a business / been self-employed (can select more than one option)

Parents ☐
Partner / Spouse ☐
Brother / Sister ☐
Other Relatives ☐
Friends ☐
None ☐

Kindly rate the following statements on a scale from 1 to 5 where:

1 = Strongly disagree
2 = Disagree
3 = Neither agree nor disagree
4 = Agree
5 = Strongly agree

No.	Statement	Score
11	I will be able to achieve most of the goals that I have set for myself	
12	When facing difficult tasks, I am certain that I will accomplish them	
13	In general, I think that I can obtain outcomes that are important to me	
14	I believe that I can succeed at most any endeavour to which I set my mind	
15	I will be able to successfully overcome many challenges	
16	I am confident that I can perform effectively on many different tasks	
17	Compared to other people, I can do most tasks very well	
18	Even when things are tough, I can perform quite well	
19	I like to take bold action by venturing into the unknown	
20	I am willing to invest a lot of time and/or money on something that might yield a high return	
21	I tend to act "boldly" in situations where risk is involved	
22	I often like to try new and unusual activities that are not typical but not necessarily risky	
23	In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before	
24	I prefer to try my own unique way when learning new things rather than doing it like everyone else does	
25	I favour experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems	
26	I usually act in anticipation of future problems, needs or changes	
27	I tend to plan ahead on projects	
28	I prefer to 'step-up' and get things going on projects rather than sit and wait for some else to do it	

29. Please make any additional comments that you may have regarding your attitude towards entrepreneurship and any intention to pursue entrepreneurial initiatives.

Thank you very much for your time and cooperation. Kindly check through to ensure that you have completed all questions before submitting the questionnaire.

Kind regards,
Manoj Ramkissor

Appendix 2: Coding for data entry

Variable of interest	Code	Options available
Gender	1	Male
	2	Female
Age group	1	25 - 34 years
	2	35 - 44 years
	3	45 - 54 years
	4	55 - 64 years
	5	Over 64
Population group	1	Black
	2	Indian
	3	Coloured
	4	White
Year of MBA registration	1	Year 1
	2	Year 2
	3	Year 3
Profession graduated	1	Arts
	2	Science
	3	Medical science
	4	Engineering
	5	Social science
	6	Commerce
	7	Education
	8	Law
	9	Other
Field currently working in	1	Arts
	2	Science
	3	Medical science
	4	Engineering
	5	Social science
	6	Commerce
	7	Education
	8	Law
	9	Other (please specify)
Number of years working experience	1	< 5 years
	2	5 - 10 years
	3	11 - 16 years
	4	17 - 20 years
	5	21 - 25 years
	6	> 25 years

Variable of interest	**Code**	**Options available**
Present employment status	1	Full time
	2	Part time
	3	Unemployed / In-between jobs
Job status	1	Top management
	2	Middle management
	3	Supervisor
	4	Non-managerial
	5	Other (please specify)
Entrepreneurial influences	1	Parents
	2	Partner / spouse
	3	Brother / sister
	4	Other relatives
	5	Friends
	6	None
Q11-28 Lickert scale responses	1	Strongly disagree
	2	Disagree
	3	Neither agree nor disagree
	4	Agree
	5	Strongly agree

Appendix 3: Frequency distribution results

Variable	Option	Count (N)	Percentage
Gender	Male	80	68.4%
	Female	37	31.6%
	Total	**117**	**100.0%**
Age	25 - 34 years	58	49.6%
	35 - 44 years	49	41.9%
	45 - 54 years	9	7.7%
	55 - 64 years	1	.9%
	Over 64	0	.0%
	Total	**117**	**100.0%**
Race	Black	54	46.2%
	Indian	49	41.9%
	Coloured	2	1.7%
	White	12	10.3%
	Total	**117**	**100.0%**
Year of MBA registration	Year 1	42	35.9%
	Year 2	39	33.3%
	Year 3	36	30.8%
	Total	**117**	**100.0%**
Number of years working experience	< 5 years	1	0.9%
	5 - 10 years	54	46.2%
	11 - 16 years	36	30.8%
	17 - 20 years	16	13.7%
	21 - 25 years	8	6.8%
	> 25 years	2	1.7%
	Total	**117**	**100.0%**
Present employment status	Full time	113	96.6%
	Part time	3	2.6%
	Unemployed or In-between jobs	1	0.9%
	Total	**117**	**100.0%**
Job status	Top management	24	20.5%
	Middle management	60	51.3%
	Supervisor	9	7.7%
	Non-managerial	16	13.7%
	Other	8	6.8%
	Total	**117**	**100.0%**

Qualification	Arts	3	2.6%
	Science	6	5.1%
	Medical science	5	4.3%
	Engineering	35	29.9%
	Social science	9	7.7%
	Commerce	39	33.3%
	Education	5	4.3%
	Law	6	5.1%
	Other	17	14.5%
	Total	**125**	**106.8%**
Field of Employment	Arts	1	0.9%
	Science	4	3.4%
	Medical science	4	3.4%
	Engineering	26	22.2%
	Social science	6	5.1%
	Commerce	36	30.8%
	Education	11	9.4%
	Law	2	1.7%
	Other	29	24.8%
	Total	**119**	**101.7%**
Entrepreneurial Influences	Parents	37	31.6%
	Partner or spouse	16	13.7%
	Brother or sister	30	25.6%
	Other relatives	52	44.4%
	Friends	57	48.7%
	None	14	12.0%
	Total	**206**	**176.0%**

Appendix 4: Mann Whitney test results

Comparison of mean ranks between Male and Female respondents

		Gender		
		Male	Female	Total
Entrepreneurial Intention/Self-Efficacy	Mean	4.40	4.34	4.38
	Std. Dev.	0.474	0.653	0.534
	N	80	37	117
Risk	Mean	3.95	3.78	3.89
	Std. Dev.	0.720	0.865	0.769
	N	80	37	117
Innovative	Mean	3.95	3.72	3.88
	Std. Dev.	0.585	0.716	0.635
	N	80	37	117
Proactive	Mean	4.22	4.12	4.19
	Std. Dev.	0.486	0.790	0.598
	N	80	37	117
Entrepreneurial Orientation	Mean	4.03	3.86	3.98
	Std. Dev.	0.485	0.685	0.559
	N	80	37	117

Test Statistics[a]

	Mann-Whitney U	Wilcoxon W	Z	p
Risk	1387.500	2090.500	-0.549	0.583
Innovative	1189.500	1892.500	-1.726	0.084
Proactive	1467.000	4707.000	-0.078	0.938
Entrepreneurial Orientation	1273.500	1976.500	-1.214	0.225
Entrepreneurial Intention/Self-Efficacy	1438.000	2141.000	-0.248	0.804

a. Grouping Variable: Gender

Appendix 5: Kruskal-Wallis Anova test results

Comparison of mean ranks between Age

		Age Group				
		25 - 34 years	35 - 44 years	45 - 54 years	55 - 64 years	Total
Entrepreneurial Intention/Self-Efficacy	Mean	4.39	4.43	4.06	4.75	4.38
	Std. Dev.	0.624	0.363	0.650	0.00	0.534
	N	58	49	9	1	117
Risk	Mean	3.86	4.03	3.37	4.00	3.89
	Std. Dev.	0.795	0.688	0.889	0.00	0.769
	N	58	49	9	1	117
Innovative	Mean	3.85	3.93	3.75	4.00	3.88
	Std. Dev.	0.687	0.577	0.673	0.00	0.635
	N	58	49	9	1	117
Proactive	Mean	4.14	4.26	4.04	5.00	4.19
	Std. Dev.	0.678	0.453	0.716	0.00	0.598
	N	58	49	9	1	117
Entrepreneurial Orientation	Mean	3.94	4.06	3.72	4.30	3.98
	Std. Dev.	0.631	0.424	0.689	0.00	0.559
	N	58	49	9	1	117

Test Statistics[a,b]

	Chi-Square	df	p
Risk	4.273	3	0.233
Innovative	0.551	3	0.908
Proactive	2.708	3	0.439
Entrepreneurial Orientation	2.087	3	0.555
Entrepreneurial Intention/Self-Efficacy	3.007	3	0.391

a. Kruskal Wallis Test

b. Grouping Variable: Age group

Comparison of mean ranks between Race

		Population Group				
		Black	Indian	Coloured	White	Total
Entrepreneurial Intention/Self-Efficacy	Mean	4.28	4.47	4.19	4.53	4.38
	Std. Dev.	0.577	0.498	0.265	0.450	0.534
	N	54	49	2	12	117
Risk	Mean	3.81	4.01	4.33	3.75	3.89
	Std. Dev.	0.833	0.734	0.000	0.622	0.769
	N	54	49	2	12	117
Innovative	Mean	3.74	3.99	3.88	4.06	3.88
	Std. Dev.	0.626	0.681	0.530	0.371	0.635
	N	54	49	2	12	117
Proactive	Mean	4.13	4.20	4.00	4.44	4.19
	Std. Dev.	0.658	0.527	0.471	0.592	0.598
	N	54	49	2	12	117
Entrepreneurial Orientation	Mean	3.88	4.06	4.05	4.08	3.98
	Std. Dev.	0.588	0.569	0.354	0.341	0.559
	N	54	49	2	12	117

Test Statistics[a,b]

	Chi-Square	df	p
Risk	2.798	3	0.424
Innovative	4.932	3	0.177
Proactive	2.275	3	0.517
Entrepreneurial Orientation	3.115	3	0.374
Entrepreneurial Intention/Self-Efficacy	4.451	3	0.217

a. Kruskal Wallis Test

b. Grouping Variable: Population group

Comparison of mean ranks between Year of MBA Registration

		Year of MBA Registration			
		Year 1	Year 2	Year 3	Total
Entrepreneurial Intention/Self-Efficacy	Mean	4.36	4.38	4.41	4.38
	Std. Dev.	0.670	0.428	0.470	0.534
	N	42	39	36	117
Risk	Mean	3.90	3.96	3.82	3.89
	Std. Dev.	0.808	0.697	0.811	0.769
	N	42	39	36	117
Innovative	Mean	3.90	4.04	3.69	3.88
	Std. Dev.	0.617	0.546	0.708	0.635
	N	42	39	36	117
Proactive	Mean	4.13	4.28	4.15	4.19
	Std. Dev.	0.765	0.443	0.519	0.598
	N	42	39	36	117
Entrepreneurial Orientation	Mean	3.97	4.09	3.87	3.98
	Std. Dev.	0.650	0.448	0.545	0.559
	N	42	39	36	117

Test Statistics[a,b]

	Chi-Square	df	p
Risk	0.555	2	0.758
Innovative	5.429	2	0.066
Proactive	1.159	2	0.560
Entrepreneurial Orientation	4.569	2	0.102
Entrepreneurial Intention/Self-Efficacy	0.264	2	0.876

a. Kruskal Wallis Test

b. Grouping Variable: Year of MBA registration

Comparison of mean ranks between Profession Graduated

		Profession Graduated									
		Arts	Sci.	Med. Sci.	Eng.	Soc. Sci.	Com.	Edu.	Law	Other	Total
EI/ Self-Eff.	Mean	4.42	4.27	4.58	4.50	4.22	4.34	4.46	4.18	4.35	4.38
	Std. Dev.	0.523	0.3296	0.4805	0.41633	0.7009	0.67737	0.2883	0.4645	0.43516	0.534117
	N										
Risk	Mean	4.22	3.72	4.07	4.00	3.89	3.88	4.33	3.40	3.73	3.89
	Std. Dev.	0.3853	0.4916	0.6415	0.72233	1.1069	0.81037	0.3333	0.7235	0.80916	0.769117
	N										
Innov.	Mean	3.75	4.13	3.95	4.06	3.75	3.76	4.08	3.60	3.81	3.88
	Std. Dev.	0.6613	0.5866	0.7985	0.57333	0.8579	0.71237	0.5203	0.5765	0.40316	0.635117
	N										
Pro.	Mean	4.22	3.89	4.40	4.37	4.19	4.12	4.22	3.87	4.10	4.19
	Std. Dev.	0.3853	0.5846	0.4355	0.47033	0.6039	0.70437	0.1923	0.7305	0.62916	0.598117
	N										
EO	Mean	4.033	3.933	4.120	4.136	3.922	3.905	4.200	3.620	3.875	3.977
	Std. Dev.	0.2513	0.5166	0.5895	0.47433	0.7829	0.63237	0.2003	0.5935	0.46816	0.559117
	N										

Test Statistics[a,b]

	Chi-Square	df	p
Risk	6.535	8	0.588
Innovative	8.146	8	0.419
Proactive	5.948	8	0.653
Orientation	7.381	8	0.496

a. Kruskal Wallis Test

b. Grouping Variable: Profession graduated

Comparison of mean ranks between Field of Employment

		Field of Employment									
		Arts	Sci.	Med. Sci.	Eng.	Soc. Sci.	Com.	Edu.	Law	Other	Total
EI/ Self-Eff.	Mean	5.00	4.22	4.53	4.51	4.06	4.35	4.36	3.94	4.39	4.38
	Std. Dev.	0.00	0.257	0.543	0.421	0.769	0.683	0.355	0.088	0.437	0.534
	N	1	4	4	26	6	36	11	2	27	117
Risk	Mean	4.00	3.75	4.17	4.00	3.56	3.86	4.03	3.17	3.89	3.89
	Std. Dev.	0.00	0.569	0.694	0.699	1.223	0.806	0.795	1.179	0.716	0.769
	N	1	4	4	26	6	36	11	2	27	117
Innov.	Mean	3.00	4.13	3.94	3.96	3.54	3.78	3.86	3.38	4.05	3.88
	Std. Dev.	0.00	0.629	0.921	0.551	0.941	0.709	0.574	0.884	0.476	0.635
	N	1	4	4	26	6	36	11	2	27	117
Pro.	Mean	4.67	4.17	4.50	4.31	4.06	4.13	4.15	3.33	4.20	4.19
	Std. Dev.	0.00	0.577	0.430	0.461	0.574	0.709	0.565	0.943	0.572	0.598
	N	1	4	4	26	6	36	11	2	27	117
EO	Mean	3.800	4.025	4.175	4.077	3.700	3.908	4.000	3.300	4.044	3.977
	Std. Dev.	0.00	0.457	0.665	0.451	0.839	0.624	0.551	0.989	0.474	0.559
	N	1	4	4	26	6	36	11	2	27	117

Test Statistics[a,b]

	Chi-Square	df	p
Risk	3.216	8	0.920
Innovative	8.449	8	0.391
Proactive	5.670	8	0.684
Orientation	5.193	8	0.737

a. Kruskal Wallis Test

b. Grouping Variable: Field of Employment

Comparison of mean ranks between Years of Working Experience

		Number of years working experience						
		< 5 years	5 - 10 years	11 - 16 years	17 - 20 years	21 - 25 years	> 25 years	Total
Entrepreneurial Intention/Self-Efficacy	Mean	5.00	4.36	4.40	4.19	4.72	4.44	4.38
	Std. Dev.	0.00	0.615	0.434	0.498	0.312	0.442	0.534
	N	1	54	36	16	8	2	117
Risk	Mean	4.00	3.83	3.91	3.81	4.38	4.00	3.89
	Std. Dev.	0.00	0.771	0.767	0.902	0.547	0.000	0.769
	N	1	54	36	16	8	2	117
Innovative	Mean	4.00	3.81	3.89	3.78	4.53	3.88	3.88
	Std. Dev.	0.00	0.655	0.625	0.618	0.339	0.177	0.635
	N	1	54	36	16	8	2	117
Proactive	Mean	4.67	4.09	4.27	4.13	4.38	4.83	4.19
	Std. Dev.	0.00	0.699	0.435	0.607	0.415	0.236	0.598
	N	1	54	36	16	8	2	117
Entrepreneurial Orientation	Mean	4.20	3.90	4.01	3.89	4.44	4.20	3.98
	Std. Dev.	0.00	0.605	0.488	0.601	0.329	0.141	0.559
	N	1	54	36	16	8	2	117

Test Statistics[a,b]

	Chi-Square	df	p
Risk	3.597	5	0.609
Innovative	12.308	5	0.031*
Proactive	5.989	5	0.307
Entrepreneurial Orientation	10.302	5	0.067
Entrepreneurial Intention/Self-Efficacy	9.214	5	0.101

a. Kruskal Wallis Test

b. Grouping Variable: Number of years working experience

Comparison of mean ranks between categories of Employment Status

		Present Employment Status			
		Full time	Part time	Unemployed or In-between jobs	Total
Entrepreneurial Intention/Self-Efficacy	Mean	4.40	3.71	4.38	4.38
	Std. Dev.	0.466	1.922	0.00	0.534
	N	113	3	1	117
Risk	Mean	3.90	3.56	4.67	3.89
	Std. Dev.	0.743	1.711	0.00	0.769
	N	113	3	1	117
Innovative	Mean	3.90	3.00	3.75	3.88
	Std. Dev.	0.597	1.500	0.00	0.635
	N	113	3	1	117
Proactive	Mean	4.21	3.44	4.33	4.19
	Std. Dev.	0.524	2.117	0.00	0.598
	N	113	3	1	117
Entrepreneurial Orientation	Mean	3.99	3.30	4.20	3.98
	Std. Dev.	0.509	1.706	0.00	0.559
	N	113	3	1	117

Test Statistics[a,b]

	Chi-Square	df	p
Risk	1.405	2	0.495
Innovative	1.651	2	0.438
Proactive	0.154	2	0.926
Entrepreneurial Orientation	0.534	2	0.766
Entrepreneurial Intention/Self-Efficacy	0.001	2	0.999

a. Kruskal Wallis Test

b. Grouping Variable: Present employment status

Comparison of mean ranks between of Job Status

		Job Status					
		Top mngt.	Middle mngt.	Supervisor	Non-managerial	Other	Total
Entrepreneurial Intention/Self-Efficacy	Mean	4.49	4.28	4.46	4.54	4.39	4.38
	Std. Dev.	0.423	0.611	0.400	0.415	0.502	0.534
	N	24	60	9	16	8	117
Risk	Mean	3.85	3.91	3.70	4.13	3.71	3.89
	Std. Dev.	0.890	0.739	0.539	0.729	0.950	0.769
	N	24	60	9	16	8	117
Innovative	Mean	3.96	3.86	3.50	4.05	3.91	3.88
	Std. Dev.	0.666	0.675	0.500	0.542	0.442	0.635
	N	24	60	9	16	8	117
Proactive	Mean	4.38	4.16	4.00	4.25	3.96	4.19
	Std. Dev.	0.504	0.621	0.601	0.590	0.653	0.598
	N	24	60	9	16	8	117
Entrepreneurial Orientation	Mean	4.05	3.96	3.71	4.13	3.86	3.98
	Std. Dev.	0.570	0.578	0.426	0.533	0.550	0.559
	N	24	60	9	16	8	117

Test Statistics[a,b]

	Chi-Square	df	p
Risk	2.700	4	0.609
Innovative	5.786	4	0.216
Proactive	4.472	4	0.346
Entrepreneurial Orientation	6.511	4	0.164
Entrepreneurial Intention/Self-Efficacy	2.624	4	0.623

a. Kruskal Wallis Test

b. Grouping Variable: Job status

Comparison of mean ranks of Entrepreneurial Influences

		Influences						
		Parents	Partner or spouse	Brother or sister	Other relatives	Friends	None	Total
Entrepreneurial Intention/Self-Efficacy	Mean	4.27	4.46	4.52	4.48	4.42	4.25	4.38
	Std. Dev.	0.634	0.449	0.386	0.461	0.505	0.584	0.534
	N	37	7	16	26	17	14	117
Risk	Mean	3.70	3.81	4.29	3.99	3.86	3.86	3.89
	Std. Dev.	0.853	0.790	0.556	0.739	0.727	0.770	0.769
	N	37	7	16	26	17	14	117
Innovative	Mean	3.81	3.64	4.14	3.99	3.84	3.73	3.88
	Std. Dev.	0.715	0.789	0.577	0.487	0.559	0.703	0.635
	N	37	7	16	26	17	14	117
Proactive	Mean	4.19	3.86	4.33	4.19	4.18	4.19	4.19
	Std. Dev.	0.752	0.690	0.404	0.500	0.410	0.663	0.598
	N	37	7	16	26	17	14	117
Entrepreneurial Orientation	Mean	3.89	3.76	4.24	4.05	3.95	3.91	3.98
	Std. Dev.	0.644	0.682	0.422	0.422	0.488	0.654	0.559
	N	37	7	16	26	17	14	117

Test Statistics[a,b]

	Chi-Square	df	p
Intention	4.724	5	0.451
Risk	6.417	5	0.268
Innovative	4.920	5	0.426
Proactive	3.066	5	0.690
Orientation	5.937	5	0.312

a. Kruskal Wallis Test

b. Grouping Variable: Influences

Appendix 6: Ethical Clearance

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16 May 2012

Mr M Ramkissor (961074068)
Graduate School of Business

Dear Mr Ramkissor

PROTOCOL REFERENCE NUMBER: HSS/0139/012M
PROJECT TITLE: The entrepreneurial orientation and intention of UKZN MBA students

In response to your application dated 17 April 2012, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.
PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

[redacted]

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

cc. Supervisor – Prof S Cassim
cc. Mrs Wendy Clarke

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