Influence of Institutional Context on High-Growth Entrepreneurship

Neil von Hoesslin

Student Number: 10665422

A research project submitted to the Gordon Institute of

Business Science, University of Pretoria, in partial fulfilment of

the requirements for the degree of Master of Business

Administration.

9th November 2011

ABSTRACT

This research aimed to explore the influence of the institutional context on the growth-potential of new businesses in South Africa. The purpose of this study is to highlight the major responsibility of bureaucracy to enable high-growth entrepreneurship in emerging economies by building a favourable economic, social and legal environment, known as the institutional context.

An adapted research model was defined through an extensive literature review of prior studies in the fields of both institutional theory and entrepreneurship theory. An online survey was administered to many South African entrepreneurs via a number of databases across the country. The responses were then collected and analysed by means of a multiple regression analysis to test the six hypotheses of the research model.

The results revealed that all the identified institutional factors were found to have significant influences on high-growth entrepreneurship in the intended directions, while access to technology was found to have the largest influence, and the regulatory framework also contributed substantially. This implies that the bureaucracy of the country has to consider all the identified factors when attempting to design a supportive institutional environment to stimulate high-growth entrepreneurship. However, the greatest results will be achieved by focusing specifically on the access to an extensive technological infrastructure and an effective regulatory framework.

KEY WORDS

High-growth Entrepreneurship, Environmental Context, Institutional Theory, Emerging Economies

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

_____

Neil von Hoesslin

Wednesday, 09th November 2011

ACKNOWLEDGEMENTS

CONTENTS

LIST OF FIGURES AND TABLES

LIST OF ABBREVIATIONS

BPL – Business Partners Limited

BEC – Branson Entrepreneurship Centre

DTI – Department of Trade and Industry

EO – Entrepreneurial Orientation

GEM – Global Entrepreneurship Monitor

MBA – Masters of Business Administration

NSBC – National Small Business Chamber

TEA – Total Entrepreneurial Activity

TEAHG – Total Entrepreneurial Activity High-Growth

USA – United States of America

1. INTRODUCTION

1.1 Research Title

Influence of Institutional Context on High-Growth Entrepreneurship

1.2 Research Aim and Objectives

This study aims to highlight the major responsibility of bureaucracy to enable high-growth entrepreneurship in emerging economies by building a favourable economic, social and legal environment. Consequently, the following research objectives are listed:

1. To gain a better understanding of what studies have been undertaken recently in this area of research in order to further build on the existing literature.

2. Identify the main environmental context factors that may influence high-growth entrepreneurship by defining a research model.

3. Define a research methodology and empirically test this model in order to determine the influence of the identified environmental factors on the perceived growth potential of new businesses.

4. Gain insight through a thorough analysis of the results to enable all stakeholders to better understand how to construct a supportive business environment that encourages productive, high-growth entrepreneurship.

1.3 Research Problem and Purpose

1.3.1 Research Problem

Many emerging economies, such as South Africa's, are struggling to create a conducive economic and social environment that promotes the creation of high-growth entrepreneurial ventures; as a result, their overall economic growth and competitiveness suffers (Bosma and Levie, 2010; The Presidency, 2009).

Only recently have academics turned to new institutional theory to better explain the varying success of entrepreneurship in different economies (Minniti and Levesque, 2008). Although somewhat scarce, a few studies have begun using institutional theory to explain the level and type of entrepreneurial ventures (Bowen and De Clercq, 2008; Manolova, Gyoshev, and Manev, 2007; Lim, Morse, Mitchell, and Seawright, 2010; and Hindle, 2010). According to Minniti and Levesque (2008), the five principles of bounded rationality, rule-following, institutions, cognitions, and evolution are at the source of a significant and growing amount of recent work on entrepreneurship in economics. Further investigation into, and definitions of, institutional theory and entrepreneurship will be undertaken later.

1.3.2 Research Purpose

The purpose of this study is therefore to add valuable insight to the existing body of knowledge in this relatively new field of research. This will be achieved by investigating the influence of the institutional context on the perceived growth-potential of the entrepreneurs' new ventures.

1.4 Research Background and Scope

1.4.1 Research Background

Investigating how entrepreneurs create economic success has a long history stretching as far back as economists such as Richard Cantillon in 1755, Joseph Schumpeter in 1911, Jean-Baptiste Say in 1932, Alfred Marshall in 1964, and Frank Knight in 1971 (Iversen, Jørgensen, and Malchow-Møller, 2008). More recently, academics have turned to understanding the entrepreneur's direct role in an economy's growth and prosperity (Lim *et al*, 2010). These studies have identified entrepreneurship as an important driver of economic growth and job creation (Shane and Venkataraman, 2000; Lim *et al*, 2010). In turn, this has led to an area of research that sought to understand the antecedents of entrepreneurship, and in particular, the factors that might explain the level and type of entrepreneurial activity (Bowen and De Clercq, 2008; El Harbi and Anderson, 2010). On the micro level, most of this research has focused on the individual characteristics of entrepreneurs and why they choose self-employment over paid employment (Bruton, Ahlstrom, and Li, 2010). On a macro level, researchers have considered various economic and political factors that may explain the level of entrepreneurial activity (Bowen and De Clercq, 2008).

Nevertheless, governments and academics are currently still grappling with the issue of enabling entrepreneurship in countries with many unique institutional challenges, especially those in emerging economies where productive, high-growth entrepreneurial activity levels are limited (DTI, 2005; Mair and Marti, 2009;

Sobel, 2008; Troilo, 2011). The importance of entrepreneurship to the development of an emerging or transition economy is well understood by governments and academics (DTI, 2005; McMillan and Woodruff, 2002; Henrekson and Sanandaji, 2010) and is widely accepted as a key economic factor for job creation (Nieman and Nieuwenhuizen, 2009). Yet, until recently, little focus has been placed on the role that the institutional environment plays in advancing or prohibiting entrepreneurial growth, especially on the perceptions of the individual entrepreneur (Lim *et al,* 2010). Consequently, there is growing recognition that entrepreneurial behaviour needs to be interpreted in the context in which it occurs; in other words, the business, social and legal environment in which the entrepreneur operates (Welter and Smallbone, 2011).

Many researchers have recently begun to realise that individual characteristics, otherwise known as the entrepreneur's orientation (EO), as well as macro economic, political and psychological factors are not the only forces influencing entrepreneurship; environmental factors also require consideration (Mair and Marti, 2009; Puffer, McCarthy, and Boisot*,* 2009; Bruton *et al,* 2010; Welter and Smallbone, 2011). These studies have indicated that institutional factors can exert powerful forces on entrepreneurial activity. This is particularly relevant in emerging and transition economies that are experiencing changing institutional environments or institutional voids (Muhanna, 2007; Mahadea and Pillay, 2008, Puffer *et al,* 2009). Understanding the underlying structures supporting different types of entrepreneurship is an issue of tremendous importance to scholars and policy-

makers alike (Stenholm, Acs and Wuebker, 2010). Additionally, public policy that only focuses on influencing the prevalence of entrepreneurship, and not its type, may lead to undesired results (Stenholm *et al,* 2010). Therefore, a deeper understanding of those framework conditions that facilitate high-growth entrepreneurship may be of significant value (Bowen and De Clercq, 2008).

1.4.2 Research Scope

The scope of this study is therefore limited to the South African institutional context and its influence on the perceived growth-potential of the individual entrepreneur's new business.

1.5 Research Motivation

1.5.1 Entrepreneurship Research and Economic Development

According to Acs and Szerb (2007), governmental policymakers are increasingly recognising entrepreneurship as the key to building and sustaining economic growth, specifically in developing countries. They also argue that economic development that focuses on entrepreneurship is a 'positive-sum game' not just for the locality, but for the nation as a whole (Acs and Szerb, 2007). According to Acs and Virgill (2010), strong economic growth requires innovation and the [productive] entrepreneur is most likely the best agent for this. Further to this, they acknowledge that entrepreneurship matters for developing countries because markets matter; there is also empirical evidence to support the strong link between entrepreneurship and economic growth (Acs and Virgill, 2010).

This view has influenced the South African government, which has placed a heavy emphasis on the importance of entrepreneurship to advance the country's economic growth and prosperity by increasing the creation of jobs (DTI, 2005). But, according to the Global Competitiveness Report, South Africa has slipped from 36th place out of 139 countries measured in 2007, to 50th place out of 142 countries in 2011 (Schwab, 2011). This has to be a major concern for a country facing unprecedented employment challenges with a large unemployment rate, measured at 32.5% in 2009, and a slowing GDP growth rate of -3% in the same year (The Presidency, 2009).

According to Herrington, Kew and Kew (2009), South Africa's unemployment problems stem from numerous economic, political and social challenges, which is especially evident in the country's youth who more often than not lack the experience, skills and education necessary to access employment in the formal sectors. They are then forced to create their own opportunities, predominantly in the informal sector, with limited access to financial and business resources, which results in many of their new businesses failing (Herrington *et al*, 2009). Consequently, these individuals are forced further into poverty or non-productive entrepreneurship, such as crime and drug-trafficking (Herrington *et al*, 2009). Therefore, understanding how to stimulate productive, high-growth entrepreneurship remains an important field of research in general and more specifically to the South African context. This requires further motivation.

1.5.2 High-Growth Entrepreneurship and Economic Development

In order to promote economic development, policy makers should encourage high-growth entrepreneurial ventures rather than support low-potential or unproductive businesses in general (Stam, Suddle, Hessels and Van Stel, 2008). According to Baughn, Sugheir and Neupert (2010), countries differ not only in the extent of overall levels of entrepreneurship, but also in the growth potential of those new ventures formed. Baughn *et al* (2010) further argue that the growth potential of entrepreneurial firms is quite concentrated with a relatively small proportion of the new firms generating the large majority of new jobs and technological innovation.

While the total supply of entrepreneurship is quite constant across societies, the productive contribution of entrepreneurship varies (Minniti, 2008). This is because of its allocations between desirable, high-growth activities, such as innovation, and unproductive and socially undesirable activities, such as rent-seeking or organised crime (Minniti, 2008). Empirical research evidence seems to confirm the consistent positive effect that high-potential and fast-growing businesses have on economic growth; with regard to job creation, it is not just new businesses that are key, but rather the fast-growing new businesses that make up the majority of new jobs being created (Stam *et al.* 2008). Therefore, by moulding a favourable environment, government policy can better allocate efforts towards promoting high-growth entrepreneurship rather than merely promoting its overall supply; this will therefore have a larger influence on overall economic growth (Bowen and De Clercq, 2008).

1.5.3 Institutions and Economic Development

What drives economic development and in particular, what determines the success and failure of businesses within a given context? According to Peng, Wang and Jiang (2008), historically there have been two theories that address these questions: The industry-based view of William Porter and the resource-based view of J. Barney. The industry-based view argues that conditions within each industry largely determine firm strategy and performance, whereas the resource-based view suggests that it is firm-specific differences that drive strategy and performance (Peng *et al*, 2008). Both these theories ignore the institutional underpinning that provides the context of competition and performance among industries and businesses (Luiz, 2009). This is no surprise, because both theories arose primarily out of research on competition in the United States, which was a relatively stable, market-based institutional framework and did not consider emerging economies where the institutional context is vastly different and substantially less stable (Luiz, 2009).

This view has caused a recent shift in thinking as researchers increasingly explore emerging economies, where 'institutional voids' are commonplace (Beck and Laeven, 2006). These studies have begun to investigate the importance of the institutional context on the economic prosperity of a country (Peng *et al*, 2008). The ever-expanding literature on economic growth has come to establish the importance of the impact of institutions on long-term economic growth (Luiz, 2009). Institutional theory has become such an important consideration for economic

development that it is now included as one of the main contributing pillars towards global competitiveness (Schwab, 2010). In his Global Competitiveness Report, Schwab (2010) argues that the quality of institutions has a strong bearing on competitiveness and growth; it influences investment decisions, the organisation of production and plays a key role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies (Schwab, 2010). Therefore, it is evident that research involving the influence of different institutional factors on economic development in emerging economies, like South Africa's, is crucial to understanding how to accelerate those economies that are currently underperforming (Luiz, 2009).

1.5.4 Relevance of this Research

Even though some authors such as Bowen and De Clercq (2008), and Lim *et al* (2010) have shown that different institutional factors influence the level and type of entrepreneurial activity, this has not been empirically tested on an individual level in developing economies where the institutional environment is not well established (Tang, 2010). Such a study would add substantial knowledge to the existing research (Tang, 2010). According to Bruton *et al* (2010), future research should expand the use of institutional theory to examine issues such as the macro-micro link, which should investigate the influence of the macro environment on the individual mindset.

Tang (2010) proposed a study that identifies the institutional environment as a moderating factor in the opportunity-recognition process of entrepreneurs in China.

However, merely recognizing an opportunity is not enough; it is the subtle interplay between the individual and the opportunity that catalyzes new business creation (Stenholm *et al*, 2010). This study would also be limited as it does not attempt to investigate the direct underlying influences of different institutional factors on the emergence of new businesses, particularly high-growth businesses.

Due to the rarity of high-growth entrepreneurship around the world, international comparative studies of this topic are virtually non-existent and it therefore remains a field of research that has a serious lack of comprehension (Autio, 2007). Furthermore, a study of the antecedent-type relationships between institutional factors and high-growth entrepreneurship [especially in developing economies] remains underdeveloped (Lim *et al,* 2010; Bowen and De Clercq, 2008). This study will therefore expand the existing literature by investigating the influence of institutional theory and entrepreneurship on each other and so lead to a better understanding of what institutional factors may encourage or discourage high-growth entrepreneurship. Such a study will be invaluable to many stakeholders, which requires further justification.

1.5.5 Potential Beneficiaries of this Study

For entrepreneurship to thrive, it has to involve the integrated efforts of government, academic institutions, financial institutions, and society at large to have any chance of success (Nieman and Nieuwenhuizen, 2009). In view of this, potential benefits of this research to these stakeholders may include:

- Providing bureaucracy with academically researched information that can guide policy-makers to develop policies that mould the appropriate institutions that encourage high-growth entrepreneurship.

- Academic institutions aimed at training future high-growth entrepreneurs will use the knowledge from this study to help them focus their curriculum and ensure that their students are well-equipped to understand and possibly influence the institutional context in which they operate.

- This study will add a wealth of knowledge to those entrepreneurship scholars who are interested in entrepreneurship as a context-based science specifically in developing countries.

- Entrepreneurs can benefit from understanding the factors that promote high-growth entrepreneurial behaviour and learn from this study to enhance the chances of them becoming successful, high-growth entrepreneurs.

1.6 Conclusion

This chapter served to motivate the need for a deeper understanding of the influence of the institutional context on high-growth entrepreneurship. Too much focus in previous literature has been on understanding the entrepreneur's individual characteristics and direct role in an economy. Research that provides a better understanding of how the institutional environment influences high-growth entrepreneurship therefore still remains under-developed and is the reason for this study. A summary of the existing literature in this field of research is now necessary in order to ultimately define the research model for this study.

2. THEORY AND LITERATURE REVIEW

2.1 Introduction

The purpose of this literature review is to present an overview of what research has been conducted recently to support this study, as well as highlight where this study will provide unique insights. Literature that ultimately investigates the influence of different institutional factors on the level and type of entrepreneurship is therefore highlighted, discussed and argued in order to develop these unique viewpoints.

2.2 Elements of Literature Review

The literature review includes **seven** main elements of discussion that are divided into two theory bases, namely entrepreneurship theory and institutional theory, and are then ultimately combined to explain the topic of this research. This is illustrated in Figure 1. The seven elements include:

1. Defining entrepreneurship,
2. Classifying and measuring high-growth entrepreneurship,
3. Characterising entrepreneurship as a behavioural science,
4. Describing behavioural entrepreneurship as a context-based science,
5. Defining institutional theory,
6. Linking institutional theory and entrepreneurship, and
7. Relating the influence of institutional factors on high-growth entrepreneurship.

Figure 1. Literature Review Illustration
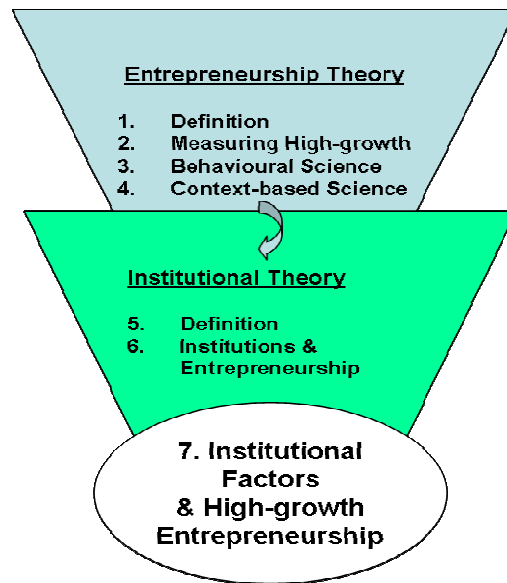
2.2.1 Entrepreneurship Defined

According to Peneder (2009), entrepreneurship has been described as one of the most intriguing yet elusive concepts in economics. As mentioned before, defining entrepreneurship dates back as far as Cantillon in 1755 in the academic literature (Iversen *et al*, 2008). There has been much debate over the years around what constitutes entrepreneurship and how it influences economic growth (Iversen *et al,* 2008). As a result, this field of study has enjoyed much attention from a variety of disciplines ranging from behaviourists to economists; consequently, different definitions have been coined based on different perspectives (Nieman and Niewenhuizen, 2009). According to Iversen *et al* (2008), it is crucial to be precise about which kind of entrepreneurship is considered in a given context. Scholars of business strategy and management typically apply a behavioural perspective to their definition; they are interested in how to act entrepreneurially, whereas economists largely care about how the economic system works, and therefore

characterise entrepreneurship by the particular functions it performs (Peneder, 2009). This study focuses on a behaviourist view in that it aims to understand the individual entrepreneur's mental processes, known as 'entrepreneurial cognitions', which are influenced by the surrounding environment in which they operate, amongst other factors. Therefore, this study simultaneously views entrepreneurship as both a context-based science and a behavioural science.

According to Tang (2010), the behaviourist view on entrepreneurship involves the process of opportunity identification, evaluation, and exploitation. Pech and Cameron (2006) believe that entrepreneurs have a heightened ability and awareness for recognizing and exploiting business opportunities. They also persistently and continually seek opportunity-laden information in order to satisfy internal motivations such as the need for achievement and the fulfilment of competitive urges (Pech and Cameron, 2006). In addition to this, authors such as Shane and Venkatamaran (2000), McMillan and Woodruff (2002), Bowen and De Clercq (2008), Puffer *et al* (2009), Lim *et al* (2010), and Hindle (2010) acknowledge that entrepreneurship does not function in isolation and that the context in which entrepreneurs operate can have a significant influence on the behaviour of entrepreneurs and consequently, the level and type of entrepreneurship. This has given rise to the basis of entrepreneurship as a context-based science (Welter, 2010). Combining a behaviourist with a context-based view on entrepreneurship results in the following definition: 'Entrepreneurship is the process of opportunity identification, evaluation, and

exploitation by individuals with a heightened ability and awareness for perceiving and bravely exploiting potential high-growth business opportunities within a given institutional context that either enables or constrains it.'

This definition reveals that the following questions have to be explored and answered during the literature review in order to define a model that explains the influence of the institutional context on high-growth entrepreneurship:

1. What is high-growth entrepreneurship and how does one measure it?
2. How, and in what stage of the entrepreneurial process, do the entrepreneur's perceptions influence high-growth entrepreneurship?
3. How does the institutional context influence entrepreneurs' perceptions?
4. Which institutional factors are identified as having a potential influence on entrepreneurs' perceptions and ultimately high-growth entrepreneurship?

2.2.2 High-Growth Entrepreneurship

Sobel (2008) argues that productive entrepreneurship is important to an economy because it is the fundamental source of economic growth and wealth creation. Minniti (2008) contends that it is the high-growth start-ups that are the type of venture best suited to foster economic growth. There is empirical evidence to suggest that countries differ not only in the extent of overall levels of entrepreneurship, but also in the growth potential of new businesses (Autio, 2007). But what constitutes a productive, high-growth venture?

According to Sobel (2008), William Baumol's seminal work on productive and unproductive entrepreneurship in 1990 theorised that entrepreneurial individuals have a choice to devote their efforts towards private sector wealth-creation or securing wealth redistribution through political and legal processes. Too often, government programmes direct entrepreneurial efforts toward figuring out how to obtain transfers or subsidies, rather than devoting those efforts towards satisfying customers and creating value (Sobel, 2008).

Acs and Amoros (2008) further suggest that productive entrepreneurship involves more productive techniques per worker, the creation or adoption of new and innovative products, new materials, new markets, new organisational forms, the establishment of new skills and the accumulation of new knowledge. This results in the promotion of innovation so that they are able to reach new technological frontiers and thus become knowledge-based, innovation-driven firms (Acs and Amoros, 2008). Therefore, productive entrepreneurship can lead to high-growth entrepreneurship, which results in increased venture capital investments per capita, patents per capita and growth in self-employment activities (Sobel, 2008). A more austere view is that high-growth firms are characterised by rising labour productivity at the same time as they are creating jobs (Stam *et al*, 2008). On the other hand, unproductive entrepreneurship uses up resources in the process of capturing zero-sum transfers, where these resources had alternative, productive uses (Sobel, 2008). A typology of unproductive versus productive entrepreneurship and some examples is represented in Table 1.

Table 1. Typology of productive versus unproductive entrepreneurship

	Abide	Evade	Alter
Productive	Pursue a business opportunity within prevailing institutions.	Sidestep stifling labour market regulations through a new contractual form.	Provide an innovative new local public good or service
Unproductive/ Destructive	Sue competitors for a share of their profit. Rogue states; rivalry between 'warlords'.	Bribe a government official to obtain a contract. Illegal syndicates.	Lobby for a new regulation to protect an industry. Repeal property rights to plunder a wealthy group.

Source: Henrekson and Sanandaji (2011, p.53)

Stam *et al* (2008) argue that the growth motivation and perception of the individual entrepreneur is a good proxy measure of potential firm growth. Such motivation is determined by the entrepreneur's perceived ability, need and opportunity for growth, which is positively associated with gender, age, experience and is influenced by the external environment (Stam *et al,* 2008). This suggests that the perceived growth potential of the individual entrepreneur is a good proxy measure of potential high-growth ventures rather than those measures mentioned above by Sobel (2008). However, the question still remains regarding how to define a measure of productive, high-growth entrepreneurship based on the individual entrepreneur's perceptions.

High-growth entrepreneurship is defined in the Global Entrepreneurship Monitor (GEM) report by Bosma and Levie (2010) as those entrepreneurs that aspire to create 20 or more jobs within the next five years through their new ventures. Bowen and De Clercq (2008) also adopt this approach in their study; however, only measuring job-creation may be limited (Stam *et al*, 2008). The measure for high-growth entrepreneurship should also include innovation and potential future

international expansion, known as 'internationalisation' (Stam *et al*, 2008). Bowen and De Clercq (2008) recommend that a measure for high-growth ventures should include perceived future technological innovation and internationalisation together with job-creation. Therefore, for the purposes of this study, high-growth entrepreneurship is assessed using three measures, which are summarised in Table 2 below.

Table 2. High-Growth Entrepreneurship Measures

No.	Measure	Source
1.	Technologically innovative new products & services within the next 5 years.	Bosma & Levie (2010); Stenholm *et al* (2010)
2.	Create 20 or more jobs within the next 5 years.	Stam *et al* (2008); Bowen & De Clercq (2008)
3.	Potential to expand internationally in the future.	Stam *et al* (2008); Bowen & De Clercq (2008); Stenholm *et al* (2010)

These combined measures provide a more comprehensive assessment of high-growth entrepreneurship than job-creation alone and will be a unique approach of this research. Since it has been established that the perceived growth potential of the entrepreneur is a good proxy measure for the resultant behaviour and ultimate growth potential of the new business, entrepreneurship as a behavioural science should be further explored.

2.2.3 Entrepreneurship as a Behavioural Science

If entrepreneurs are regarded as an essential part of the process through which new businesses are created, it is reasonable to suggest that their behaviour plays an important role in this process (Baron, 2007). Theoretical positions share a

common ground in the idea that understanding human behaviour requires a consideration of the mental representations and processes, otherwise known as 'cognitions' (Gregoire, Corbett and McMullen, 2011). Entrepreneurial cognitions are defined as "the knowledge structures that people use to make assessments, judgements, or decisions involving opportunity evaluation, venture creation, and growth" (Lim *et al*, 2010, p. 493).

Lim *et al* (2010) cite Shapero and Sokol (1982) as well as Krueger and Brazeal (2004) as being the prominent academics to suggest that new venture formation occurs when entrepreneurs perceive the desirability and feasibility of an opportunity concurrently, which is consistent with social cognition concepts. This idea has been adopted by several entrepreneurial cognition researchers, because it explains how both individual behaviour and the surrounding environment are formed by the person-environment interaction (Lim *et al*, 2010). This symbiotic relationship is the foundation of this research and will be expanded further in later sections.

Henrekson and Sanandaji (2011) contend that the entrepreneur's behaviour is a result of his/her entrepreneurial cognitions, which are a combination of perceptiveness, motivation and the ability to recognize and evaluate opportunities that others have ignored or not yet identified. Baron (2007) insists that entrepreneurship researchers should only focus on entrepreneurs' cognitive

variables or processes and resultant behavioural traits that are closely related to the conception, launch, development and operation of new ventures.

Ucbasaran, Westhead, and Wright (2008) agree that understanding the combined opportunity identification, evaluation and exploitation processes represents a core topic for the domain of entrepreneurship research. Casson and Wadeson (2007) also maintain that the exploitation of opportunities [the entrepreneur's behaviour], combined with opportunity identification and evaluation [entrepreneurial cognitions], are essential to the growth of entrepreneurship and are a vital part of an economy's response to external shocks. Therefore, in this study, opportunity identification and evaluation [or perceived desirability and feasibility] are combined and regarded as antecedent 'entrepreneurial cognitions', which directly influence the entrepreneur's behaviour during the new venture-creation process (Casson and Wadeson, 2007; Ucbasaran *et al*, 2008).

Both Lim *et al* (2010) and Bosma and Levie (2008) found that different entrepreneurial cognitions influence the entrepreneur's behaviour in different ways. Bowen and De Clercq (2008) take a more direct approach by stating that all entrepreneurial cognitions [no matter how they are defined] ultimately influence the allocation of entrepreneurial effort through the resultant actions of the entrepreneur. What this means is that entrepreneurial cognitions have a significant, direct influence on both the level and type of entrepreneurship. Furthermore, if these cognitions can be influenced not only by the entrepreneur's

orientation, but also the surrounding institutional environment, then perhaps a better understanding of entrepreneurship as a context-based science is required (Bowen and de Clerq, 2008). This will be investigated at a later stage.

Nevertheless, the results of Bowen and De Clerq (2008) do not provide a clear indication on whether the influence of the entrepreneur's cognitions on his/her behaviour varies based on the stage of entrepreneurship. According to Bosma and Levie (2010), the influence of entrepreneurial cognitions on the future potential growth of a venture varies based on the stage of the entrepreneurial process. This warrants further exploration before the topic of behavioural entrepreneurship as a context-based science is investigated.

2.2.4 Stages of Entrepreneurship

Bosma and Levie (2010) illustrate a model in their 2009 GEM report to categorise the different stages in the entrepreneurial process (Figure 2). The model consists of four stages, namely *Pre-start*, *Nascent*, *Early-stage owner-manager* and *Established owner-manager* (Bosma and Levie, 2010).

According to Bosma and Levie (2010), a critical stage in the growth-potential of a new venture is during the early-stage entrepreneurial activity, denoted as 'TEA'. TEA includes both the nascent and early-stage owner-manager phases. The new venture creation decision, or firm birth occurs during the TEA stages. TEA High-Growth (TEAHG) is also defined and measured within these two stages (Bosma and Levie, 2010).

Figure 2. Stages in the entrepreneurship process
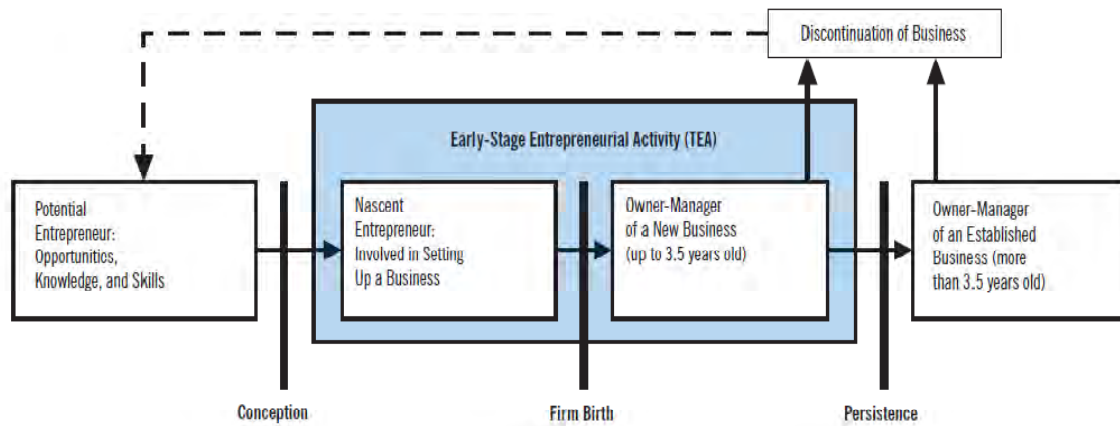
Source: Bosma and Levie (2010, p.14)

Baron (2007) contends that most of the recent literature on the stages of entrepreneurship identifies similar tasks that are regarded as key activities in the creation and success of a new venture. These are:

1. Generating ideas for new products and services [Pre-start].

2. Recognising business opportunities related to these ideas [TEA].

3. Obtaining the resources needed for developing these ideas through the launch of a new venture [TEA].

All of these activities are regarded as being most fundamental to the early phases of new venture creation; however, recent studies on this topic have only focused on TEA and have neglected the sensitivity of the pre-start stage to individual orientation and external influences (Baron, 2007). Cognitive and behavioural processes continue to play an important role in later phases of new venture

founding and operation, but according to Baron (2007) the long-term success of a new venture is particularly dependent on the influence of these cognitions and behaviours during both the pre-start <u>and</u> TEA stages. Therefore, both these stages will be included in this research, which is another differentiating approach of this study compared to research previously undertaken.

It is now established that entrepreneurial cognitions directly influence the entrepreneur's behaviour during both the pre-start and TEA stages of entrepreneurship and ultimately influence the growth potential of the new venture (Bowen and de Clercq, 2008; Lim *et al* 2010; Bosma and Levie 2010). Additionally, the perceived desirability and feasibility cognition [perceived growth potential] of the entrepreneur is a good proxy measure to determine the actual growth potential of the business (Baron, 2007). These findings are summarised in Figure 3.

Figure 3. Behavioural entrepreneurship and entrepreneurial stages
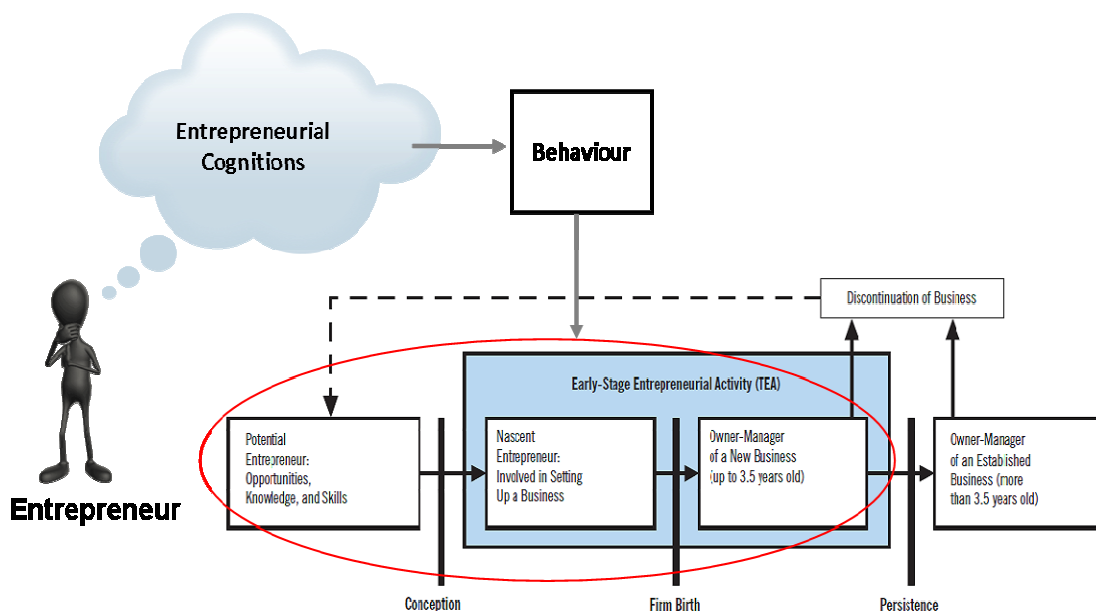
This raises the next question: What then influences the entrepreneur's cognitions? Is it the Entrepreneurial Orientation (EO) of each individual entrepreneur, the context in which he/she is operating, or is it a combination of both? These questions require further investigation.

2.2.5 Behavioural Entrepreneurship as a Context-based Science

Nieman and Nieuwenhuizen (2009) define a model of entrepreneurship development, which is shown in Figure 4. It illustrates how the entry of new entrepreneurs into an economy is directly influenced by three factors, namely *Entrepreneurial Orientation (EO), a supportive environment* and *a cooperative environment.*

Figure 4. Entrepreneurship Development Model
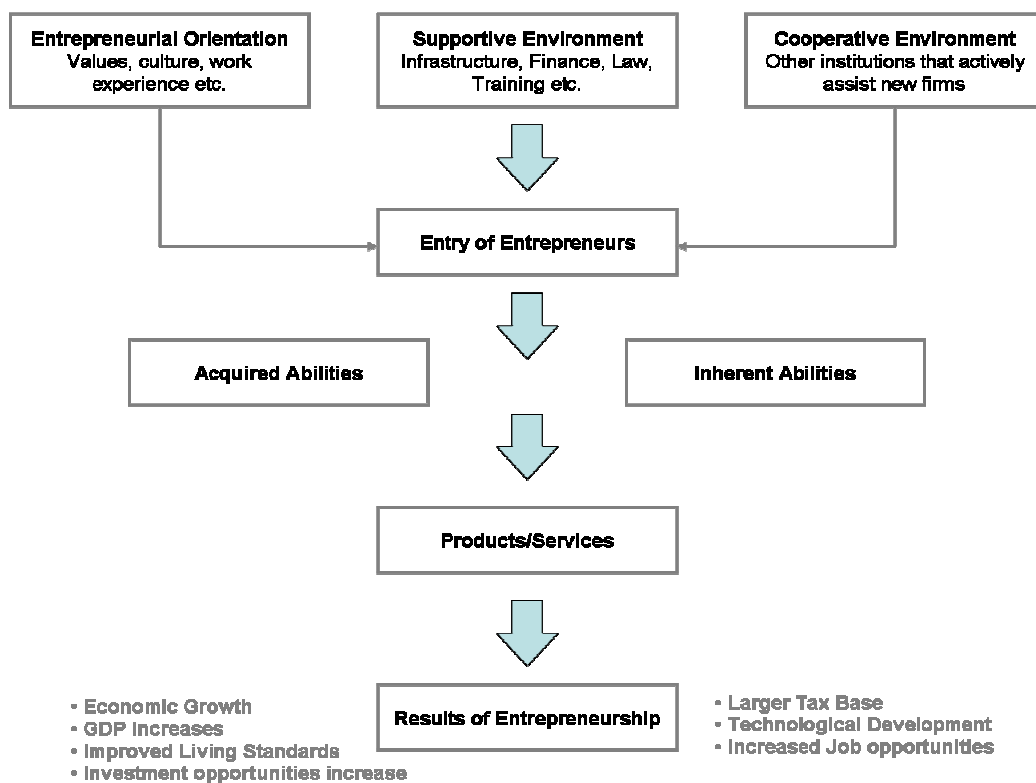
Source: Nieman and Nieuwenhuizen (2009, p. 11)

This model highlights that for entrepreneurship to grow and thrive, the presence of all three factors is essential. According to Nieman and Nieuwenhuizen (2009), EO is essential to the survival and growth of new businesses and is fostered by a unique blend of factors, such as culture, family and role models, previous education, work experience and personal orientation. Baron (2007) supports the idea that EO influences how the entrepreneur perceives entrepreneurship and behaves towards it. In other words, the EO of the entrepreneur influences his/her cognitions and subsequent behaviours when setting up a new business (Baron, 2007). The factors that make up EO are well understood and will not be included in this research. The remaining two factors are of greater importance to this study even though it is acknowledged that the influence of EO cannot be ignored.

Nieman and Nieuwenhuizen (2009) contend that the external environment, made up of both supportive and cooperative environmental factors, should create a climate favourable for entrepreneurship. This is what Tang (2008) calls a 'munificent environment'. It is evident from this model that entrepreneurship is not merely a behavioural science, but is also highly dependent on the context in which it operates.

According to Welter (2010, p. 167), context refers to "circumstances, conditions, situations, or environments that are external to the respective phenomenon and enable or constrain it". Context simultaneously provides individuals with entrepreneurial opportunities and sets boundaries for their behaviour; in other

words, individuals may simultaneously experience it as asset and liability (Welter, 2010). In his 2010 study, Welter (2010) further defines four dimensions of context, namely 'Business', 'Social', 'Spatial', and 'Institutional'. Institutional context is acknowledged in this article as having a direct impact on entrepreneurship by offering [or preventing] opportunities (Welter, 2010). This 'institutional context' is what Nieman and Nieuwenhuizen (2009) refer to as both the supportive and cooperative environments. Therefore, for the purposes of this research, the supportive and cooperative environments will be combined and referred to as the 'institutional context'.

The influence of the institutional context is relevant during all stages of entrepreneurship, especially in the early stages as discussed previously. Consequently, the surrounding institutional environment may influence the level and type of new businesses being created by influencing the cognitions and resultant behaviours of entrepreneurs (Bowen and De Clercq, 2008; Lim *et al*, 2010). Since the institutional context is such an important facet of this study, further investigation into the roots of institutional theory is required. This should ultimately reveal what institutional factors will most likely influence the cognitions of entrepreneurs and consequently the perceived growth potential of their new ventures during these early stages.

2.2.6 Institutional Theory

Even as far back as R.C.O Matthews in 1986, academics have begun to acknowledge the importance of the influence of institutions on the economic growth of a country (Williamson, 2000; Luiz, 2009), specifically through the allocation of entrepreneurial activities (Baumol and Strom, 2007). According to Williamson (2000), institutional economists of all kinds, old and new, are unanimous in the view that institutions matter.

According to Narayanan and Fahey (2005), Douglass North was one of the first to conceptualise the term 'institutions' back in 1990. North defined institutions as 'the rules of the game' that are humanly created constraints that structure human interaction; this included formal rules and informal constraints (Narayanan and Fahey, 2005). When the institutions are established and operating efficiently, they can reduce uncertainty and risk, as well as transaction costs (Welter and Smallbone, 2011). It would be unwise, however, to assume that there is a one-size-fits-all solution and much of the institutional reform is predicted on the assumption that there is a single set of institutions worth emulating (Luiz, 2009). The danger of this approach is that it ignores local realities, which inhibit these institutions from being embedded and will thus result in failure (Luiz, 2009). Nevertheless, because institutions matter, institutional theory has to progress, not by developing an overarching theory, but by uncovering, elaborating and explaining the influence of institutional factors and institutional voids on economic and individual behaviour (Williamson, 2000; Dequech, 2006).

Richard Scott was one of the first to begin elaborating on institutional theory in 1995 by differentiating three types of elements that underlie institutional order: *regulative, normative* and *cultural-cognitive* (Scott, 2008). Regulative elements include rule-setting, monitoring, and authorisation activities, whereas normative elements introduce a prescriptive, evaluative, and compulsory dimension into social life; cultural-cognitive elements emphasize the mutual beliefs that constitute the nature of how the local society operates and the lens through which they make sense of the world around them (Scott, 2008).

Regulative elements, or factors, are seen as 'formal' institutions, such as constitutional, legal and organisational frameworks (Welter and Smallbone, 2011). Normative and cultural-cognitive factors are seen as 'informal' institutions (Beck and Laeven, 2006). These include codes of conduct, values, traditions and norms, including the attitudes that are entrenched in a society (Welter and Smallbone, 2011). Institutional theory is thus concerned with regulatory, socio-economic, and cultural influences that promote [or inhibit] the survival and legitimacy of organizations (Bruton *et al*, 2010). These institutional forces are identified in multiple works from sociology and organisational theory to political science and economics (Bruton *et al*, 2010) and are summarised in Table 3 below.

Table 3. Institutional Theory

Degree of Formality (North, 1990)	Supportive Pillars (Scott, 1995)	Examples
Formal Institutions:	Regulative (coercive)	1. Laws
		2. Regulations
		3. Rules
Informal Institutions:	Normative	1. Norms
	Cognitive	2. Cultures
		3. Ethics

Source: Peng, Sun, Pinkham, and Chen (2009)

This now raises the next question: Can institutions be designed, or are they just an inherent result of human interaction? Peng *et al* (2009) argue that formal institutions can be more quickly designed, enforced and changed than informal institutions, since informal institutions are deeply ingrained in the norms, culture and ethics of each society. Welter and Smallbone (2011) develop this concept further by adding that informal and formal institutions co-evolve. Informal institutions are often a result of formal institutions in the form of collective, oftentimes implicit and unwritten, interpretation of formal rules, which they in turn influence (Welter and Smallbone, 2011). For example, although a specific legal framework may contain explicit regulations for implementing laws; these regulations may be complemented by an implicit interpretation of their content (Welter and Smallbone, 2011).

This means that in order to create a munificent institutional environment, one must ideally focus on designing the appropriate formal institutions, which in turn influence the informal institutions via the cognitions and resultant behaviours of

individuals; this should indirectly mould the informal institutions over time and stimulate a productive economy (Tang, 2008).

It must be stressed again that there is no 'silver bullet' when it comes to designing the 'ideal' munificent institutional environment (Luiz, 2009). Nevertheless, institutional theory has seen a recent surge in the application of a wide field of studies, particularly entrepreneurship and its influence on economic development (Sobel, 2008). This is because if research can expose, elaborate and explain the influence of different formal institutional factors on entrepreneurial cognitions, behaviour, and ultimately productive output, then this knowledge will enable those with influence to establish effective institutions in order to stimulate productive, high-growth entrepreneurship (Dequech, 2006).

2.2.7 Institutional Context and Entrepreneurship

When [formal] institutions provide for secure property rights, a fair and unbiased judicial system, contract enforcement, and effective constitutional limits on government's ability to transfer wealth through taxation and regulation, it reduces the profitability of unproductive and destructive entrepreneurship; this is whilst encouraging innovative individuals to engage in the creation of wealth through productive market entrepreneurship (Sobel, 2008). Tang (2008) supports this idea by suggesting that a munificent institutional environment facilitates the entrepreneur to create new productive ventures by enabling him/her to cultivate the diverse knowledge extracted from his/her human capital, social capital, and social skills.

A country's entrepreneurial activity is shaped by many key institutional framework conditions, including the financial, commercial and legal systems, education, and social norms supporting entrepreneurship; some conditions can be directly influenced by policy, and others reflect national culture and societal values (Baughn *et al*, 2010). This again highlights the notion that in order to create a munificent institutional environment, focus should be placed on defining what formal institutional factors have an influence on both informal institutions [specifically the cognitions of entrepreneurs], and ultimately the level and type of entrepreneurship in order to guide government policy and regulation to stimulate productive entrepreneurial activities (Tang, 2008). It must also be noted that if there is a void of munificent formal institutions, the risks for those entrepreneurs operating in these types of environments are exacerbated far beyond the usual levels experienced by entrepreneurs operating in more supportive environments (Puffer *et al*, 2009).

Henrekson and Sanandaji (2011) create the link between institutions and individual entrepreneurs by arguing that institutions directly shape the cognitions, and resultant actions, of entrepreneurs and help determine the supply of entrepreneurship. Additionally, institutional factors not only determine the level, but also the type of entrepreneurship and they do not merely control entrepreneurs, because entrepreneurs' actions in turn also influence the institutions (Henrekson and Sanandaji, 2011). Bowen and De Clercq (2008) tested this on a macro level using the Total Entrepreneurship Activity (TEA) and TEA High Growth (TEAHG)

indices from the GEM report for different countries and correlated these with five national institutional factors. The results found a significant correlation ($P < 0.001$) of each institutional variable with both TEA and TEAHG, as they had proposed (Bowen and De Clercq, 2008). Sobel (2008) also examined the role of the institutional quality on the net productivity of entrepreneurship by testing Baumol's 1990 theory that entrepreneurial individuals channel their effort in different directions depending on the prevailing economic, political, and legal institutions. Sobel (2008) found that there is a high correlation ($R^2 = 0.875$, $\alpha = 0.05$) between institutional quality between different states in the USA and the net entrepreneurial productivity of new ventures in each state, as can be seen in Figure 5.

Figure 5. Institutional quality and the productivity of entrepreneurship
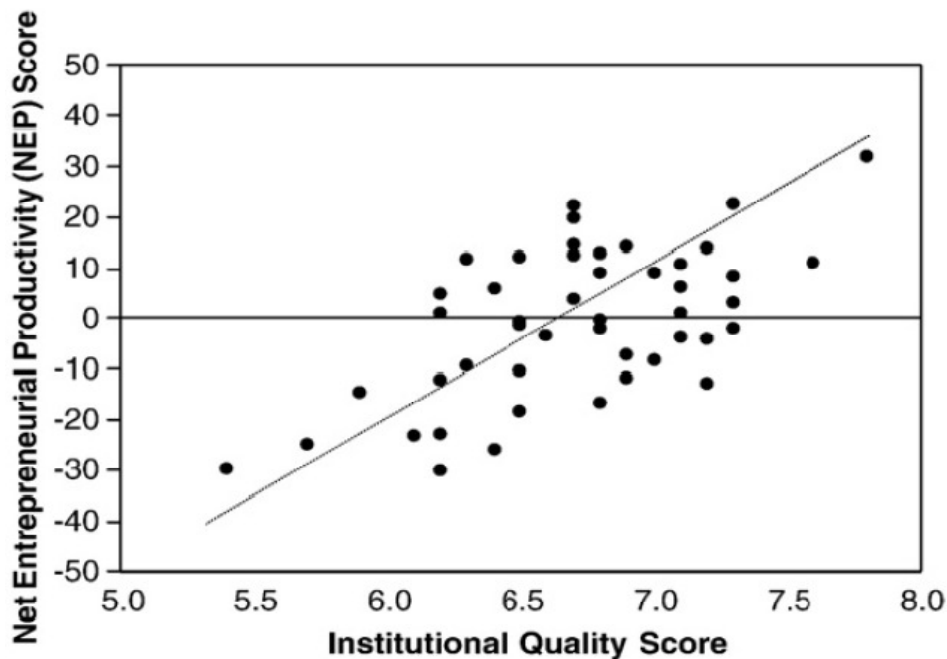
(Source: Sobel, 2008, p. 650)

Roxas, Lindsay, Ashill and Victorio (2006) take a slightly different slant by suggesting that the influence of the institutional context on entrepreneurship does not only vary between nations, or between different regions/states within a nation, but also between cities themselves. Whilst a national picture of the state of the socio-economic-political environment for business helps in describing the business and investment potentials of a country, it unfairly masks the large disparities amongst different cities within the country (Roxas *et al*, 2006). Hence, efforts to stimulate and support entrepreneurship as part of economic development initiatives also depends on a clear understanding of how sub-national economic conditions impact entrepreneurs (Roxas *et al,* 2006).

Figure 6. Institutional context and entrepreneurship
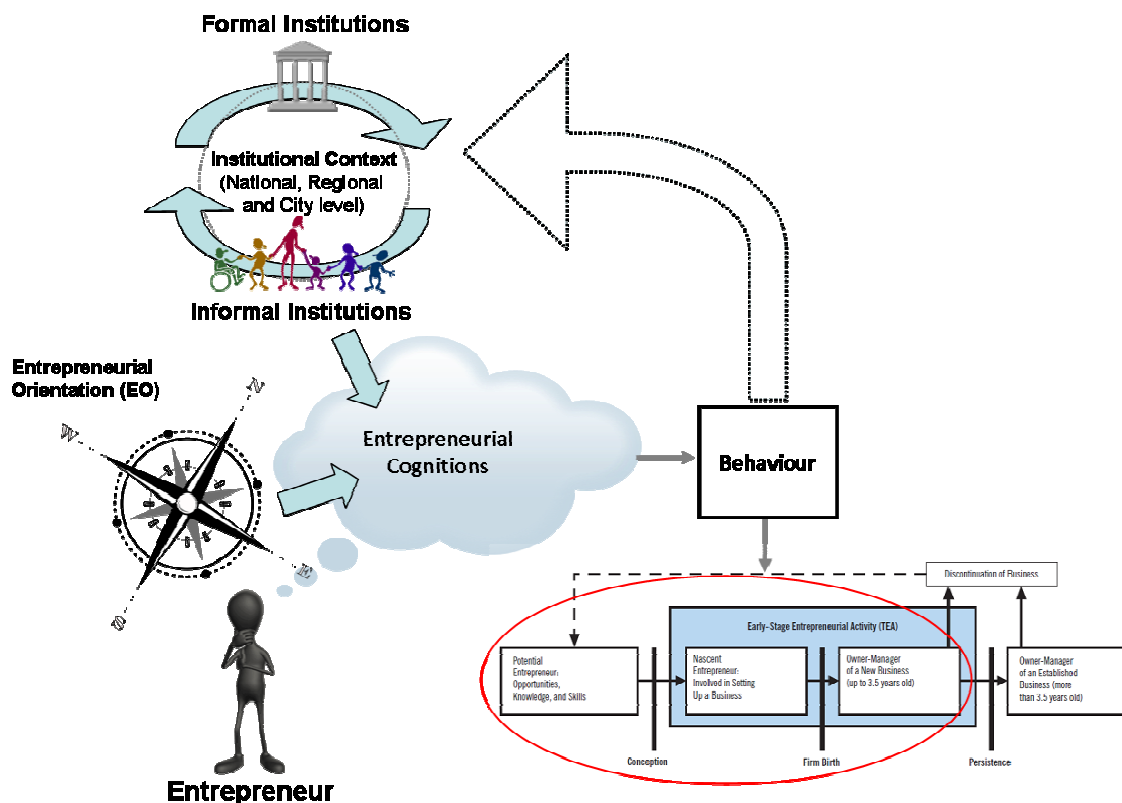
Figure 3 is now expanded by including forces that directly influence the cognitions of entrepreneurs when setting up a new business, namely EO and the institutional context. This is illustrated in Figure 6. Note again that even though EO is included in this model for comprehensiveness, it will not form any further part of this study hereafter. Also notice the feedback effect of the entrepreneur's behaviour on the institutional context. This is in line with the view taken by Henrekson and Sanandaji (2011).

Figure 6 illustrates again that institutions matter with regards to entrepreneurial cognitions, behaviour and ultimate growth potential, specifically during the early stages of the entrepreneurial process. As a next step, scholars must tackle the harder and more interesting questions of which institutional factors matter, how they matter, under what circumstances, to what extent, and in what ways (Peng, Sun, Pinkham, and Chen, 2009).

2.2.8 Institutional Factors and High-Growth Entrepreneurship

Several studies have recently attempted to better understand the influence of different institutional factors on entrepreneurial activity (Bowen and De Clercq, 2008; Lim *et al*, 2010; Tang, 2010; Stenholm *et al*, 2010). For example, Tang (2010) defines four dimensions of institutional factors that are believed to be critical to opportunity recognition; these are government policies and procedures, socio-economic conditions, financial and non-financial support services, and infrastructure (Tang, 2010). Bowen and De Clercq (2008) include four institutional factors in their study on institutional context and the allocation of entrepreneurial

effort; these are government regulation and complexity, financial capital, educational capital, and corruption. Lim *et al* (2010) also define four factors in their study on the influence of the institutional environment on entrepreneurial cognitions; these are the legal system, financial system, education system and trust relations.

These and other studies have been examined and compared, and ultimately five main categories of institutional factors that may have a significant influence on high-growth entrepreneurship have been identified. These factors and their sources are summarised in Table 4 and require further investigation.

Table 4. Institutional Factors and Literature Sources

No.	Institutional Factors	Sources
1.	Government Policies and Procedures/Legal system	Tang (2010), Bowen and De Clercq (2008), Lim *et al* (2010), Troilo (2011), McMullen *et al* (2008), Luiz (2009), Stenholm *et al* (2010)
2.	Corruption/Trust relations	Stenholm *et al* (2010), Lim *et al* (2010), Bowen and De Clercq (2008), Harris, Sapienza and Bowie (2009), Anokhin and Schulze (2009)
3.	Financial Support	Bowen and De Clercq (2008) Minniti (2008), Lim *et al* (2010), Bruton *et al* (2010), Tang (2010), McMullen *et al* (2008), Stenholm *et al* (2010)
4.	Educational Support/Training	Rasmussen and Sorheim (2006), Lim *et al* (2010), Bowen and De Clercq (2008), Dickson, Solomon & Weaver (2008). Stenholm *et al* (2010), Neck and Greene (2011)
5.	Infrastructure/Technology availability	Roxas *et al* (2006), Post and Pfaff (2007), Tang (2008), Levie and Autio (2008), Nieman & Niuewenhuizen (2009)

2.2.8.1 *Government Policies and Procedures / Legal System*

Government policies and procedures are based on the property rights view of institutional theory [formal, regulative element] where the **regulatory protection** of intellectual property through the 'rule of law' can motivate entrepreneurial activity (Minniti, 2008; Lim *et al*, 2010; Troilo, 2011). More simply defined, it is the extent to which government regulation provides a protective environment for entrepreneurship (Bowen and De Clercq, 2008, Autio and Acs, 2010). The regulatory framework promotes or hinders entrepreneurship by shaping the level of risk involved in the formation and growth of a business, as well as influencing entrepreneurial behavior through the rules that are enforcement (Stenholm *et al*, 2010).

McMullen, Bagby and Palich (2008) argue that without property rights secured in the rule of law, individuals are less likely to invest in improving their assets and are required to direct their attention away from productive activities in the effort to secure legally unprotected property. Luiz (2009) contends that poor countries are often peppered with non-existent property rights for the majority of the people, the erratic enforcement of the law, elites who have unlimited political and economic power, and high levels of inequality; this leads to a low level of productive entrepreneurship and consequently, low economic growth. The findings of these scholars therefore indicate that there is a positive link between the level of regulatory protection of property rights and productive, high-growth entrepreneurship (Bowen & de Clercq, 2008; Troilo, 2011). However, the findings

of Stenholm *et al* (2010) reveal a contrary conclusion to these authors; in their findings it was concluded that even though the level of regulatory protection does positively influence the level of entrepreneurial activity, it has no bearing on the type of entrepreneurship. This view will also be considered during this study.

Bowen and De Clercq (2008) further argue that previous research also suggests that even though it is important to have a high level of regulatory protection of property rights, the complexity of this regulatory environment may present an extra hurdle for entrepreneurs. McMullen *et al* (2008) refers to this as 'business freedom' when arguing that the more government imposes regulations on business, the harder it is for entrepreneurs to create them. Stenholm *et al* (2010) support this view by stating that entrepreneurial opportunities tend to be higher in economies with fewer regulatory procedures, free markets and few barriers to entry. The regulatory dimension stresses rules, administration, and legitimacy, which suggests that a strong presence of administrative burdens, procedures, and bureaucracy related to forming and growing a business may negatively impact individuals' intentions to engage in new firm formation (Stenholm *et al*, 2010). Bowen and De Clercq (2008) also support the view that these administrative burdens may act as a barrier to firm expansion and growth, suggesting that the level of **regulatory complexity** when creating a new venture may negatively influence the level and allocation of entrepreneurship (Troilo, 2011).

2.2.8.2 *Corruption/Trust Relations*

Linked to the above discussions is the topic of **corruption and trust relations**. In less developed countries with unstable regulative arrangements, the opportunity cost for entrepreneurship may increase dramatically, because of uncertainty of the regulatory framework and the potential for corruption (Stenholm *et al*, 2010). Corruption reflects inefficient, weak regulative institutions governing trust relations (Lim *et al*, 2010). Uncertainty and lack of trust induced by corruption may discourage potential entrepreneurs from creating new high-growth businesses (Bowen and De Clercq, 2008). Corruption weakens the rule of law, gradually replacing it with the 'rule of man'; highlighting the feedback effect of individuals' behaviour on the institutional environment (Stenholm *et al*, 2010). Anokhin and Schulze (2009) posit that better control of corruption will be associated with rising levels of innovation and entrepreneurship.

According to Scott (2008), corruption and trust relations form part of the 'informal, normative' element of institutional theory, which is something that cannot directly be controlled, as discussed earlier. Nevertheless, it is regarded as a very influential institutional factor by many economists, as it has a potentially large negative influence on the level and type of entrepreneurship within an economy (Anokhin and Schulze, 2009). Therefore, it has been included in the research model.

2.2.8.3 *Financial Support*

Financial support is another widely recognised socio-economic institutional factor influencing entrepreneurship (Minniti, 2008). In particular, finance aimed at entrepreneurial ventures to assist in the start-up process has been found to increase the likelihood of new ventures being created (Lim *et al*, 2010), especially high-growth ventures (Bowen and De Clercq, 2008).

However, Welter and Smallbone (2011) believe that a lack of access to financial support does not necessarily negatively influence the emergence of new businesses, because motivated entrepreneurs usually 'bootstrap' in situations where access to finance from formal sources is extremely scarce. Bootstrapping refers to attracting the resources needed without using external financial support (Welter and Smallbone, 2011). These entrepreneurs usually build wealth through what Welter and Smallbone (2011, p. 111) refer to as "serial entrepreneurship" where the entrepreneur starts with a simple business in trade or services that does not require substantial financial support and over time, moves on to more sophisticated ventures. Ebben (2009) agrees that financially strapped businesses, and those that do not have access to finance, are likely to use bootstrapping methods to improve their financial position and encourage growth.

Nevertheless, many economists have recognised financial support as an essential institutional factor that influences the growth of entrepreneurial ventures (Bowen and de Clercq, 2008). Bowen and de Clercq (2008) argue that the extent of the

development of a country's financial system will indirectly influence economic growth, since it will directly influence the nature of the activities in which entrepreneurs become engaged. De Clercq, Menzies, Diochon and Gasse (2009) further this idea by stating that the entrepreneur's perception of the availability of external financial support, which includes equity, debt, venture capital and governmental subsidies, will positively influence how much effort they are willing to invest in launching their new business. The findings from this study were that there is a positive correlation with regards to private financial support (debt, equity and venture capital) and a negative correlation with regards to public financial support (government subsidies).

2.2.8.4 *Educational/Training Support*

Education and training is an integral component of the socio-economic infrastructure that encourages individuals to create new high-growth ventures (Rasmussen and Sorheim, 2006; Dickson *et al*, 2008). Education and training systems are also essential to encourage individuals to be more entrepreneurial and hence, develop higher levels of cognition regarding knowledge structures, willingness and ability to start a new business (Lim *et al*, 2010).

Furthermore, education/training should focus on providing the discovery, reasoning and implementation skills required in highly uncertain environments (Neck and Greene, 2011). Neck and Greene (2011) further argue that these skills will enhance the likelihood that students/trainees will identify and exploit the right opportunity at the right time for the right reason. Therefore, economists such as

Bowen and de Clercq (2008), Lim *et al* (2010) and Dickson *et al* (2008) all suggest that the level of a country's education and training aimed specifically at entrepreneurship is positively related to the growth potential of new businesses.

2.2.8.5 *Infrastructure support*

The extent of, and access to, **infrastructure** is also known to influence entrepreneurship (Tang, 2008; Levie and Autio, 2008). One of the 'Entrepreneurial Framework Conditions', defined by Bosma and Levie in the GEM report, that is found to have a significant impact on entrepreneurship, is the "ease of access to available physical resources – communication, utilities, transportation, land or space - that does not discriminate against new firms" (Bosma and Levie, 2010, p. 33). Roxas *et al* (2006, p.123) refer to this infrastructure support as the "structural support system" and their argument is that every economic activity, regardless of scale or magnitude, requires basic infrastructure. This includes the physical infrastructure, such as roads, transport system, traffic management, water and power supplies, as well as the technological infrastructure, namely information and telecommunications (Roxas *et al*, 2006). This technological support system aids businesses by increasing the supply of inputs to the business, including information, resulting in lower costs of production, and facilitates activities of other stakeholders that are essential in the value chain (Roxas *et al*, 2006).

Post and Pfaff (2007) argue that a comprehensive technological infrastructure, including the internet and mobile phones, is the most essential institutional factor regarding a country's infrastructure that will stimulate entrepreneurship and rapid

economic growth. According to Todd (2007), high-potential entrepreneurial ventures are characterised by their adoption of innovative ideas and processes and the availability of technological tools, which enables them to establish a competitive advantage through their early embrace of these technological innovations. Furthermore, economic development is becoming increasingly knowledge-driven in both developing and developed countries and the information infrastructure is rapidly becoming a wealth-creating tool for those entrepreneurs who have access to it (Todd, 2007).

2.3 Conclusion

This chapter served to investigate the existing literature on the influence of the institutional context on high-growth entrepreneurship. A wide range of secondary information was investigated in order to build arguments and generate the research model. This was done by combining entrepreneurship theory and institutional theory, which culminated in five main institutional factors being identified as having a possible significant influence on the individual entrepreneur's perception of the growth potential of his/her new business. The findings are summarised below in Figure 7. This illustration reveals how these five institutional factors may influence the entrepreneur's perceptions of growth potential and ultimate growth of the new business.

Figure 7. Institutional factors and high-growth entrepreneurship
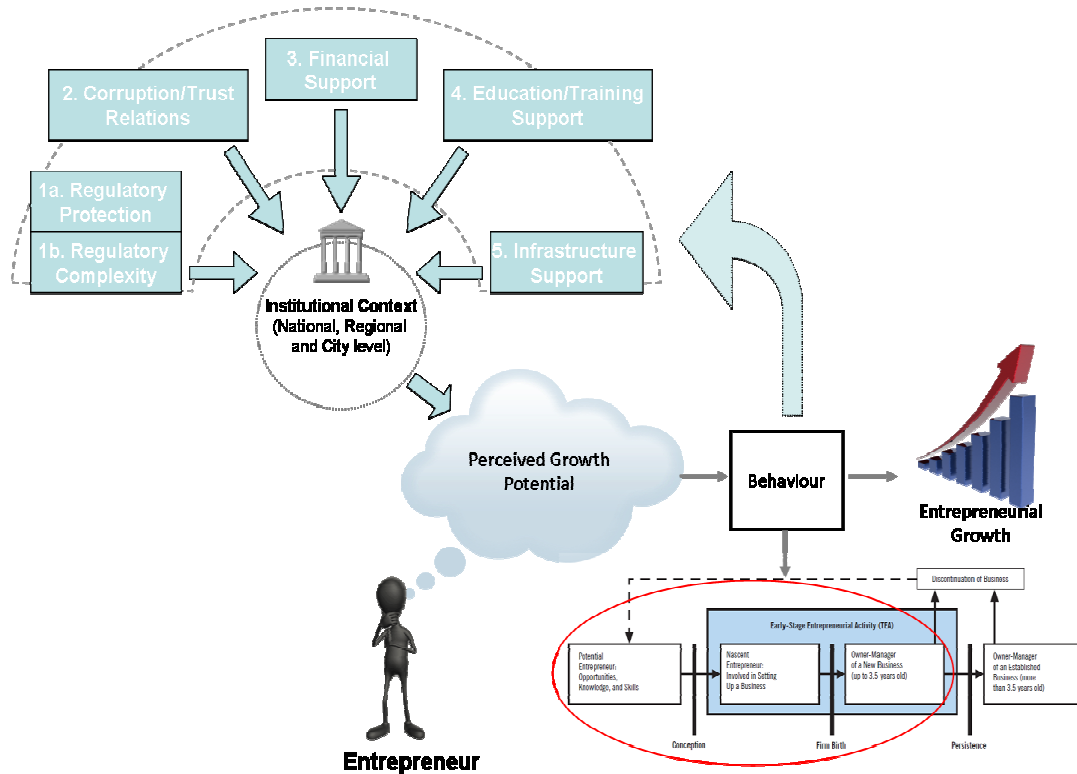
This model is now simplified in order to assist in clearly defining the research hypotheses for this study and thereafter, defining a research methodology to test this model. The simplified research model can be seen in Figure 8. It highlights the five main institutional factor constructs that have been identified and the proposed direction of their influence on the perceived growth potential of the individual entrepreneur's new business.

Figure 8. Research Model

3. RESEARCH HYPOTHESES

3.1 Introduction

It is important at this point to clearly state the research hypotheses, as well as define the statistical hypotheses that have to be empirically tested. It must be stated that all the hypotheses are tests of relations and not of causality, as will be explained in the methodology.

3.2 Government Policies and Procedures

Research Hypothesis 1a

There is a positive correlation between an entrepreneur's perceived regulatory protection and growth potential of his/her new business.

Statistical Hypothesis 1a

$H_0 : \rho = 0$

$H_1: \rho > 0$ where ρ is defined as the Pearson correlation between perceived regulatory protection and perceived growth potential.

Research Hypothesis 1b

There is a negative correlation between an entrepreneur's perceived regulatory complexity and growth potential of his/her new business.

Statistical Hypothesis 1b

$H_0 : \rho = 0$

$H_1: \rho < 0$ where ρ is defined as the Pearson correlation between perceived regulatory complexity and perceived growth potential.

3.3 Corruption/Trust Relations

Research Hypothesis 2

There is a negative correlation between an entrepreneur's perceived level of corruption and growth potential of his/her new business.

Statistical Hypothesis 2

$H_0 : \rho = 0$

H_1: $\rho < 0$ where ρ is defined as the Pearson correlation between perceived corruption/trust relations and perceived growth potential.

3.4 Financial Support

Research Hypothesis 3

There is a positive correlation between an entrepreneur's perceived financial support and growth potential of his/her new business.

Statistical Hypothesis 3

$H_0 : \rho = 0$

H_1: $\rho > 0$ where ρ is defined as the Pearson correlation between perceived financial support and perceived growth potential.

3.5 Education/Training support

Research Hypothesis 4

There is a positive correlation between an entrepreneur's perceived education/training support and growth potential of his/her new business.

Statistical Hypothesis 4

$H_0 : \rho = 0$

H_1: $\rho > 0$ where ρ is defined as the Pearson correlation between perceived education/training support and perceived growth potential.

3.6 Infrastructure Support

Research Hypothesis 5

There is a positive correlation between an entrepreneur's infrastructure support and growth potential of his/her new business.

Statistical Hypothesis 5

$H_0 : \rho = 0$

H_1: $\rho > 0$ where ρ is defined as the Pearson correlation between perceived infrastructure support and perceived growth potential.

3.7 Institutional Context Measures

Research Hypothesis 6

A linear combination of the institutional context measures determines a significant proportion of the variance in entrepreneurs' perceived growth potential of their businesses, which is more than the variance explained by any of the individual measures.

Statistical Hypothesis 6

$H_0 : \beta_1 = \beta_2 = ... = \beta_k = 0$

H_1: At least two β's are not equal to zero.

Where $\beta_1, \beta_2 ..... \beta_k$ are the regression equation coefficients.

4. RESEARCH METHODOLOGY

4.1 Introduction

The research methodology provides the details on exactly how the research hypotheses were tested and what the limitations of this approach were. This section provides the rationale behind the chosen methodology considering that different methodologies are appropriate for different types of studies (Blumberg, Cooper and Schindler, 2008). The research methodology chapter is divided into seven main sections:

1. *Research Design,*

2. *Research Method,*

3. *Sample Design,*

4. *Instrument Design,*

5. *Data Collection,*

6. *Data Analysis, and*

7. *Methodology Limitations.*

4.2 Research Design

In order to identify the institutional factors that may influence high-growth entrepreneurship, exploratory research of secondary data was first implemented and detailed in the literature review (Blumberg *et al*, 2008). This study was then designed to be an exploratory, explanatory and predictive, cross-sectional, quantitative study. This was in order to characterise, explain and attempt to predict, the associations between the identified independent institutional factors

and the dependent variable, namely perceived entrepreneurial growth-potential (Blumberg *et al*, 2008).

4.2.1 Motivation of Research Design

Blumberg *et al* (2008) advocate that a research design is the blueprint for the collection, measurement and analysis of data and is the plan and structure of investigation as to obtain answers to the research question. Therefore, the research has to be appropriately designed based on the overall research question, which in this case can be stated as: '*Are the identified institutional factors significantly correlated with perceived high-growth entrepreneurship as defined in a given institutional context?*' Based on this question, it is evident that an exploratory, explanatory and predictive design was necessary to explore how the different institutional factors may explain, and possibly predict, the level of high-growth entrepreneurship in a given institutional context.

Exploratory research defines possible relationships in only the most general form and then allows the analysis to reveal the relationships (Hair, Black, Babin and Anderson, 2010). Explanatory and predictive designs go beyond just exploring and describing, by attempting to explain the reasons for the phenomenon, as well as predict the outcomes, that the exploratory or descriptive study has only observed and described (Blumberg *et al*, 2008). Furthermore, Blumberg *et al* (2008) argue that quantitative designs are used to study numbers and figures, whereas qualitative designs are more aimed at describing the 'what' and 'why'. A quantitative design was appropriate for this study in that it aimed to determine how

much positive or negative influence each institutional factor exerts on high-growth entrepreneurship.

Cross-sectional studies are carried out once and represent a snapshot of one point in time, whereas longitudinal studies are repeated over an extended period (Blumberg *et al*, 2008). Since this study was a once-off snapshot, it was designed as a cross-sectional study. Therefore, the reason why the study was not casual is because it was a cross-sectional design and according to Blumberg *et al* (2008), longitudinal designs are more appropriate for causal studies as a causal relationship between A and B requires that A happened before B.

4.3 Research Method

There are four research methods for an explanatory design, namely surveys, experiments, secondary data studies, and observations (Blumberg *et al*, 2008). Blumberg *et al* (2008) advocate that surveys attempt to explain a phenomenon in terms of 'what', 'who', 'when', 'where', 'how much' and/or quantify certain factual information. Since this study was aimed at quantifying such factual information, in the form of 'how' and 'how much', a survey method by means of a self-administered questionnaire was employed to carry out this research.

4.3.1 Population and Unit of Analysis

The population of this study included all pre-start, nascent and early-stage owner-manager entrepreneurs in South Africa, as per the definition in the literature review (Bosma and Levie, 2010). Therefore, established owner-manager entrepreneurs

were excluded, as well as corporate entrepreneurs and entrepreneurs based outside the borders of South Africa.

According to Blumberg *et al* (2008), the unit of analysis is derived from the research question, which often allows for more than one unit of analysis. In this case, there were four possible units of analysis: country-level, regional-level, city-level, and individual-level. Since this study was focused on measuring the influence of different institutional factors on the perceptions of individual entrepreneurs when attempting to start new businesses, the unit of analysis in this case was an individual entrepreneur.

4.4 Sample Design

According to Blumberg *et al* (2008), the sample must be chosen so that there is minimal bias and sampling error present in the data. Additionally, the sample must be as representative of the population as possible (Blumberg *et al*, 2008). There must be sufficient elements in the sample, they must be drawn in a way that favours neither overestimation nor underestimation, and the standard error of estimate must be minimised as far as possible (Blumberg *et al*, 2008).

Blumberg *et al* (2008) also state that the researcher faces a basic choice: a probability or a non-probability sample design. A probability sample is based on the concept of random selection, whereas a non-probability sample is arbitrary and subjective; a probability sample is a more complex and costly procedure which allows the researcher to make probability-based confidence estimates, whereas

this cannot be done with a non-probability sample (Blumberg *et al*, 2008). The question the researcher has to ask is: 'is a probability sample necessary and if so, is it possible?' (Blumberg *et al*, 2008).

According to Lim *et al* (2010), the difficulty in accessing sampling frames for probability samples in social science research is very complex and time-consuming. Furthermore, the researcher was more concerned with determining whether there was a statistically significant positive or negative influence of the institutional factors on perceived growth potential, rather than the accurate size of the effect. According to Blumberg *et al* (2008), this holds especially true for research that employs variables that do not know a common scale, which was the case in this study. Therefore, the approach of this study was similar to that of Lim *et al* (2010) where a non-probability sample design was implemented.

There are three categories of non-probability sampling designs, namely convenience, purposive, and snowball (Blumberg *et al*, 2008). Convenience samples are unrestricted and allow the researcher the freedom to choose whoever they can find, which does lend itself to a less reliable sample, but is the cheapest and easiest to construct (Blumberg *et al*, 2008). A non-probability sample that conforms to some criterion is known as a purposive sample and is therefore more reliable than a convenience sample (Blumberg *et al*, 2008). Snowball sampling is used predominantly when sample subjects are difficult to find and is a method

where the researcher uses referral networks to locate more and more sample subjects (Blumberg *et al*, 2008).

In this study, the primary approach was one of convenience sampling due the time and financial constraints of the research. In order to be as representative as possible, multiple sample frames that cover a wide geographical area within the borders of South Africa were identified and selected. Further sample frames and subjects were also accessed using a snowball sampling approach. The primary sampling frames included the Branson Entrepreneurship Centre (BEC), the Gibs 2009, 2010 and 2011 entrepreneurship MBA students, the University of Cape Town Entrepreneurial MBA students, the National Small Business Chamber (NSBC), and the Business Partner Limited (BPL) databases or 'sample fames'.

4.5 Instrument Design

4.5.1 Introduction

The measuring instrument comprised 4 sections, namely the demographics, the qualifying question, perceived growth potential rating scale, and institutional factors rating scale. The measuring instrument details are discussed below and a copy can be found in Appendix A**.**

4.5.2 Demographics

Demographic questions were included for the purposes of understanding the nature of the respondents of the sample. This included age, gender, province and

educational qualification. This demographic data was used to better understand any patterns within different age groups, genders, regions or educational levels.

4.5.3 Qualifying Question

A Qualifying question was included in order to ensure that only those respondents that fit the criteria of being a pre-start, nascent or early-stage owner-manager entrepreneur were considered in the analysis, as detailed in the literature review.

4.5.4 Dependent Variable - Perceived Growth Potential Rating Scale

Blumberg *et al* (2008) state that there are four widely used classifications of rating scales, namely nominal, ordinal, interval and ratio:

1. Nominal has a classification, but no order (example: Gender). Each group is mutually exclusive and collectively exhaustive.

2. Ordinal has a classification and order, but no measurable distance or unique origin (example: disagree, neutral, agree). The use of an ordinal scale implies a statement of 'greater than' or 'less than'.

3. Interval has a classification, an order and is measurable, but has no unique origin (example: Temperature in degrees)

4. Ratio has a classification, order, distance, and a unique origin (example: age in years)

An ordinal rating scale is widely used in surveys where attitudes towards a topic are to be measured; this is often known as a 'Likert' scale and usually consists of statements that express either a favourable or unfavourable attitude towards the

object of interest (Blumberg *et al*, 2008). The participant is asked to agree or disagree with each statement and then each response is given a numerical score to reflect its degree of attitudinal favourableness (Blumberg *et al*, 2008).

According to Bowen and de Clercq (2008), the Global Entrepreneurship Monitor (GEM) *Adult Population Survey* is a collaborative project led by the London Business School and carried out by multiple national teams around the world. The aim was to create harmonised data on the level and type of entrepreneurial activity across countries. A standardised questionnaire was developed and validated for this project, which uses a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree' (Bowen and de Clercq, 2008). This questionnaire was adopted for this study and adapted to include the additional, unique measures of innovativeness and internationalisation, as discussed in the literature review. The perceived growth potential was then measured using this adapted rating scale. This meant that each entrepreneur was asked to rate the perceived growth potential of their new venture, based on the three seven-point Likert rating scale items of job creation, innovation and internationalisation. The available choices ranged from strongly disagree to strongly agree, which was consistent with the GEM adult population survey.

4.5.5 Independent Variables - Institutional Factors Rating Scale

According to Bowen and de Clercq (2008), the Global Entrepreneurship Monitor (GEM) *Expert Questionnaire* is a standardised measure of a country's institutional context with respect to entrepreneurship. This questionnaire includes standardised

measures of experts' perceptions of their country's entrepreneurial framework conditions; it is unique in that it assesses the institutional environment for entrepreneurship on the basis of standardised questions and scales of measurement for a large number of countries (Bowen and de Clercq, 2008). The multi-item constructs used in this survey have shown levels of reliability consistent with current social science standards (Bowen and de Clercq, 2008). The six independent institutional factors were measured using the same survey and rating scale design, which was adapted for this study. A seven-point Likert rating scale was utilised to determine the entrepreneurs' attitudes towards each institutional factor consistent with the Expert Questionnaire (Bowen and de Clercq, 2008). The available choices ranged from strongly disagree to strongly agree.

4.6 Data Collection

There are four main approaches a researcher can adopt to conduct a survey in order to collect data; this can be done through personal interviews, telephone interviewing, self-administered surveys, or an online survey via a computer (Blumberg *et al*, 2008). There are advantages and disadvantages of each method and this has to be chosen carefully depending on the design, budget, time-constraints and access to the target participants (Blumberg *et al*, 2008).

Since the members of most of the databases listed above were not easily accessible in person, the survey instrument was designed as an online survey, using a tool called "Survey Monkey". Therefore, it was a saturation survey as it was sent to every member of each online sample frame (Blumberg *et al*, 2008).

Where the databases were accessible in person, a self-administered survey on a printed copy was handed personally to the individuals.

4.7 Data Analysis

4.7.1 Pilot Testing

Five individuals from the population were approached to complete the questionnaire prior to sending the final updated questionnaire to the sample frames. These individuals provided valuable feedback, which was then used to refine the questionnaire. The majority of the feedback entailed changing the grammatical construction of the sentences to clarify the statements.

4.7.2 Data Examination and Editing

According to Hair *et al* (2010), the data examination and editing process is a very necessary step in any analysis that researchers often overlook. This process involves cleaning and transforming data by identifying and ignoring data from respondents who do not complete the questionnaire (Hair *et al*, 2010). The following steps were taken to examine and edit the data that was collected and downloaded from Survey Monkey:

1. Each response was examined to ensure it falls within the defined population. If a respondent did not fall within the target population, they were removed. In total, 19 respondents were removed.

2. All remaining responses were checked to ensure all questions were completed. If there were individuals who did not complete the questionnaire,

they were removed from the list. This amounted to a total of three non-complete questionnaires being removed.

3. Open-ended questions were captured and interpreted for later use.

4.7.3 Descriptive Statistics

Descriptive statistics were included in the analysis to present the characteristics of the respondents in the sample relevant to the administered questionnaire. Descriptive statistics are essential in providing the reader with a clear picture of the respondents' characteristics (Blumberg *et al,* 2008). Therefore, descriptive statistics were included as an introduction to the data analysis, which comprised of a demographics analysis, a descriptive analysis of the qualifying question, and a descriptive analysis of the different items of each research construct.

4.7.3.1 *Demographics*

A demographic analysis of the respondents generates a clear understanding of who the respondents are; this includes characteristics of the respondents such as age, gender, race, education and many others relevant to the specific study (Blumberg *et al,* 2008). For this research, age, gender, province, and education level was analysed demographically to better understand the respondents.

4.7.3.2 *Qualifying Question*

The qualifying question was analysed to determine the distribution of respondents that fell within the different stages of entrepreneurship. Those respondents who did not fall within the defined research population were then filtered out and the remaining respondents were also analysed.

4.7.3.3 *High-growth Entrepreneurship and Institutional Factors*

The distributions of each rating scale item within each research construct was illustrated and analysed to generate a clear understanding of the distributions of each scale item in the questionnaire.

4.7.4 Psychometric Properties of the Scales

4.7.4.1 *Instrument Reliability Testing*

Reliability is an assessment of the degree of consistency between multiple measurements of a construct or variable (Hair *et al*, 2010). A common measure of reliability is to assess the internal consistency among the items in a summated scale (Hair *et al*, 2010). If a summated scale is proposed to have multiple dimensions, each dimension should be reflected by a separate scale item (Hair *et al*, 2010). The rationale for internal consistency is that the individual items should all be measuring the same construct and thus be highly inter-correlated (Hair *et al*, 2010).

The first measure of internal consistency is the reliability coefficient, which assesses the consistency of the entire scale, with Cronbach's alpha being the most common measure (Hair *et al*, 2010). The generally agreed upon lower limit for Cronbach's alpha is 0.7; however, it may decrease to 0.6 in exploratory research (Hair *et al*, 2010). In cases where the alpha is less than 0.6, attempts must be made to improve the reliability (Blumberg *et al*, 2008). This can be done by removing items one-by-one and re-assessing Cronbach's alpha to determine

whether the alpha has increased above 0.6 as a result of removing a particular item (Blumberg *et al,* 2008). If it is found that Cronbach's alpha becomes greater than 0.6 by removing a particular item, then that item has to be removed from the scale (Blumberg *et al,* 2008). The second measure considers the average correlation between each separate item in the scale (Hair *et al*, 2010). A rule of thumb is that the average inter-item correlation should be greater than 0.3 (Hair *et al*, 2010). Once the items in a scale are confirmed to be internally consistent, they can be summated into one reliable rating scale representing the relevant variable (Hair *et al*, 2010).

All the rating scales were tested for internal consistency using the Cronbach's alpha, as well as determining the average inter-item correlation. This was to check whether the scale was reliable within this context. Inter-item correlations of below 0.3 and alpha values below 0.6 were deemed unreliable and considerations for the exclusion of a specific item from the scale were then investigated.

4.7.4.2 *Tests for Normality*

Once the reliability of the constructs was confirmed, the assumptions underlying the chosen multivariate technique for the study had to be tested. This is because all multivariate techniques are based on a set of assumptions (Hair *et al*, 2010). The most fundamental assumption is normality, referring to the data distribution for an individual metric variable and its correspondence to the normal distribution (Hair *et al*, 2010). When performing a multivariate technique, both the univariate and the multivariate tests for normality should be implemented (Hair *et al*, 2010). Univariate

normality is easily tested and a number of corrective measures are possible (Hair *et al*, 2010). Multivariate normality is more difficult to test, but in most cases, assessing and achieving univariate normality for *all* variables is sufficient (Hair *et al*, 2010).

Testing for normality involves two measures: kurtosis and skewness (Hair *et al*, 2010). Kurtosis refers to the 'peakedness' or 'flatness' of the distribution compared to the normal distribution (Hair *et al*, 2010). Skewness is used to describe the balance of the distribution by determining whether it is centred and symmetrical or shifted to one side (Hair *et al*, 2010). A common diagnostic test for normality is the Shapiro-Wilks test, which calculates the level of significance for the differences from a normal distribution (Hair *et al*, 2010). This approach was employed in the analysis to test for normal distributions for each construct.

4.7.4.3 *Scale Transformations*

If it is found that a distribution is skewed, peaked or flat, transformations to achieve normality can be employed (Hair *et al*, 2010). For non-normal distributions, the most common patterns are flat and skewed distributions (Hair *et al*, 2010). In the case of flat distributions, the most common transformation is the inverse (1/Y or 1/X); whereas skewed distributions can be transformed by taking the square root, logarithms, squared, or cubed terms (Hair *et al*, 2010). Usually, negatively skewed distributions are best transformed by employing a squared or cubed transformation, whereas the logarithm or square root typically works best on positive skewness (Hair *et al*, 2010). If after these transformations, the distributions

remain non-normal, then a non-parametric test has to be conducted in parallel with the parametric test to validate the parametric test results (Hair *et al*, 2010). A common test to use in this case is the Spearman rank order correlation test, which can be compared to the parametric test results to validate these results (Hair *et al*, 2010). This approach was adopted for the data analysis.

4.7.4.1 *Summary of Scale Statistics*

Measures of central tendency are used to characterise what is typical for the group (Blumberg *et al*, 2008). These measures include the mean, mode and median. Measures of variability express the spread or variation in responses, as well as the skewness of the distribution (Blumberg *et al*, 2008). Since it was found that most of the distributions were skewed, the severity of the skewness had to be investigated. This was done by means of a table summarising the central tendency with 95% confidence intervals, as well as a measure for skewness for each distribution. Any skewness measure above one is regarded as being severely skewed (Blumberg *et al*, 2008).

Additionally, the size of the sample also influences the effects of non-normality (Hair *et al*, 2010). The larger the sample size, the greater its 'statistical power' by reducing sampling error (Hair *et al*, 2010). The greater the statistical power the more the detrimental effects of non-normality are reduced (Hair *et al*, 2010). With sample sizes of less than 50, and especially sample sizes less than 30, significant departures from normality cause substantial impacts on the results (Hair *et al*, 2010).

4.7.4.1 *Factor Analysis*

Factor analysis is an interdependence technique whose primary purpose is to define the underlying structure among the variables in the analysis (Hair *et al*, 2010). However, this can only be performed in the case where there are more than 100 responses (Hair *et al*, 2010). Additionally, the general rule is that the minimum is to have at least five times as many observations as the number of variables to be analysed; the more acceptable sample size would be 10:1 (Hair *et al*, 2010). Since the sample size for this study was 90, it does not satisfy these criteria and therefore, factor analysis was not employed.

4.7.5 Regression Analysis

Multiple regression analysis is a multivariate statistical technique that can be used to analyse the relationship between a single dependent variable and several independent variables (Hair *et al*, 2010). The objective of multiple regression analysis is to use the independent variables whose values are known to explain and predict the variation in the single dependent variable (Hair *et al*, 2010). A simple regression involves a single independent variable, whereas a multiple regression involves multiple independent variables (Hair *et al*, 2010). In order to determine which independent variables best explain the variance in the dependent variable, a bivariate linear correlation analysis can be employed (Hair *et al*, 2010). Once the correlations between each individual independent variable and the dependent variable are verified and calculated, a stepwise linear regression analysis can be employed to determine the model that describes the variance of

the dependent variable best (Hair *et al*, 2010). This approach was adopted for the analysis and all the hypotheses were tested in the process.

4.7.5.1 *Bivariate Linear Correlation Analysis*

A bivariate linear correlation analysis was implemented to test hypotheses 1a, 1b, 2, 3, 4 and 5. The method used to depict the associations between the dependent variable and each independent variable is to generate a correlation matrix (Hair *et al*, 2010). This enabled the researcher to determine the statistical significance, direction and size of the correlation between each of the five institutional factors and the dependent variable and as a result, test the abovementioned hypotheses. It also enabled the researcher to identify and order the predictors from highest to lowest. The supporting bivariate scatter plots were also examined for the possible effects of outlying values and non-linearity.

4.7.5.2 *Non-parametric measures of association*

In the case where the distributions were found to be skewed and could not be normalised, a non-parametric measure of association was implemented in parallel with the bivariate linear correlation analysis. This was to validate the parametric test results of the six hypotheses (1a, 1b, 2, 3, 4 and 5).

4.7.5.3 *Multivariate Stepwise Linear Regression*

Hypothesis six was tested by means of a multivariate stepwise linear regression. The task of the researcher is to expand the simple regression model by adding independent variables that have the greatest additional predictive power (Hair *et al*, 2010). A sequential search method can be employed to achieve this, as it

provides an objective method for selecting variables that maximises the prediction while employing the smallest number of variables (Hair *et al*, 2010). The most common sequential search method is the stepwise linear regression method (Hair *et al*, 2010). The approach enables the researcher to examine the contribution of each independent variable to the regression model (Hair *et al*, 2010). Each variable is considered for inclusion prior to developing the equation with the independent variable having the greatest contribution being added first (Hair *et al*, 2010). Independent variables are then selected based on their incremental contribution over variables already in the equation (Hair *et al*, 2010).

4.8 Research Methodology Limitations

This methodology was limited in the following ways:

1. It was limited to the South African context and may not be applicable in other institutional environments.

2. The sample was not representative as it was sourced using a non-probability sampling technique and therefore, the findings cannot be generalised to the entire population as defined.

3. There was a non-response bias, as many target participants chose not to answer the survey.

4. The rating scale used in the survey instrument introduced skewness bias and therefore, the distributions were non-normal.

5. There is a possibility that the sample size introduced type II error, which means that there was a chance that a correlation was not identified even though it may have existed.

4.9 Conclusion

This chapter has detailed the research methodology approach of this study. It was an exploratory, explanatory and predictive, quantitative, cross-sectional study. The population included all pre-start, nascent and early-stage owner-manager entrepreneurs in South Africa and the unit of analysis was an individual entrepreneur within this defined population. The sample was a non-probability, convenience and snowball sample taken from various sample frames around the country. The measurement instrument included four main sections, namely 'demographics', 'a qualifying question', 'perceived growth potential rating scale, and 'institutional factors rating scale'. The data was collected via an online survey, as well as in person and was analysed using bivariate linear correlation analysis and step-wise linear regression analysis. There were a number of limitations to this research methodology approach, which could not be avoided, but were minimised where possible.

There were 112 respondents, of which 19 were filtered out in the qualifying question. These 19 respondents were not regarded as usable, because they did not form part of the defined research population. Three respondents did not complete the questionnaire. Therefore, 90 responses were used in the statistical analysis. The following section details the results of this analysis.

5. RESULTS

5.1 Introduction

The purpose of this chapter is to present the statistical results of the data collected and analysed from the survey responses. This analysis is divided into three main sections, namely *descriptive statistics*, *psychometric properties of the scales*, and *regression analysis*.

Descriptive statistics were used to describe the respondents in relation to all the questions that were asked in the questionnaire. This was done to better understand the nature of the sample. Reliability testing was then applied to the perceived high-growth potential dependent variable, as well as the independent institutional factor variables. This was done via Cronbach's alpha to examine the internal consistency of each rating scale. Thereafter, the distribution of the scales was tested for normality and scale transformations were applied in an attempt to normalise any scales that were not normally distributed. Additionally, measures of central tendency and variability were computed. Finally, bivariate linear correlation and step-wise multivariate linear regression analyses were performed to test all the hypotheses.

5.2 Descriptive Statistics

This section presents the characteristics of the respondents relevant to the administered questionnaire. Percentages were calculated based on the 90 valid responses.

5.2.1 Demographics

5.2.1.1 *CD1 - Age*

Figure 9. Percentage Distribution of Age (n=90)

	Percent
> 50	11
36 - 50	18
26 - 35	50
19 - 25	19
<18	2
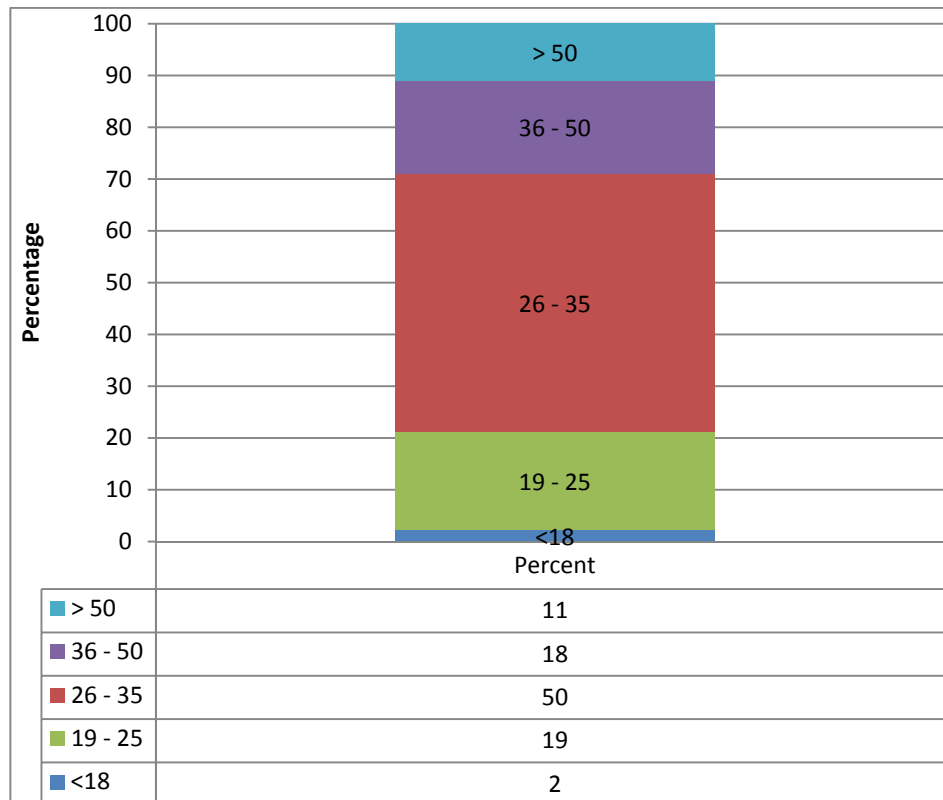
Respondents were asked to provide their age group bracket. Figure 9 shows that the majority of respondents (50%) were aged 26 – 35. The second biggest group was aged 19 – 25 (19%) and the smallest group was younger than 18 years old (2%).

5.2.1.2   *CD2 - Gender*

Respondents were asked to disclose their gender. Figure 10 below shows that males accounted for 51% of all respondents, while females accounted for 49%.

Figure 10. Percentage Distribution of Gender (n=90)

	Percent
Female	49.89
Male	51.11
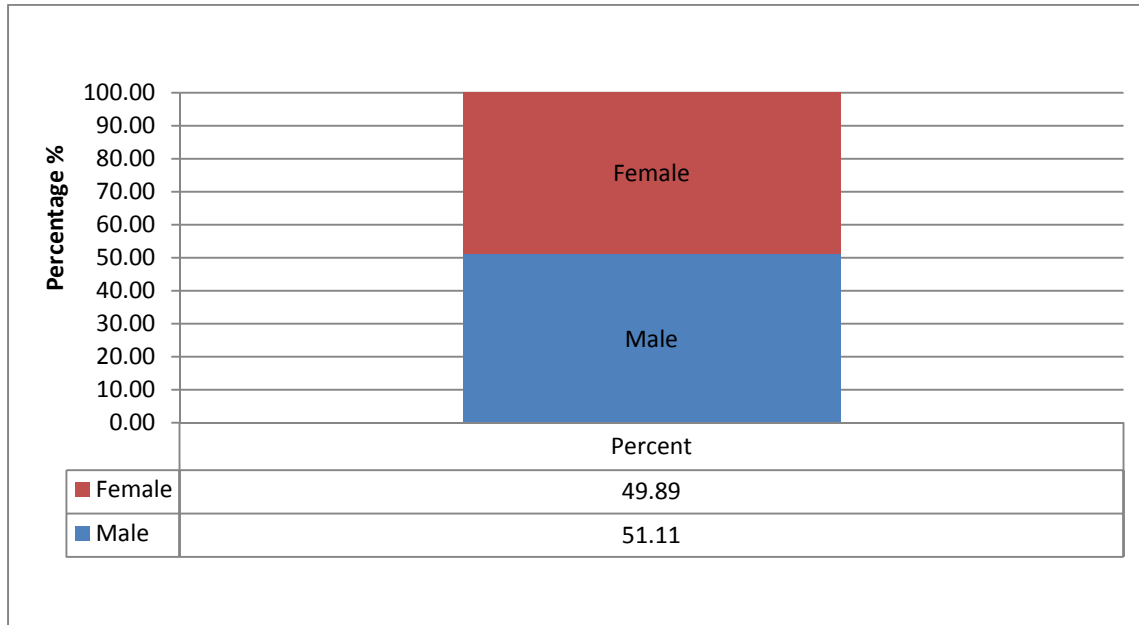
5.2.1.3   *CD3 – Location/Province*

Respondents were asked to reveal what province they operate in. This is shown in Figure 11. Out of the nine provinces, only four were represented by respondents. These were Gauteng, North West, Freestate, and the Western Cape. Gauteng had the majority of the 90 respondents (78), which made up 87% of the total responses. The Western Cape was a distant second with 10% of the responses (9 responses). The Freestate and North West provinces both had a very small contribution towards the overall responses.

Figure 11. Percentage Distribution of Region (n=90)

	Percent
■ Western Cape	10
■ Freestate	1
■ North West	2
■ Gauteng	87
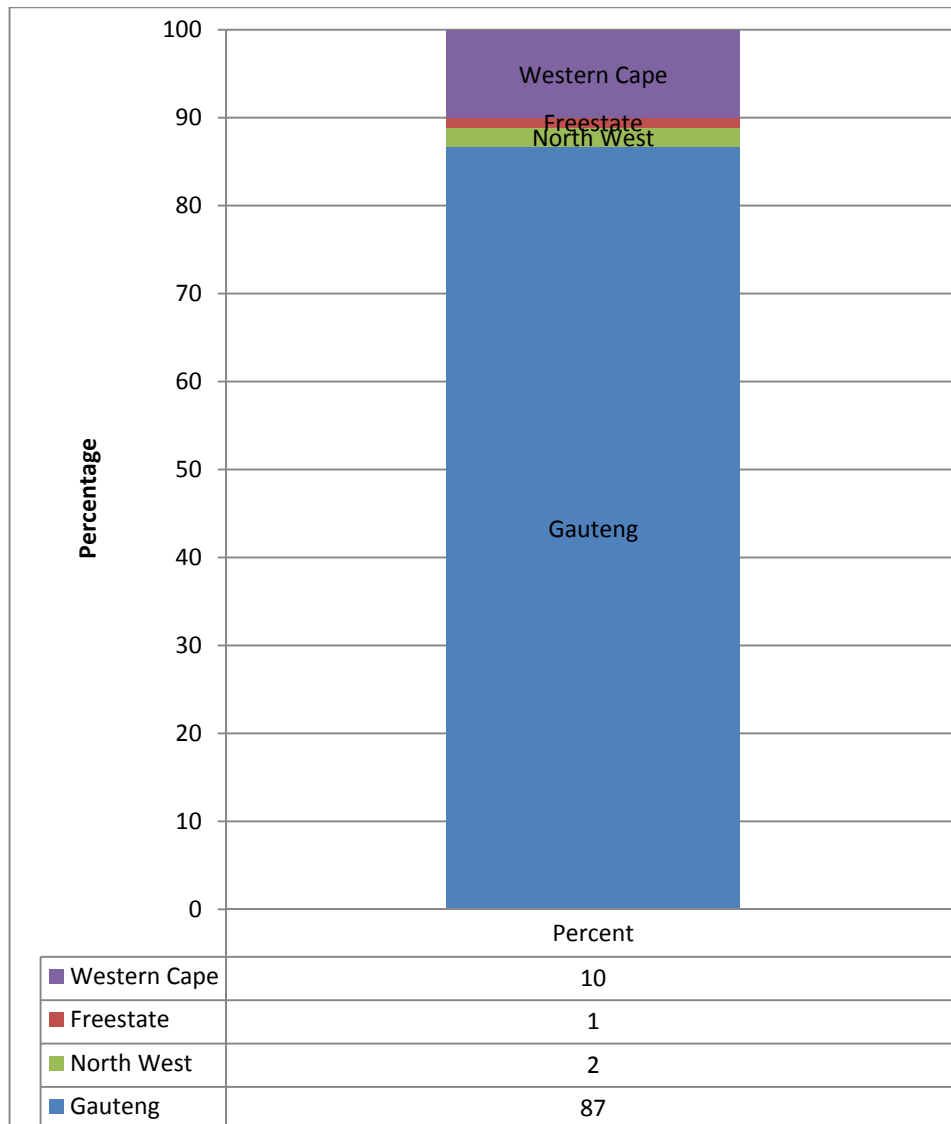
5.2.1.4 *CD4 - Education Level*

Respondents were asked to supply their highest level of education. Figure 12 summarises their responses. There was a wide spread of education levels of which Matric (30%) and diplomas (23%) made up the bulk of the respondents. 16% of respondents had no formal education certificate at all.

Figure 12. Percentage Distribution of Education (n=90)

	Percent
■ Entrepreneurial MBA	4
■ MBA	3
■ Post Graduate	10
■ Undergraduate	13
■ Diploma	23
■ Matric	30
■ None	16
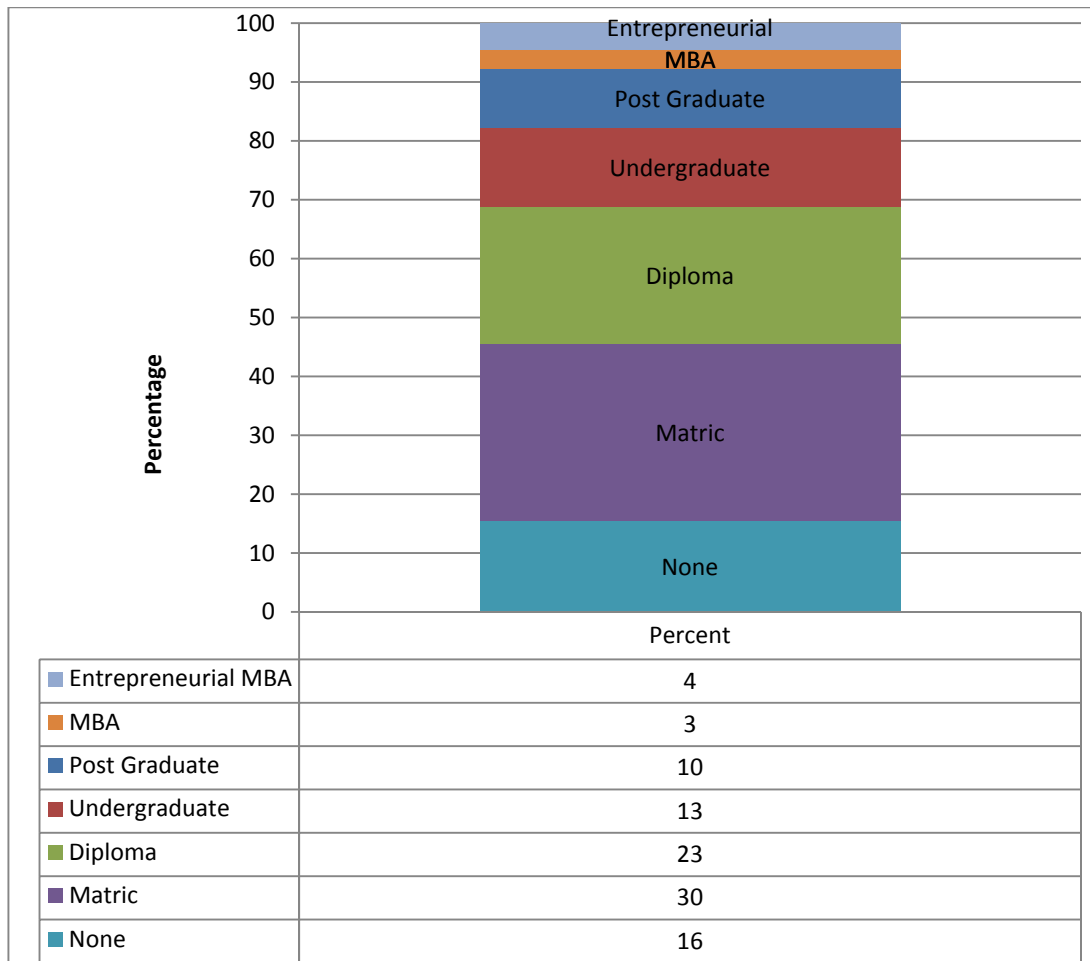
5.2.2 Qualifying Question

The respondents were requested to state in what stage of entrepreneurship their venture is currently defined by asking very precise questions. This was based on the literature review. Figure 13 reveals the percentage distribution of the total valid responses, including the mature-stage owner manager, which falls outside the research population. It can be seen that 17% of the respondents fell in this category and these had to be filtered out. This left 90 responses that were used for the analysis.

Figure 13. Percentage Distribution of Entrepreneurial Stage – Total

	Percent
■ Mature Owner-Manager	17
■ Early-Stage Owner Manager	17
■ Nascent	39
■ Pre-start	27
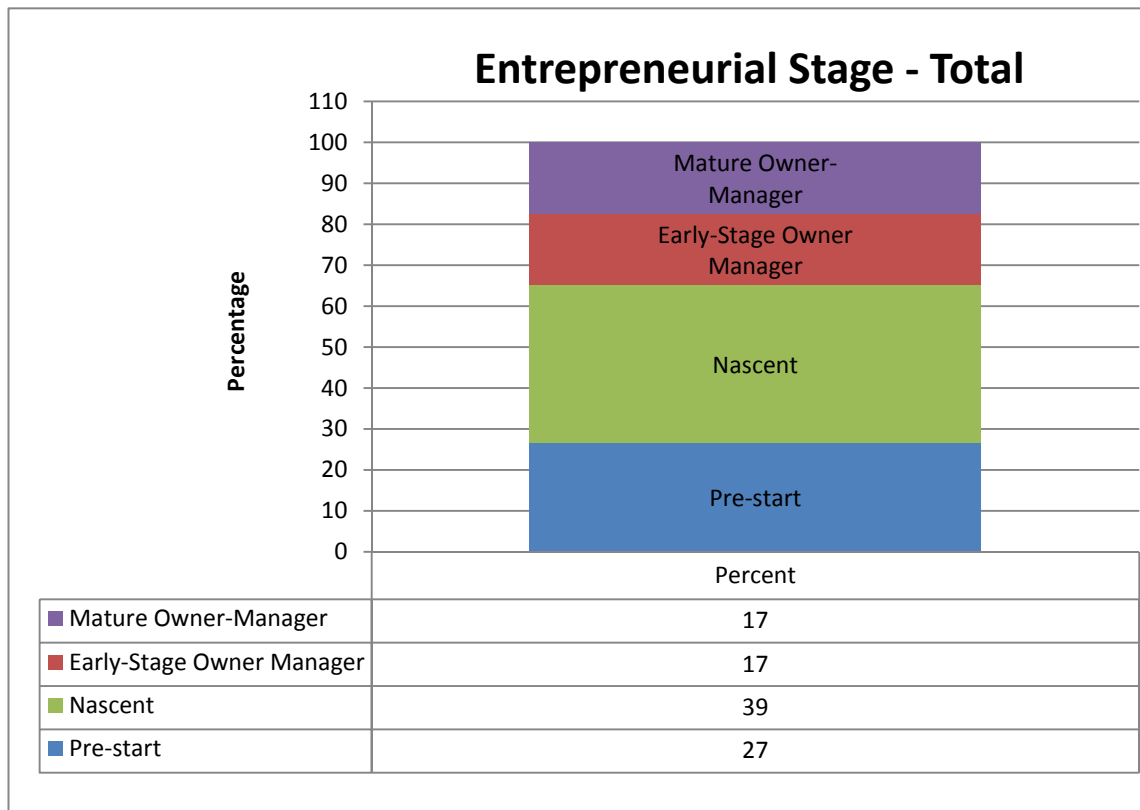
The majority of the 90 remaining legitimate responses (47%) were nascent entrepreneurs (Figure 14). Pre-start entrepreneurs made up 32% and early-stage entrepreneurs comprised 21% of the remaining respondents (Figure 14).

Figure 14. Percentage Distribution of Entrepreneurial Stage – Filtered
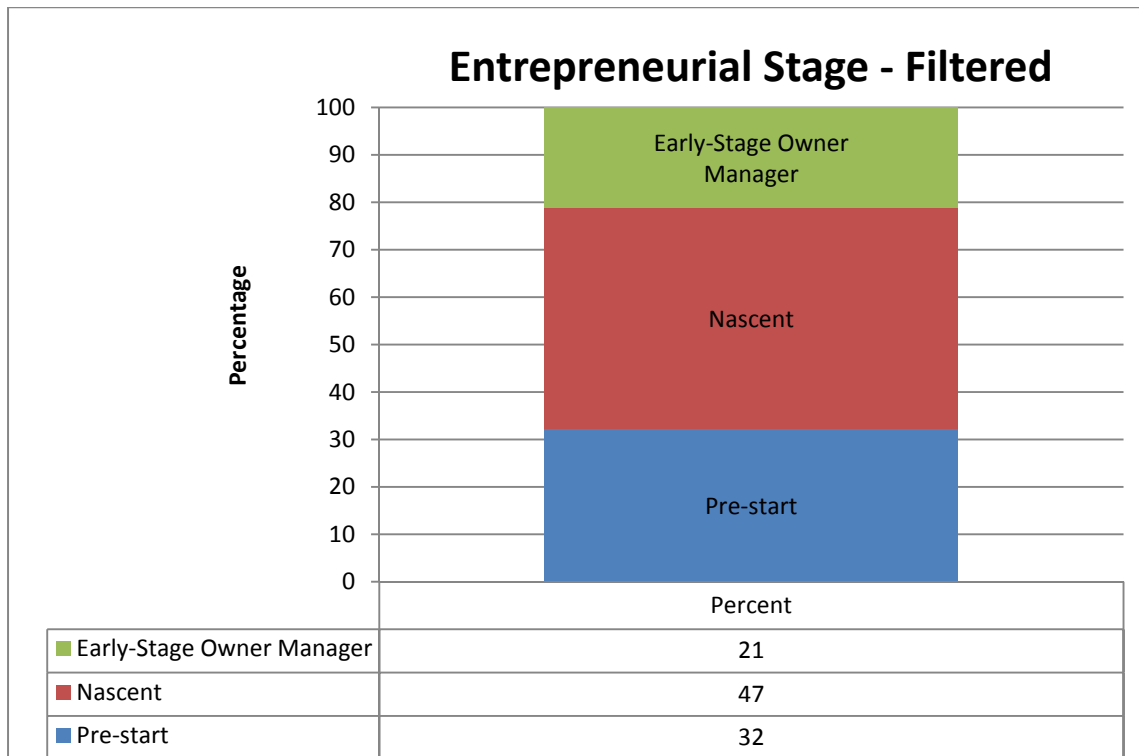
5.2.3 High-growth Entrepreneurship and Institutional Factors

5.2.3.1 *Introduction*

The GEM's *expert questionnaire* used by Bowen and De Clercq (2008) was adapted for this research as discussed previously. The perceived growth potential and institutional factor rating scale was a 7-point likert scale and respondents selected their choice by marking the most appropriate rating for each question. Selecting (1) indicated a strong disagreement with each statement to the left of the likert scale and selecting (7) indicated a strong agreement. The options between (1) and (7) allowed the respondents to select their degree of agreement of each statement.

5.2.3.2 *High-growth Entrepreneurship*

Table 5. High-growth Entrepreneurship – Rating Scale

The high-growth entrepreneurship dependent variable consisted of three statement items coded CD6, CD7 and CD8 (Table 5). Figure 15 shows that for all three items, the largest proportion of the individuals had a score of 7 on the rating scale. Figure 15 also reveals a potential skewed distribution of the overall construct once the internal consistency is confirmed and the items are summated.

Figure 15. Growth Potential Items – Percentage Distributions

5.2.3.3 *Institutional Context Factors*

Table 6. (1a) Regulatory Protection – Rating Scale

✱ 1. I believe I can grow my new business faster knowing that:	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD9 - My intellectual property rights are protected.	◯	◯	◯	◯	◯	◯	◯
CD10 - My products will not be pirated and sold illegally.	◯	◯	◯	◯	◯	◯	◯
CD11 - My patent, copyright and trademark will be legally protected.	◯	◯	◯	◯	◯	◯	◯

The regulatory protection institutional factor consisted of three statement items coded CD9, CD10 and CD11. Figure 16 shows that for CD9, the largest proportion (33%) of the individuals scored 6 on the rating scale. For CD10, the largest proportion (30%) of the respondents scored 4, while for CD11, the largest proportion (30%) also scored 6.

Figure 16. (1a) Regulatory Protection Items – Percentage Distributions

Table 7. (1b) Regulatory Complexity – Rating Scale

The regulatory complexity institutional factor consisted of four statement items coded CD12, CD13, CD14 and CD15, which were reverse coded based on the defined model. Figure 17 shows that for CD12, the largest proportion (18%) of the individuals scored either 1 or 4. For CD13, the largest proportion (31%) of the respondents scored 3, while for CD14, the largest proportion (32%) scored 1 and for CD15, 27% of the respondents scored 2.

Figure 17. (1b) Regulatory Complexity Items - Percentage Distributions

Table 8. (2) Corruption/Trust Relations – Rating Scale

The Corruption/Trust Relations institutional factor consisted of three statement items coded CD16, CD17 and CD18, which were also reverse coded based on the defined model. Figure 18 shows that for CD16, the largest proportion (38%) of the individuals scored 1. For CD17, the largest proportion (41%) of the respondents scored 1, while for CD18, the largest proportion (41%) also scored 1.

Figure 18. (2) Corruption/Trust Relation Items – Percentage Distributions

Table 9. (3) Financial Support – Rating Scale

*4. I believe that I will be able to grow my new business faster if the following sources of funding are widely available and easily accessible to me:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD19 - Private equity	◯	◯	◯	◯	◯	◯	◯
CD20 - Debt funding	◯	◯	◯	◯	◯	◯	◯
CD21 - Government subsidies	◯	◯	◯	◯	◯	◯	◯
CD22 - Venture capitalists	◯	◯	◯	◯	◯	◯	◯

The financial support institutional factor consisted of four statement items coded CD19, CD20, CD21 and CD22. Figure 19 shows that for CD19, the largest proportion (30%) of the individuals scored 6. For CD20, the largest proportion (28%) of the respondents scored 4, while for CD21, the largest proportion (34%) scored 7 and for CD22, 30% of the respondents also scored 7.

Figure 19. (3) Financial Support Items – Percentage Distributions

Table 10. (4) Education/Training Support – Rating Scale

The education/training support institutional factor consisted of two statement items coded CD23 and CD24. Figure 20 shows that for CD23, the largest proportion (32%) of the individuals scored 7. For CD24, the largest proportion (46%) of the respondents also scored 7.

Figure 20. (4) Education/Training Support Items – Percentage Distributions

Table 11. (5) Infrastructure Support – Rating Scale

6. I believe I will be able to grow my new business faster if I have access to:	Strongly disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD25 - an extensive road, rail, sea and air transport infrastructure	○	○	○	○	○	○	○
CD26 - an affordable and widely accessible telecommunications infrastructure	○	○	○	○	○	○	○
CD27 - an affordable, broadband internet infrastructure	○	○	○	○	○	○	○

The infrastructure support institutional factor consisted of three statement items coded CD25, CD26 and CD27. Figure 21 shows that for CD25, the largest proportion (26%) of the individuals scored 7. For CD26, the largest proportion (36%) of the respondents scored 7, while for CD27, the largest proportion (47%) also scored 7.

Figure 21. (5) Infrastructure Support Items – Percentage Distributions

5.3 Psychometric properties of the scales

In this section, the reliabilities of the scales were examined first, followed by the tests of the assumption of normality of the distributions. In the case of skewed distributions, scale transformations were considered and in turn tested for normality. A summary of the scale statistics is also provided to determine the measures of central tendency, variability and the severity of the skewness of the distributions.

5.3.1 Instrument Reliability

5.3.1.1 *Perceived High-growth Potential*

Table 12. Perceived High-growth Potential Cronbach's Alpha

Cronbach's Alpha Summary:	N	Mean	Std. Dev	Cronbach's α	Standardised α
Perceived High-growth Potential	90	5.163	1.453	0.788	0.789
Deleted Item		**Mean**	**Std. Dev**	**Cronbach's α**	
CD6: 20+ Jobs		4.990	1.601	0.758	
CD7: Innovation		5.339	1.460	0.714	
CD8: Internationalisation		5.156	1.490	0.658	

Table 12 reveals that the standardised Cronbach's alpha, which takes into consideration the number of items in the scale, is 0.79 and is greater than 0.6. This indicates that the dimension is reliable in terms of internal consistency. It also reveals that if any of the individual items were to be deleted from the scale, the resultant Cronbach's alpha would be lower than the original value.

5.3.1.2 *Government Policies and Procedures*

1a. Regulatory Protection

Table 13. Regulatory Protection Cronbach's Alpha

Cronbach's Alpha Summary:	N	Mean	Std. Dev	Cronbach's α	Standardised α
1a. Regulatory Protection	90	5.252	1.236	0.729	0.729
Deleted Item		**Mean**	**Std. Dev**	**Cronbach's α**	
CD9: Intellectual property protection		5.217	1.370	0.728	
CD10: Protection against piracy		5.367	1.231	0.587	
CD11: Patent & Copyright protection		5.172	1.326	0.596	

Table 13 reveals that the standardised Cronbach's alpha is 0.73, which is again greater than 0.6 and indicates that the dimension is reliable in terms of internal consistency. It also reveals that if any of the items were to be deleted from the scale, the resultant Cronbach's alpha would be lower than the original value.

1b. Regulatory Complexity

Table 14. Regulatory Complexity Cronbachs' Alpha

Cronbach's Alpha Summary:	N	Mean	Std. Dev	Cronbach's α	Standardised α
1b. Regulatory Complexity	90	3.133	1.219	0.631	0.649
Deleted Item		**Mean**	**Std. Dev**	**Cronbach's α**	
CD12: Company Registration time		2.948	1.311	0.647	
CD13: Tax Exemption		3.315	1.353	0.530	
CD14: Government Policy		3.252	1.244	0.511	
CD15: Non-financial assistance		3.019	1.228	0.556	

Table 14 reveals that the standardised Cronbach's alpha is 0.65, which indicates that dimension is reliable in terms of internal consistency. It also shows that if any of the individual items were to be deleted from the scale, the resultant Cronbach's alpha would be lower than the original value.

5.3.1.3 *Corruption/Trust Relations*

Table 15. Corruption/Trust Relations Cronbach's Alpha

Cronbach's Alpha Summary:	N	Mean	Std. Dev	Cronbach's α	Standardised α
2. Corruption/Trust Relations	90	2.289	1.159	0.702	0.703
Deleted Item		**Mean**	**Std. Dev**	**Cronbach's α**	
CD16: Business Ethics		2.261	1.265	0.626	
CD17: Awarding of Contracts		2.272	1.155	0.556	
CD18: Trust Relations		2.333	1.282	0.642	

Table 14 reveals that the standardised Cronbach's alpha is 0.7, which indicates that this dimension is reliable in terms of internal consistency. It also reveals that if any of the items were to be deleted from the scale, the resultant Cronbach's alpha would be lower than the original value.

5.3.1.4 *Financial Support*

Table 16. Financial Support Cronbach's Alpha

Cronbach's Alpha Summary:	N	Mean	Std. Dev	Cronbach's α	Standardised α
3. Financial Support	90	5.253	1.147	0.739	0.741
Deleted Item		**Mean**	**Std. Dev**	**Cronbach's α**	
CD19: Private Equity		5.274	1.124	0.643	
CD20: Debt Funding		5.444	1.211	0.716	
CD21: Government Subsidies		5.104	1.224	0.672	
CD22: Venture Capital		5.189	1.195	0.685	

Table 16 shows that the standardised Cronbach's alpha is 0.74, which indicates that the dimension is reliable in terms of internal consistency. It also reveals that if any of the items were to be deleted from the scale, the resultant Cronbach's alpha would be lower than the original value.

5.3.1.5 *Education/Training Support*

Table 17. Education/Training Support Cronbach's Alpha

Cronbach's Alpha Summary:	N	Mean	Std. Dev	Cronbach's α	Standardised α
4. Education/Training Support	90	5.656	1.258	0.648	0.695
Deleted Item		**Mean**	**Std. Dev**	**Cronbach's α**	
CD23: Entrepreneurial MBA		6.088	1.092	0.000	
CD24: Entrepreneurial Training		5.222	1.743	0.000	

Table 17 shows that the standardised Cronbach's alpha is 0.70, which indicates that the dimension is reliable in terms of internal consistency.

5.3.1.6 *Infrastructure Support*

Table 18 shows how the standardised alpha is equal to 0.42, well below the accepted level of 0.6 and therefore indicates that the rating scale is not internally consistent and is therefore unreliable. On further investigation of the individual items, it can be seen that if the physical infrastructure is separated out, the Cronbach's alpha becomes 0.64. This now indicates that the remaining items CD26 and CD27 combine to form an internally consistent rating scale. The combination of CD26 and CD27 can be regarded as 'technological infrastructure support', which is consistent with the discussions in Chapter 2. This dimension therefore requires further investigation regarding Cronbach's alpha.

Table 18. Infrastructure Support Cronbach's Alpha

Cronbach's Alpha Summary:	N	Mean	Std. Dev	Cronbach's α	Standardised α
5. Infrastructure Support	90	5.663	0.880	0.363	0.420
Deleted Item		**Mean**	**Std. Dev**	**Cronbach's α**	
CD25: Physical infrastructure Support		5.945	0.984	0.643	
CD26: Telecommunications infrastructure Support		5.583	0.944	0.000	
CD27: Internet infrastructure support		5.461	1.083	0.308	

5.3.1.7 *Technological Infrastructure Support*

Table 19 shows that the standardised Cronbach's alpha is 0.64, which indicates that the dimension is reliable in terms of internal consistency.

Table 19. Technological Infrastructure Support Cronbach's Alpha

Cronbach's Alpha Summary:	N	Mean	Std. Dev	Cronbach's α	Standardised α
6. Technological Infrastructure Support	90	5.944	0.990	0.643	0.643
Deleted Item		**Mean**	**Std. Dev**	**Cronbach's α**	
CD26: Telecommunications infrastructure Support		6.067	1.123	0.000	
CD27: Internet infrastructure support		5.822	1.170	0.000	

5.3.1.8 *Conclusion*

The Cronbach's alpha analysis revealed that every scale, except for infrastructure support, was internally consistent and therefore reliable. The items representing each reliable scale were then summated. The infrastructure support scale was separated into 'physical infrastructure' and 'technological infrastructure'. These were then regarded as two separate scales. The two items representing technological infrastructure were found to be internally consistent and were therefore summated to represent the technological infrastructure rating scale.

Table 20 summarises the Cronbach's Alpha coefficients and average inter-item correlation for each scale. A 'green-yellow-red' colour scale was used to highlight the differences in values. The shade of the cell represents the value in the cell: dark red is the lowest value and dark green is the highest.

Table 20. Summarised Measures of Reliability

Scale	Cronbach's α	Standardized α	Average inter-item correlation
Perceived Growth Potential	0.79	0.79	0.56
Regulatory Protection	0.73	0.73	0.48
Regulatory Protection	0.63	0.65	0.32
Corruption/Trust Relations	0.70	0.70	0.44
Financial Support	0.74	0.74	0.42
Education/Training Support	0.65	0.69	0.53
Infrastucture Support - total	0.36	0.42	0.21
Technological Infrastructure Support	0.64	0.64	0.47

The average inter-item correlations validate the conclusions drawn, based on the Cronbach's alpha coefficients in Tables 12 - 19. It should be noted that all the inter-item correlations were greater than 0.3, which is the preferred minimum, except for the infrastructure support scale, which was lower at 0.21.

5.3.2 Scale Distributions

The summated rating scales, as discussed above, were then tested for normality to ensure the assumptions for regression analysis were upheld. These findings are detailed below.

5.3.2.1 *Tests for normality*

Each construct was evaluated separately, using the Shapiro-Wilks test, to determine whether they were all normally distributed. A summary of the distribution

of each scale can be seen in Appendix B1. These distributions reveal that, according to Shapiro-Wilks, there was a statistically significant difference ($P < 0.05$) between a normal distribution and every summated rating scale, which means that none of the distributions can be regarded as normally distributed. This means that the majority of the people surveyed were biased towards a particular side. This violates the assumptions of true parametric tests, which assume normality. Therefore, scale transformations had to be attempted to normalise the distributions. This is summarised below.

5.3.2.2 *Transformations of the Scales*

As discussed in Chapter 4, scale transformations can be applied in an attempt to transform skewed distributions into normal distributions through a number of transformation techniques. A summary of the transformation results can be found in Appendix B2. These histograms reveal that the transformations did not result in normally distributed scales, according to Shapiro-Wilks. Therefore, the regression analysis had to be conducted with parallel, non-parametric tests using Spearman-rank order correlations.

5.3.3 Summary of Scale Statistics

Table 21 summarises the rating scale distributions in terms of means, confidence intervals, medians, standard deviations and skewness measures. The mean values for all the scales are significantly greater than the scale mid-point of four indicating that attitudes tend to be positive towards each of the constructs. This takes into consideration the reverse-coded rating scales. This conclusion is based

on the 95% confidence intervals that do not include the value of four. Although the scales appear to be skewed, based on the similarities of the mean and median of each scale and the values of the skewness all being less than 1, the deviations from normality are not considered severe.

Table 21. Summary of Scale Statistics

	Valid N	Mean	Confidence -95%	Confidence 95%	Median	Std.Dev.	Skewness
Perceived growth potential	90	5.16	4.86	5.47	5.33	1.45	-0.61
1a. Regulatory protection	90	5.25	4.99	5.51	5.33	1.24	-0.59
1b. Regultory Complexity	90	3.13	2.88	3.39	3.00	1.22	0.17
2. Corruption/Trust Relations	90	2.29	2.05	2.53	2.00	1.16	0.75
3. Financial support	90	5.25	5.01	5.49	5.50	1.15	-0.56
4. Education/training support	90	5.66	5.39	5.92	6.00	1.26	-0.92
5a. Technology infrastructure	90	5.94	5.74	6.15	6.00	0.99	-0.77
5b. Physical infrastructure	90	5.10	4.76	5.44	5.00	1.62	-0.57

5.4 Regression Analysis

The multivariate technique chosen to test the research hypotheses was a linear multivariate regression analysis. The results of this analysis are detailed below.

5.4.1 Bivariate Linear Correlation Analysis

Table 22 represents a correlation matrix of all the research variables. The correlation values highlighted in **bold red** are statistically significant at $p < 0.05$. The correlations of interest in this table are those in the first column, which reveal the linear correlation between each independent variable and the dependent variable of perceived growth potential. The scatter plots for each correlation can be found in Appendix C. These plots revealed no outlying values that would influence the results unduly.

Table 22. Bivariate Linear Correlation Matrix

	Perceived growth potential	1a.	1b.	2	3	4	5a.	5b.
Perceived growth potential	1.00							
1a. Regulatory protection	**0.39**	1.00						
1b. Regulatory Complexity	**-0.39**	**-0.35**	1.00					
2. Corruption/Trust Relations	**-0.40**	**-0.32**	**0.60**	1.00				
3. Financial support	**0.32**	**0.29**	**-0.60**	**-0.59**	1.00			
4. Education/Training support	**0.37**	**0.33**	-0.14	**-0.36**	**0.42**	1.00		
5a. Technology infrastructure	**0.52**	**0.27**	**-0.54**	**-0.48**	**0.48**	**0.32**	1.00	
5b. Physical infrastructure	-0.02	-0.01	-0.14	**-0.23**	**0.23**	**0.23**	0.07	1.00

Research hypotheses 1a, 1b, 2, 3, 4 and 5 can all be tested based on the correlation matrix above and the scatter plots in Appendix C

5.4.1.1 *Hypothesis 1a – Regulatory Protection*

There is a positive correlation between an entrepreneur's perceived regulatory protection and growth potential of his/her new business:

$H_0 : \rho = 0$

$H_1: \rho > 0$ *where ρ is defined as the Pearson correlation between perceived regulatory protection and perceived growth potential.*

Table 22 and Appendix C reveal the following regarding the correlation between perceived regulatory protection and entrepreneurial growth potential:

1. It is a **statistically significant** correlation at $p < 0.05$.

2. The correlation is in the intended **positive direction**, consistent with hypothesis 1a.

3. Perceived regulatory protection **explains 0.39^2 = 15.21% of the variance** in perceived growth potential.

4. H_0 **is rejected** and Regulatory Protection can be regarded as having a statistically significant positive influence on the perceived growth potential of the entrepreneur's new business.

5.4.1.2 *Hypothesis 1b – Regulatory Complexity*

There is a negative correlation between an entrepreneur's perceived regulatory complexity and growth potential of his/her new business.

$H_0 : \rho = 0$

$H_1: \rho < 0$ where ρ is defined as the Pearson correlation between perceived regulatory complexity and perceived growth potential.

Table 22 and Appendix C reveal the following regarding the correlation between perceived regulatory complexity and entrepreneurial growth potential:

1. It is a **statistically significant** correlation at $p < 0.05$.

2. The correlation is in the intended **negative direction**, consistent with hypothesis 1b.

3. Perceived regulatory complexity **explains 0.39^2 = 15.21% of the variance** in perceived growth potential.

4. H_0 **is rejected** and Regulatory Complexity can be regarded as having a statistically significant negative influence on the perceived growth potential of the entrepreneur's new business.

5.4.1.3 *Hypothesis 2 - Corruption/Trust Relations*

There is a negative correlation between an entrepreneur's perceived level of corruption and growth potential of his/her new business.

$H_0 : \rho = 0$

H_1: $\rho < 0$ where ρ is defined as the Pearson correlation between perceived corruption/trust relations and perceived growth potential.

Table 22 and Appendix C reveal the following regarding the correlation between perceived Corruption/Trust Relations and entrepreneurial growth potential:

1. It is a **statistically significant** correlation at $p < 0.05$.

2. The correlation is in the intended **negative direction**, consistent with hypothesis 2.

3. It reveals that corruption **explains $0.40^2 = 16\%$ of the variance** in perceived growth potential.

4. H_0 **is rejected** and Corruption/Trust Relations can be regarded as having a statistically significant negative influence on the perceived growth potential of the entrepreneur's new business.

5.4.1.4 *Hypothesis 3 – Financial Support*

There is a positive correlation between an entrepreneur's perceived financial support and growth potential of his/her new business.

$H_0 : \rho = 0$

H_1: $\rho > 0$ where ρ is defined as the Pearson correlation between perceived financial support and perceived growth potential.

Table 22 and Appendix C reveal the following regarding the correlation between perceived Financial Support and entrepreneurial growth potential:

1. It is a **statistically significant** correlation at $p < 0.05$.

2. The correlation is in the intended **positive direction**, consistent with hypothesis 3.

3. It reveals that financial support **explains $0.32^2 = 10.24\%$ of the variance** in perceived growth potential.

4. H_0 **is rejected** and Financial Support can be regarded as having a statistically significant positive influence on the perceived growth potential of the entrepreneur's new business.

5.4.1.5 *Hypothesis 4 – Education/Training Support*

There is a positive correlation between an entrepreneur's perceived education/training support and growth potential of his/her new business.

$H_0 : \rho = 0$

$H_1: \rho > 0$ where ρ is defined as the Pearson correlation between perceived education/training support and perceived growth potential.

Table 22 and Appendix C reveal the following regarding the correlation between perceived Education/Training Support and entrepreneurial growth potential:

1. It is a **statistically significant** correlation at $p < 0.05$.

2. The correlation is in the intended **positive direction**, consistent with hypothesis 4.

3. It reveals that education/training support **explains 0.37^2 = 13.69% of the variance** in perceived growth potential.

4. H_0 **is rejected** and Education/Training Support can be regarded as having a statistically significant positive influence on the perceived growth potential of the entrepreneur's new business.

5.4.1.6 *Hypothesis 5 – Infrastructure Support*

There is a positive correlation between an entrepreneur's infrastructure support and growth potential of his/her new business.

$H_0 : \rho = 0$

$H_1: \rho > 0$ where ρ is defined as the Pearson correlation between perceived infrastructure support and perceived growth potential.

The reliability test revealed that combining the physical infrastructure and technological infrastructure was not internally consistent and therefore, resulted in an unreliable summated rating scale. Consequently, they were separated out and tested individually. Table 22 and Appendix C reveal the following regarding the correlation between both perceived Technological Infrastructure Support and Physical Infrastructure Support, and entrepreneurial growth potential:

A. Technological Infrastructure Support:

1. It is a **statistically significant** correlation at $p < 0.05$.

2. The correlation is in the intended **positive direction**, consistent with hypothesis 5.

3. It reveals that this independent variable **explains 0.52^2 = 27.04% of the variance** in the dependent variable.

4. H_0 **is rejected** and Technological Infrastructure Support can be regarded as having a statistically significant positive influence on the perceived growth potential of the entrepreneur's new business.

B. Physical Infrastructure Support:

1. It is <u>not</u> a **statistically significant** correlation: $p > 0.05$.

2. H_0 **is not rejected** and Physical Infrastructure Support can be regarded as <u>not</u> having a statistically significant influence on the perceived growth potential of the entrepreneur's new business.

5.4.1.7 *Conclusion*

A bivariate linear correlation analysis was employed to test hypotheses 1a, 1b, 2, 3, and 4, and 5. A linear correlation matrix was generated and illustrated in Table 22. This revealed that the null hypotheses 1a, 1b, 2, 3 and 4 were rejected and therefore, each of these institutional factors was regarded as being statistically significant and all correlations were in the intended directions. Hypothesis 5 had to be adjusted, based on the findings that the original rating scale was not reliable and had to be sub-divided into 'Technological Infrastructure Support' and 'Physical Infrastructure Support'. These were then tested as two individual hypotheses. Technological infrastructure support was found to be a statistically significant predictor, explaining 27.04% of the variance in perceived growth potential. However, physical infrastructure support was not a statistically significant predictor.

This is summarised in Table 23. Note that the predictors are now arranged from those that have the highest prediction capability, namely perceived technological infrastructure support, to the predictor with the lowest prediction, being perceived physical infrastructure support.

Table 23. Percentage explanation of variance in Perceived Growth Potential

Instituional Factor	Pecentage Explanation of Variance in perceived growth potential
5a. Perceived Technological Infrastructure Support	27.04%
2. Percieved Corruption/Trust Relations	16.00%
1a. Perceived Regulatory Protection	15.21%
1b. Perceived Regulatory Complexity	15.21%
4. Percieved Education/Training Support	13.69%
3. Pereived Financial Support	10.24%
5b. Perceived Physical Infrastructure Support	0%

5.4.2 Non-parametric measures of association

Table 24. Non-parametric Measures of Association Matrix

	Perceived growth potential	1a.	1b.	2	3	4	5a.	5b.
Perceived growth potential	1.00							
1a. Regulatory protection	0.40	1.00						
1b. Regulatory Complexity	-0.34	-0.38	1.00					
2. Corruption/Trust Relations	-0.43	-0.41	0.58	1.00				
3. Financial support	0.25	0.30	-0.58	-0.59	1.00			
4. Education/Training support	0.38	0.32	-0.12	-0.34	0.42	1.00		
5a. Technology infrastructure	0.44	0.27	-0.51	-0.46	0.46	0.32	1.00	
5b. Physical infrastructure	-0.02	-0.04	-0.13	-0.15	0.21	0.17	0.06	1.00

Table 24 reveals that the non-parametric Spearman correlations were of the same order as their parametric equivalents and therefore, the researcher proceeded to test the multivariate linear regression.

5.4.3 Multivariate Stepwise Linear Regression

Hypothesis six was tested by means of a multivariate stepwise linear regression. Based on the correlations presented in Table 22, it is clear that the predictors themselves are significantly inter-correlated. For example, regulatory complexity is significantly correlated with corruption, financial support and technology infrastructure ($r = 0.60$, $r = -0.60$ and $r = -0.54$ respectively). Although these correlations are not sufficiently high to claim the presence of multicolinearity, there is clear redundancy in the predictor information.

Table 25. Summary of Regression of Perceived Growth Potential

	b*	Std. Error of b*	b	Std. Error of b	t(87)	p-value
Intercept			-0.37	0.85	-0.43	0.667
Technology infrastructure	0.44	0.09	0.65	0.13	4.88	0.000
Regulatory protection	0.27	0.09	0.32	0.11	2.96	0.004
R = 0.58						
R² = 0.33						
Adjusted R² = 0.32						
F(2,87) = 21.875; p<0.00000						

Table 25 represents a summary of the linear stepwise regression results. This technique avoids the redundant predictor information by selecting the predictor variable that explains the most variance of the outcome variable in the first step, and thereafter the predictor variable that explains the most of the remaining variance of the outcome variable, and so forth until there is no longer a predictor variable that explains any remaining variance. At each step, the explained variance should be significant, otherwise the process stops. Accordingly, the stepwise method selected technology infrastructure support as the most highly correlated predictor in the first step of the regression, and regulatory protection as

the most important predictor of the remaining variance in the second step of the regression. No other predictor explained significant additional variance in the presence of these two predictors. In the first step of the regression, 27% of the variance in perceived growth potential was explained by technology infrastructure, while in step 2, regulatory protection contributed significantly with an additional 6.7% of explained variance. Thus, a third (R^2 = 0.33 adjusted to 0.32) of variance in perceived growth potential was explained jointly by these two predictors in the significant regression model [$F(2,87)$ = 21.88, $p<0.001$] presented in Table 25. It should be noted that this particular combination of predictors explains the most variance in perceived growth potential compared to other predictors. However, other combinations of predictors excluding technological infrastructure support could be examined further. A summary of additional combinations can be found in Appendix D.

5.4.3.1 *Hypothesis 6 – Institutional Context Measures*

A linear combination of the institutional context measures determines a significant proportion of the variance in entrepreneurs' perceived growth potential of their businesses, which is more than the variance explained by any of the individual measures.

$H_0 : \beta_1 = \beta_2 = ... = \beta_k = 0$

H_1*: At least two β's are not equal to zero.*

The alternative hypothesis says that there is at least a second predictor that is significant, in other words, there is a significant regression model with at least two

significant predictors. The results of the linear step-wise regression were used to test hypothesis 6. The following was concluded from this test:

1. The regression model: $F_{(2,87)} = 21.88$ is statistically significant at $p<0.001$

2. It explains 32% of the variance in perceived growth potential, which is greater than the explanation of perceived technological infrastructure support on its own.

3. It is a linear combination of two institutional context measures, namely perceived technological infrastructure support and regulatory protection.

4. H_0 **is rejected** and the predictors of the regression model [$F_{(2,87)} = 21.88$, $p<0.001$] can be regarded as predicting a significant proportion of the variance in entrepreneurs' perceived growth potential of their new businesses, which is more than the variance explained by any of the individual measures alone.

5.5 Conclusion

The findings of this quantitative research were presented in the sections above. With the exception of perceived physical infrastructure support, Cronbach's alpha confirmed acceptably high reliability of all the rating scales. Due to contraventions of assumptions of normality, non-parametric Spearman correlations were included in parallel analyses, and these successfully validated the parametric test results.

All the research hypotheses, except for hypothesis 5, were supported by the regression analysis. As the infrastructure scale showed low internal consistency

with a low Cronbach's alpha coefficient, the scale was split into two subscales based on items that inter-correlated most highly. These infrastructure subscales were named 'perceived technological infrastructure support' and 'perceived physical infrastructure support'. Hypothesis 5 was consequently divided into two separate hypotheses and tested separately. The overall research model was tested using multivariate linear stepwise regression, which revealed that almost a third of the variance in perceived growth potential can be explained by two institutional factors, namely perceived technological infrastructure support and regulatory protection. These results are discussed in the following chapter.

6. DISCUSSION OF RESULTS

6.1 Introduction

The purpose of this chapter is to discuss the results in relation to the literature review and the research hypotheses. The approach in this chapter is firstly to briefly discuss hypotheses 1 to 5, followed by a more detailed discussion of hypothesis 6, and finally to provide some concluding remarks by presenting an integrated view of all the results. The concluding remarks will also discuss any additional insights that were found to be of value to this field of research. The descriptive statistics are not discussed separately, but instead are incorporated into the findings where applicable.

6.2 Institutional Factors

6.2.1 Hypothesis 1a – Regulatory Protection

6.2.1.1 *Introduction*

There is a positive correlation between an entrepreneur's perceived regulatory protection and growth potential of his/her new business.

The importance of the influence of well-defined and established formal institutions on entrepreneurship was discussed rigorously in the literature review. In particular, government policies and procedures, as well as the legal system, were highlighted as being essential to the health of an economy, particularly for the growth of entrepreneurship.

Within this context, 'Regulatory Protection' was singled out as being an important factor in determining the growth of entrepreneurship. It was defined by Bowen and De Clercq (2008) as being the extent to which bureaucracy/government regulation provides a protective environment for entrepreneurship to grow and thrive. The argument put forward by Bowen and De Clercq (2008), as well as other economists such as Lim *et al* (2010), is that a well defined, and legally protected, regulatory environment in which entrepreneurs operate, should reduce the risks, and improve the ease, of doing business.

The 'rules of law' within a protective environment should in theory influence the behaviour of entrepreneurs in a positive manner if properly designed (Stenholm *et al*, 2010). Therefore, if the bureaucracy of a country enforces clearly defined, well deliberated rules and has established the relevant institutional structures to protect them via an effective legal system, then this should create an environment where entrepreneurs feel safe that their property rights will be protected. This should influence entrepreneurs to be more willing to invest in improving their assets and directing their efforts towards more productive activities, rather than spending time and energy attempting to secure legally unprotected property and assets. This argument was the basis for the hypothesis that the level of protection of an entrepreneur's property rights is positively associated with the perceived growth potential of his/her new business.

6.2.1.2 *Discussion of Results*

The results of this study revealed that this hypothesis is indeed supported in the South African context. The level of regulatory protection does have a relatively substantial (15%) statistically significant positive influence on entrepreneurs' perceived ability to create high-growth businesses. Rules and regulations for conducting oneself when doing business, as well as their effective enforcement, are therefore highly important to the success of high-growth entrepreneurship in a country.

The study of Bowen and De Clercq (2008), which was implemented across multiple countries, revealed a similar result. In their analysis, they also found a significant bivariate correlation between regulatory protection and high-growth entrepreneurial activity. However, contrary to this study, no significant effect was found once the influence of other institutional variables was taken into account. Bowen and De Clercq (2008) suggest that this was possibly due to their dependent variable only measuring one dimension of high-growth entrepreneurship, namely job-growth, and did not consider technology developments or internationalisation. All three dimensions were included in this study and may be the reason for the more significant results.

Lim *et al* (2010) also found in their study that individuals in countries with more property rights protection demonstrated higher levels of willingness to start their new business, as well as having a clearer idea of how to go about it. McMullen *et*

al (2008) found that opportunity-motivated entrepreneurship is positively associated with property rights protection, but necessity-motivated entrepreneurship is not. They attribute this to the opportunity-motivated entrepreneur's tendency to be more innovative and their conclusion is that strong property rights protection acts as an incentive for entrepreneurial action of an innovative nature (McMullen *et al*, 2008). Troilo (2011) found that regulatory protection was positively associated with both profound market expansion and high job growth and therefore, their findings are also supported by this study.

Stenholm *et al* (2010), however, had contradictory results to all the above-mentioned research. They concluded that even though the regulative environment influences the level of entrepreneurship, it matters very little for the formation of innovative, high-growth new ventures. Therefore, the findings of this research oppose those of Stenholm *et al* (2010).

6.2.1.3 *Conclusion*

The results of this study regarding hypothesis 1a support the overwhelming majority of existing literature that rules and regulations, and the effective protection of property rights, should be highly important considerations for the bureaucracy of a country when attempting to encourage high-growth entrepreneurship. Since the South African government has placed a large emphasis in recent years on growing entrepreneurship in the country, it would be wise for them to pay attention to these results and scrutinise the regulatory framework in an attempt to mould a more conducive environment in which to start and build high-growth businesses.

6.2.2 Hypothesis 1b – Regulatory Complexity

6.2.2.1 *Introduction*

There is a negative correlation between an entrepreneur's perceived regulatory complexity and growth potential of his/her new business.

The complexity of the regulatory environment was also singled out in the literature review as having a negative influence on the level and type of entrepreneurship. This institutional factor also falls within the formal regulatory framework, but focuses on the complexities of starting and growing a new business through administrative burdens, procedures, and bureaucracy. This argument was the basis for the hypothesis that the level of regulatory complexity of starting and growing a new business negatively influences the perceived growth potential of that new business.

6.2.2.2 *Discussion of Results*

The results of this study revealed that this hypothesis is indeed supported in the South African context. The level of regulatory complexity does have a statistically significant negative influence on entrepreneurs' perceived ability to create high-growth businesses. This result infers that to encourage high-growth businesses, policy-makers have to find ways to simplify the process of starting and growing businesses. Coincidently, regulatory complexity explains a very similar amount of the variance in growth potential of new businesses to regulatory protection, at 15%. What this may indicate is that a very fine balance has to be struck between

enforcing rules and regulations, and ensuring that these rules and regulations do not become so complex and administratively cumbersome that they discourage or hinder entrepreneurial growth.

Interestingly, Bowen and De Clercq (2008) also found a negative correlation between regulatory protection and the allocation of entrepreneurial effort, which was in the same order of magnitude as the positive correlation they found with regulatory protection. This again reveals the fine balance that needs to be struck worldwide between enforcing an effectual regulatory framework and ensuring that this framework does not impede entrepreneurial growth. Their study also established that even though this negative correlation existed, no significant effect was found once the influence of other institutional variables was taken into account (Bowen and De Clercq, 2008).

Stenholm *et al* (2010) also found an association between the level of regulative institutional arrangements in a country and the type of entrepreneurial activity. They conclude that regulatory interventions and policy choices about the ease of new business formation do indeed influence the rate of entrepreneurial activity negatively (Stenholm *et al*, 2010). McMullen *et al* (2008) equated increases in entrepreneurial freedom, regarded as being the inverse of regulatory complexity, to reductions in transaction costs, which in turn positively influences entrepreneurial activity. Therefore, this study also supports the findings of both Stenholm *et al* (2010) and McMullen (2008).

6.2.2.3 *Conclusion*

The results of this study regarding hypothesis 1b supports the majority of existing studies that increasing the level of bureaucratic processes required to start and to grow a business will negatively impact the growth potential of that business. Therefore, the complexity of the regulatory environment should be one of the central considerations for the bureaucracy of a country when attempting to promote high-growth entrepreneurship. Efforts should be made to reduce the complexity of bureaucratic processes, as well as ensure that any new policy that is passed by government is designed to be a simple and quick process that will not impede the growth potential of entrepreneurship in that country.

6.2.3 Hypothesis 2 – Corruption/Trust Relations

6.2.3.1 *Introduction*

There is a negative correlation between an entrepreneur's perceived level of corruption and growth potential of his/her new business.

It is widely understood in the literature that the potential for corruption increases in countries with inefficient and weak regulatory institutions (Stenholm *et al*, 2010). This in turn reduces the trust that individuals have with one another when performing a business transaction. In such environments, entrepreneurs are not willing to take risks, which restrict the scale and scope of their trade. This hampers productivity and investment in innovation and therefore, may reduce the growth potential of the entrepreneur's business. This argument was the foundation to the

hypothesis that the level of corruption in a country, and consequent lack of trust amongst its people, is negatively associated with the perceived growth potential of new businesses.

6.2.3.2 *Discussion of Results*

The results of this study revealed that this hypothesis is supported in the South African context. The level of corruption is negatively associated with the growth potential of entrepreneurial ventures. The magnitude of this predictor's ability to independently explain the variance in perceived growth potential of entrepreneurial ventures is of a similar magnitude to that of the regulatory framework predictors, at 16%. This is in itself an interesting finding. The level of corruption is closely linked to the regulatory framework conditions in much of the literature that was discussed in the review. This suggestion is supported by the results of this study due to the similarity in magnitude of this predictor with that of the regulatory framework predictors, as well as the evidence in the correlation matrix (Table 22), where in particular there is a high correlation (r=0.6) between the level of regulatory complexity and the level of corruption. This may suggest that the more administrative burdens, procedures, and bureaucracy involved in starting and growing a business, the greater chance there is that short-cuts and rule-breaking may occur in order to circumvent these barriers to entry and growth.

Anokhin and Schulze (2009) also uncovered some intriguing results regarding corruption in relation to the rates of entrepreneurship and innovation in a country. Their research suggests that corruption plays an important role in accounting for

disparities in the level and type of entrepreneurial ventures across countries. Their results indicated that there is a positive relationship between the control/reduction of corruption, and the level and type of entrepreneurship. This suggests that the more corruption is controlled and reduced, the higher the level and type of entrepreneurship. Even though this factor was measured in an inverse manner in this study, it does support the results of Anokhin and Schulze (2009).

The results of this study also support that of Bowen and De Clercq (2008), who in turn link their findings to those of Baumol's 1990 theory that unfair interventions by economic actors can create high uncertainty that may discourage entrepreneurs from exhibiting high-growth ambitions. Moreover, high levels of corruption may result in the increased perception of risk of high-growth entrepreneurial activities, because the higher gains from such activities are more likely to be extracted by unfair practices of competitors or with the help of corrupt government officials.

6.2.3.3 *Conclusion*

Corruption in the South African context has been a topic of much debate in recent times due to its high prevalence among economic and political actors. This is an issue that has been identified as one of the main reasons for the lack of competitiveness and growth of the South African economy (Schwab, 2011). It is well understood that unfair practices reduce even-handed competition, which in turn negatively impacts on the innovation and growth-potential of entrepreneurial ventures. The findings of this research support the majority of existing literature and therefore, have far-reaching implications for scholars, entrepreneurs, and the

bureaucracy of the country. These findings suggest that in order to stimulate high-growth entrepreneurship, more focus should be placed on reducing the levels of corrupt behaviour amongst all actors, including economic and political actors. This has to be approached on two levels.

The first is a more obvious approach of ensuring that the regulatory framework is designed and enforced appropriately, as discussed in hypotheses 1a and 1b. The second approach is a more subtle approach. It includes finding ways to improve what Harris *et al* (2009) refer to as self-regulation and moral awareness among entrepreneurs. This is influenced to a certain degree by the informal cultural and normative institutions, but is also a personal choice that can be influenced through educational interventions and awareness campaigns. Harris *et al* (2009) suggest that entrepreneurs with stronger self-regulatory characteristics are more morally aware, resulting in an emphasis on personal integrity and interpersonal trust.

According to the results of this study, there is a greater chance of the entrepreneur achieving substantial growth over time if they place a greater emphasis on their personal integrity and interpersonal trust. Therefore, entrepreneurs need to be made more morally aware of the implications of their actions. The more the entrepreneur practices good ethical behaviour, the more recurring business they should receive, and the more chance there is of referral business. This should ultimately lead to a higher growth potential for their business.

6.2.4 Hypothesis 3 – Financial Support

6.2.4.1 *Introduction*

There is a positive correlation between an entrepreneur's perceived financial support and growth potential of his/her new business.

Finance is arguably the most widely recognised regulator of allocation of entrepreneurial effort. As a rule, some start-up investment is always required to establish and initially grow the business until it is capable of generating enough cash flows to support itself (Levie and Autio, 2008). It is widely understood by many scholars and policy-makers that entrepreneurship is more dependent on credit and capital to fund their access to resources than established businesses are. Entrepreneurs that have access to formal start-up finance are therefore, more likely to invest in resources and assets that will generate higher returns. These returns can then be re-invested into the company, which has the potential to stimulate further growth, and so forth. This argument formed the basis of the hypothesis that access to financial support during the initial stages of a business is positively associated with the perceived growth-potential of that business.

6.2.4.2 *Discussion of Results*

The results of this study revealed that this hypothesis is moderately supported in the South African context. The level of access to finance during the initial stages of the business is positively associated with its perceived growth potential. However, the magnitude of this predictor's ability to independently explain the variance in

perceived growth potential of entrepreneurial ventures is one of the weakest at only 10%. This supports certain literature, which found that even though access to formal sources of finance is an important factor, this does not usually prevent ambitious entrepreneurs from circumventing this (Levie and Autio, 2008). These entrepreneurs usually make use of informal sources, such as their own money or that of friends and family, or through bootstrapping their businesses (Welter and Smallbone, 2011). The results of this study therefore support this moderate association and it can be suggested that those entrepreneurs that are opportunity-driven and ambitious will find a way to finance the establishment of their new business through alternative, informal sources if needed. This is contrary to the findings of Bowen and De Clercq (2008) who insist that financial constraints may be particularly detrimental to entrepreneurs intending to grow their businesses.

An explanation of this difference in findings could be attributed to the fact that South Africa has a long history of a lack of financial capital aimed at entrepreneurship and therefore, entrepreneurs have had to make alternative arrangements and believe they are less dependent on formal financial support. An alternative explanation could be that the importance of financial support varies based on the stage of entrepreneurship. The respondents may have been too early in the entrepreneurial process to require substantial financial assistance in order to significantly leverage their businesses and therefore, did not see it as a main priority. Nevertheless, there remains a large body of literature supporting the view that access to formal sources of entrepreneurial finance matters when it

comes to stimulating the growth of entrepreneurial activities in an economy (Bowen and De Clercq, 2008; Minniti, 2008).

6.2.4.3 *Conclusion*

It is well known in the South African context that access to formal sources of finance during the initial phases of entrepreneurship has been limited in recent history. Much debate has been around whether this has indeed influenced entrepreneurial growth. The findings of this research seem to suggest that even though access to entrepreneurial finance is an important institutional factor that can positively influence the level of entrepreneurship, it does not necessarily imply that those entrepreneurs that are highly motivated to start and grow their businesses will be greatly constrained due to lack of access to formal financial support. This also insinuates that finance aimed at entrepreneurship will better explain the level of entrepreneurial activity, but may not necessarily explain or predict the speed of growth of new businesses. However, there is evidence in the existing literature to suggest that those countries with high levels of high-growth entrepreneurship have very strong formal financial systems aimed at growing new businesses (Bowen and De Clercq, 2008).

The implication of this conclusion for the bureaucracy of South Africa and other developing economies is that although a strong focus should be placed on developing formal financial institutions aimed at fostering long-term entrepreneurial growth, this is not a factor that will necessarily achieve stellar results regarding the speed of growth of new businesses.

6.2.5 Hypothesis 4 – Education/Training Support

6.2.5.1 *Introduction*

Education and training specifically aimed at entrepreneurship is another widely recognised regulator of the allocation of entrepreneurial effort (Dickson *et al*, 2008). The entrepreneur's human capital, expressed as his/her education, experience and skills, constitutes arguably the most important resource to the business during its early stages (Levie and Autio, 2008). Education enhances an individual's cognitive ability to recognise and exploit an opportunity. Additionally, in order for entrepreneurs to successfully establish and grow their businesses, they also have to master not only their technical specialisation, but also a broad set of business management and leadership skills (Levie and Autio, 2008). These skills are not usually taught in general education courses and therefore, usually have to be learnt through experience or are taught through entrepreneurship-specific education and training courses. It was therefore argued in this study that the higher the level of education and training courses aimed at providing entrepreneurs with the necessary entrepreneurial skills, the more they will believe in themselves and perceive their business to be a high-growth potential business.

6.2.5.2 *Discussion of Results*

The results of this study revealed that this hypothesis is supported in the South African context. The level of access to entrepreneurial education and training during the initial stages of the business is positively associated with its perceived growth potential. The magnitude of this predictor's ability to independently explain

the variance in perceived growth potential of entrepreneurial ventures is approximately 13%. Although this is greater than that of the finance predictor, it remains one of the weaker predictors in the research model.

The results of Levie and Autio (2008) support these findings by suggesting that the level of entrepreneurship education and training appears to be only moderately associated with the level of skills required to establish a business, and it appears to affect only levels of new business activity, not high-growth expectation entrepreneurial activity. Levie and Autio (2008) argue that the reason for this could be due to these courses focusing too heavily on theory and not enough on practical implementation of the theory. This is in agreement with the findings of Rasmussen and Sorheim (2006) who suggest that entrepreneurship education should be action-based and practical, rather than class-based and theoretical. An alternative explanation may be that the skill-set required in starting a new business may be too broad to be effectively taught in educational institutions, and they may be better acquired through experience (Levie and Autio, 2008). A third possible reason may be that the necessary skill-set may incorporate intangible social resources, such as entrepreneur-centric social capital, which are likely to be acquired through experience rather than through formal education and training (Levie and Autio, 2008).

On the other hand, the results of Bowen and De Clercq (2008) and Dickson *et al* (2008) found a strong relationship between a country's entrepreneurial

education/training support and high-growth entrepreneurship. They conclude that entrepreneurship education may not only create awareness of entrepreneurship as a career, but also enable a higher fraction of a country's entrepreneurs to exploit high-growth opportunities (Bowen and De Clercq, 2008). These findings are not supported by the results of this study.

6.2.5.3 *Conclusion*

The education system in South Africa is well known to be particularly poor compared to other countries and is regarded as a major cause for the downward slide in the global competitiveness of the country in recent years (Schwab, 2011). Much focus has recently been placed by the bureaucracy of the country on reviewing the basic education system, and rightly so. However, this may come at the expense of secondary education and training institutions, particularly those that provide entrepreneurship education. Even though the results of this study reveal a moderate association between entrepreneurship education/training and perceived high-growth entrepreneurship potential, it is believed that education and training aimed at improving the skills of potential entrepreneurs is critical to the success of entrepreneurial ventures. However, the researcher also agrees with the findings of both Levie and Autio (2008) and Rasmussen and Sorheim (2006) that entrepreneurship education has to advance by becoming more action-based and practical, as well as assisting the entrepreneurs to gain higher social capital through well-established business and social networks. An implication for entrepreneurs attempting to create high-growth businesses is that it is essential they employ technically-trained managers to support any technical business

shortcomings that they may have. In other words, the entrepreneur has to surround herself with highly-educated, experienced management or consultants in areas where she doesn't have the expertise herself.

6.2.6 Hypothesis 5 – Infrastructure Support

6.2.6.1 *Introduction*

There is a positive correlation between an entrepreneur's infrastructure support and growth potential of his/her new business.

Every economic activity, regardless of the scale or magnitude of operation, requires infrastructure support for its successful implementation. This varies from the importing of goods via air or sea transport infrastructures, to the road or rail transport of goods, to electricity and water supply, and finally to the transport of voice and data via a technological infrastructure. The infrastructure support available to businesses and entrepreneurs alike can be equated to the blood-delivery and nervous systems of the human body. Without these support systems, the human body would not be able to function. The same can be said for the importance of the above-mentioned infrastructure support systems to business in general, as well as to entrepreneurial ventures. It was therefore argued in this study that the level of infrastructure support should have a positive influence on the perceived growth potential of entrepreneurial businesses.

6.2.6.2 *Discussion of Results*

The results of this hypothesis highlighted one of the key findings of this study, which was not particularly evident in the existing literature. Firstly, the reliability test revealed that this construct had to be divided into two separate factors, namely 'physical infrastructure support' and 'technological infrastructure support'. These factors were then analysed independently. The individual results were surprising, but plausible. The physical infrastructure support had no significant influence on high-growth entrepreneurship at all, whilst the technological infrastructure support results strongly supported the revised hypothesis. The technological infrastructure support predictor is able to explain the highest amount of variance in perceived growth-potential out of all the predictors, at 27%.

One of the unique aspects of this study was the adaptation of existing models, such as those of Bowen and De Clercq (2008) and Lim *et al* (2010), in order to include the infrastructure support predictor. This was influenced by additional literature from scholars, such as Tang (2008), Levie and Autio (2008), Post and Pfaff (2007), and Todd (2007). These authors suggested that the infrastructure support of a country may have a significant influence on the growth potential of entrepreneurship, but none of them empirically tested this hypothesis. The results of this study therefore add substantial insight into this field of research.

The results of this hypothesis suggest that high-growth aspiration entrepreneurs are less concerned with the physical infrastructure support than they are with the

technological infrastructure support. This advocates that a poor physical infrastructure will have little bearing on the perceived growth potential of new innovative ventures. However, lack of access to telecommunications and internet infrastructures will significantly impede the perceived growth potential of innovative entrepreneurial ventures, more so than any other institutional factor.

6.2.6.3 *Conclusion*

It can be argued that the majority of high-growth entrepreneurial ventures that have been established within the past five to ten years world-wide are largely technology-based service businesses that are not heavily reliant on the physical infrastructure for support. It therefore comes as no surprise when the factor identified in this study as having the highest impact on perceived growth-potential of new businesses, is the technology infrastructure support factor.

The implication of this for the bureaucracy of the country is that extensive access to a world-class technology infrastructure should be highest on their agenda when attempting to stimulate high-growth entrepreneurship. Currently South Africa ranks pretty poorly at 76th out of 142 countries regarding its technology readiness in the World Economic Forum Global Competitiveness Report (Schwab, 2011). This could be one of the main reasons why there is a lack of high-growth , innovative, technology-based ventures being established in the country. This is something that requires significantly more attention and focus in the future if South Africa is to produce more high-growth businesses and consequently substantially improve the economic development of the country.

6.3 Institutional Context Measures

6.3.1 Hypothesis 6 – Institutional Context Measures

6.3.1.1 *Introduction*

A linear combination of the institutional context measures determines a significant proportion of the variance in entrepreneurs' perceived growth potential of their businesses, which is more than the variance explained by any of the individual measures.

Hypothesis 6 was included in order to test the relevance of the overall research model, which was defined in the literature review and illustrated in Figures 7 and 8. This model combines all the institutional factors in an attempt to determine the collective influence of these factors on the perceived growth potential of entrepreneurs' new businesses.

An entrepreneur has to deal with many influencing forces simultaneously when establishing a new high-growth business, many of which are out of his/her control and form part of the external institutional context in which he/she operates. Some institutional forces may assist the entrepreneur and some may impede the growth potential of his/her business. This usually includes governmental policies and procedures, corruption and trust relations with external stakeholders, access to entrepreneurship finance and education, and access to physical and technological infrastructures. The identified factors may combine in such a manner as to explain

a significant proportion of the perceived growth-potential of new businesses, which may be more than any of these external factors in isolation. This argument formed the basis for hypothesis 6.

6.3.1.2 *Discussion of Results*

The results of this study revealed that this hypothesis is supported in the South African context. The linear combination of technology infrastructure support and regulatory protection is positively associated with perceived growth potential of new businesses. The magnitude of these combined predictors' ability to explain the variance in perceived growth potential of entrepreneurial ventures is approximately 32%, which is more than the influence of technology infrastructure support alone. No other institutional factor added further significant prediction capability.

This finding contradicts much of the existing literature. Firstly, most of the literature excluded infrastructure support, specifically technology infrastructure support, from their institutional context models and therefore, it did not form part of their overall findings. This could be due to the definition of an institutional factor in the literature not being precise. Therefore, some scholars have excluded this factor from their institutional models altogether, while others suggested that it be included when they recommended future research avenues. Secondly, contradictory to Bowen and De Clercq (2008), regulatory protection did add significantly towards the prediction of the model once the influence of technology infrastructure support was taken into account. None of the other factors added significantly to these to

predictors in this final model. This again opposes the findings of both Bowen and De Clercq (2008) and Lim *et al* (2010) who found linear combinations of these institutional factors that were different to the findings of this study. It must be noted again that this particular combination of predictors explains the most variance in perceived growth potential compared to other predictors. However, other combinations of predictors excluding technological infrastructure support could be examined further, as can be found in Appendix D.

6.3.1.3 *Conclusion*

It can be argued that technological innovations require effective protection of intellectual property rights, as these innovations can often be easily replicated and reproduced. The findings of this hypothesis suggest that in order to stimulate high-growth entrepreneurship, the bureaucracy of South Africa should focus more of their energy and resources towards simultaneously establishing a well-designed and enforced regulatory framework, whilst building an extensive technological infrastructure to support those entrepreneurs with high-growth aspirations. This will encourage these entrepreneurs to be more willing to take the risks of investing in their new ideas and assets, knowing that their intellectual property will be protected against piracy, copyright violations and theft. This may stimulate the development of high-growth ventures in the country, which will lead to increases in job-creation, innovations and international expansion. This may then lead to improved confidence in the country as a destination for foreign investment. Ultimately, the growth of the South African economy can only benefit from these institutional interventions.

6.4 Concluding Remarks

An observation that has not yet been raised and may be of significance to this field of research stems from the descriptive statistics. The results revealed that all the summated rating scales measuring the entrepreneurs' perceptions were positively skewed. A possible explanation for this is that the majority of entrepreneurs are inherently optimistic about their ability to start and grow their new businesses, hence the positive skewness. Therefore, any future studies surveying the perceptions of entrepreneurs' growth-potential of their businesses may find similar results. In these cases the same analysis method adopted here may have to be employed by either attempting to normalise the data and if not successful, performing parallel non-parametric analyses to validate the parametric test results.

All the defined institutional factors in the research model were found to have statistically significant influences in the intended directions on the perceived growth potential of individual entrepreneurs' new businesses. Therefore, all the defined hypotheses were supported and it can be safely argued that all the institutional factors defined in this study matter when it comes to stimulating high-growth entrepreneurship in a country. This has far-reaching implications for the bureaucracy of a country attempting to stimulate high-growth entrepreneurship, as all the institutional factors require consideration.

Nevertheless, the results highlighted that certain factors were more influential than others. It was expected from the existing literature that financial support and

education/training support would have a larger relative influence on high-growth entrepreneurship, which was not supported in the findings of this study. The most notable discovery of this study, which adds substantial insight to the existing literature, is that technological infrastructure support has the largest influence on high-growth entrepreneurship. In hindsight, this is rather obvious, but is not an institutional factor that has been given much attention in the existing literature. When combining technological infrastructure support with effective regulatory protection of property rights, a significant proportion of the variance in perceived entrepreneurial growth-potential can be explained. No other factors add significant prediction capability, which again is a valuable conclusion. The overall findings can be summarised in the illustration below (Figure 22).

Figure 22. Illustration of findings
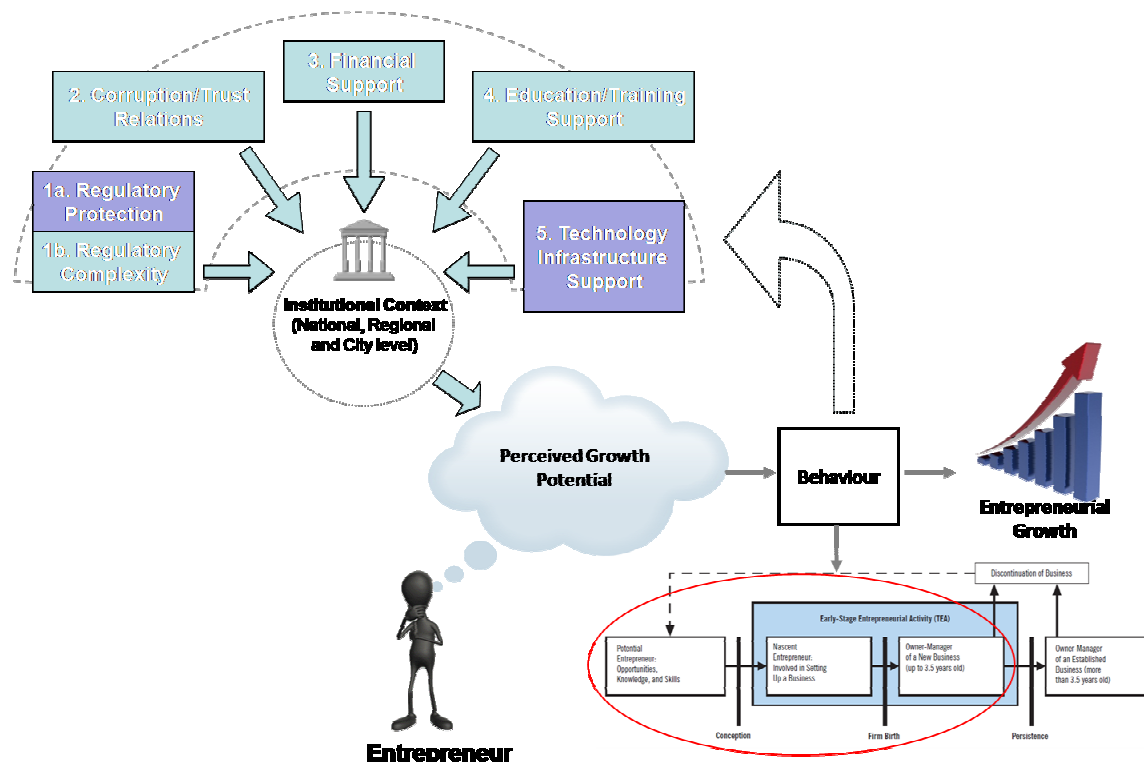
7. CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The growth and success of an emerging economy is highly dependent on the ability of its bureaucracy to encourage entrepreneurship, particularly innovative, productive, high-growth entrepreneurship (Bowen and de Clercq, 2008). It was this notion that sparked an interest to further develop the field of entrepreneurial research in emerging economies.

Entrepreneurship research is particularly necessary in South Africa, considering that the bureaucracy of the country is battling to stimulate both the level and type of entrepreneurship in the country (The Presidency, 2009). Even though a large emphasis has been placed on encouraging entrepreneurship as a solution to social issues, such as unemployment, very little success has been achieved of late in South Africa (Bosma and Levie, 2010). It was theorised that this failure was partly due to the weak institutional environment currently existing in the country. It was therefore decided to combine institutional theory with entrepreneurship theory in an attempt to identify, explain and possibly predict the influence of different institutional factors on high-growth entrepreneurship in the South African context.

A model was then defined, based on the existing literature, in order to test the theory. This model aimed to explain the link between institutional factors and high-growth entrepreneurship. This model was then tested by means of a survey questionnaire that was distributed to a large number of entrepreneurs throughout

the country, an analysis of the results and a consequent discussion of the findings. It is important at this point to revisit the research objectives for this study before continuing.

7.2 Research Objectives Revisited

The following research objectives were listed at the beginning of this study:

1. To gain a better understanding of what studies have been undertaken recently in this area of research in order to further build on the existing literature.

2. Identify the main institutional factors that may influence high-growth entrepreneurship by defining a research model.

3. Devise a research methodology to empirically test this model in order to determine the influence of the identified institutional factors on the perceived growth potential of new businesses.

4. Gain insight through a thorough analysis of the results to enable all stakeholders to better understand how to construct a supportive institutional framework that encourages productive, high-growth entrepreneurship.

The literature review served to satisfy both objective one and two, while objective three was achieved with the research methodology and objective four was satisfied through the analysis of the results. It is therefore safe to state that these research objectives have been successfully achieved.

7.3 Theoretical Contribution

What value has this research added to the existing body of literature? The first value-adding feature of this study is that it aimed to understand the influence of the institutional context on the individual entrepreneur's perceptions of growth-potential, rather than taking a macro-view across countries using GEM data, which was the approach of researchers, such as Bowen and de Clercq (2008) and Lim *et al* (2010). This allowed the researcher to gain a deeper understanding of how institutional factors directly influence the thought processes and ultimate perceptions of individual entrepreneurs, which has added substantial value to the existing literature.

The second value-adding feature of this study is that an adapted institutional model was defined and tested, based on multiple works from different studies in both the institutional theory and entrepreneurship theory fields. All the available literature was explored and merged in order to define the institutional factors that most accurately explain and predict the change in perceived growth-potential of new businesses. This model was then tested in order to measure its accuracy.

A final feature that was unique to this study was that it included pre-start entrepreneurs together with Total Early Stage (TEA) entrepreneurs in the research population. The existing research that was studied only included TEA entrepreneurs. However, further investigation into the field of entrepreneurship revealed that the institutional context may also have a significant influence on the

perceptions of pre-start entrepreneurs. The findings of this study certainly support this and it is suggested in future research in this field that pre-start entrepreneurs are included in the research population.

7.4 Key Findings and Implications

This study highlighted some fascinating findings that have far-reaching implications for all stakeholders, particularly the bureaucracy of the country. These are listed below:

1. Every institutional factor in the model is significant and therefore, all have to be taken into consideration by the bureaucracy when attempting to design a munificent institutional environment to stimulate high-growth entrepreneurship in South Africa.

2. A comprehensive and easily accessible technological infrastructure is the most influential institutional factor that will stimulate high-growth entrepreneurship. Since access to the internet in particular is limited in South Africa, this should be the key area of focus in the future.

3. The effective protection of all property rights is a factor that requires reconsideration, as it is also seen to be a highly essential influence on the growth-potential of new businesses. Even though South Africa is known to have well-established rules and regulations, there may need to be more focus placed on improving the enforcement of these laws through a more efficient legal system. However, it must also be highlighted that this regulatory system has to be kept as uncomplicated as possible.

4. The largest impact on high-growth entrepreneurship will be experienced if the technological infrastructure and regulatory environment are given the most consideration.

5. Running awareness campaigns, as well as educating the entrepreneurs to be more morally aware and self-regulatory may reduce the levels of corruption, improving the ease of doing business and consequently increasing the level of high-growth entrepreneurship.

6. Improving the formal financial support for early-stage entrepreneurs is important, but may be more relevant later in the entrepreneurial stage when significant growth is required through financial leverage.

7. Improving entrepreneurial education and training may have a significant positive effect on high-growth entrepreneurship, but more focus has to be placed on ensuring it is action-based and social networking-orientated, rather than being too theoretical.

8. Improving the physical infrastructure may not significantly influence high-growth entrepreneurship.

7.5 Research Limitations

While it is believed that this study and empirical results provide important insights into the question of how the institutional context influences high-growth entrepreneurship, the findings are subject to a few limitations. Below is a list of these limitations:

- There may be other institutional factors that also significantly influence high-growth entrepreneurship, but have not been identified for this study.

- As was stated in the literature review, there is no 'one-size-fits-all' solution to institutional theory. Therefore, because this research was limited to the South African context, it may not be relevant in other countries, particularly developed countries.

- The majority of the survey responses came from the Gauteng province and therefore, the results may be skewed towards this region. This limited the study in that it was not possible to compare inter-regional and inter-city differences, as suggested by Roxas *et al* (2006).

- The accuracy of the results and subsequent conclusions may have been affected by the inherent over-confidence bias of the entrepreneurs that responded.

- Finally, since this analysis focused on the individual influence of alternative institutional factors, the potentially important interaction effects among factors may have been neglected.

7.6 Recommendations for Future Research

- It may be a worthwhile exercise to investigate any additional institutional factors that have not been considered in this study, such as entrepreneurial incubator support and knowledge spill-overs (Stenholm *et al*, 2010).

- It is suggested that this study be implemented with respondents from all regions or major cities across the country in order to test the argument of Roxas *et al* (2006) that there exists differences between regions and cities within a particular country. This may add substantial value to the findings of this study.

- Further investigation is required into comparing the influence of the different institutional factors on high-growth entrepreneurship during different stages of the entrepreneurial process.

- A study could also be undertaken to determine the extent to which the productivity of rural entrepreneurship is influenced by providing greater access to the internet. This could have far-reaching implications.

- Finally, it may be beneficial to study the interaction between the individual institutional factors. For example, past research suggests that a better functioning legal system may promote the development of a country's financial system (Bowen and De Clercq, 2008). Similarly, it has also been stated that there may exist an interaction between a country's financial and educational institutions, in that existing research has indicated that more highly educated entrepreneurs experience lower borrowing constraints (Bowen and de Clercq, 2008).

"Most of what you hear about entrepreneurship is all wrong. It's not magic; it's not mysterious; and it has nothing to do with genes. It's a discipline and, like any discipline, it can be learned."

Peter F. Drucker

REFERENCES

Acs, Z. & Amoros, J. (2008) Entrepreneurship and competitiveness dynamics in Latin America. *Journal of Small Business Economics. 31(3),* 305-322. Doi: 10.1007/s11187-008-9133-y

Acs, Z., & Szerb, L. (2007). Entrepreneurship, economic growth and public policy. *Small Business Economics, 28*(2-3), 109-109. doi:10.1007/s11187-006-9012-3

Acs, Z., & Virgill, N. (2010). Entrepreneurship in Developing Countries. *Foundations and Trends in Entrepreneurship.* 6(1), 1-68. DOI: 10.1561/0300000031

Anokhin, S., & Schulze, W., S. (2009). Entrepreneurship, innovation, and corruption. *Journal of Business Venturing*, 24(5), 465-476. DOI:10.1016/j.jbusvent.2008.06.001

Autio, E. (2007). Global Entrepreneurship Monitor: 2007 Global Report on High-Growth Entrepreneurship. Babson College: Babson Park, MA; London Business School: London, UK.

Autio, E., & Acs, Z. (2010). Intellectual property protection and the formation of entrepreneurial growth aspirations. *Strategic Entrepreneurship Journal, 4*(3), 234-251. doi:10.1002/sej.93

Baron, R. A. (2007). Behavioral and cognitive factors in entrepreneurship: Entrepreneurs as the active element in new venture creation. *Strategic Entrepreneurship Journal, 1*(1-2), 167-182. doi:10.1002/sej.12

Baughn, C. C., Sugheir, J., & Neupert, K. E. (2010). Labor flexibility and the prevalence of high-growth entrepreneurial Activity1. *Journal of Small Business*

and Entrepreneurship, 23(1), 1-15,153-154. Retrieved From:

http://search.proquest.com/docview/89126487?accountid=14717

Baumol, W. J., & Strom, R. J. (2007). Entrepreneurship and economic growth. *Strategic Entrepreneurship Journal, 1*(3-4), 233-237. doi:10.1002/sej.26

Beck, T., & Laeven, L. (2006). Institution building and growth in transition economies. *Journal of Economic Growth, 11*(2), 157-186, DOI: 10.1007/s10887-006-9000-0

Blumberg, B; Cooper, D & Schindler, P (2008) *Business Research Methods* (2nd Edition), McGraw-Hill: London

Bosma, N., & Levie, J. (2010). Global Entrepreneurship Monitor: 2009 Executive Report. *Global Entrepreneurship Research Association.* Retrieved from www.gemconsortium.org

Bowen, H. P., & De Clercq, D. (2008). Institutional context and the allocation of entrepreneurial effort Palgrave Macmillan. doi:10.1057/palgrave.jibs.8400343

Bruton, G. D., Ahlstrom, D., & Li, H. (2010). Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice, 34*(3), 421-440. doi:10.1111/j.1540-6520.2010.00390.x

Casson, M., & Wadeson, N. (2007). The discovery of opportunities: Extending the economic theory of the entrepreneur. *Small Business Economics, 28*(4), 285.

De Clercq, D., Menzies, T. V., Diochon, M., & Gasse, Y. (2009). Explaining nascent entrepreneurs' goal commitment: An exploratory study. *Journal of Small*

Business and Entrepreneurship, 22(2), 123-123-139,217-218. Retrieved

from http://search.proquest.com/docview/214500375?accountid=14717

Dennis, W. J. (2011). Entrepreneurship, small business and public policy levers.
Journal of Small Business Management, 49(1), 92-106.

Dequech, D. (2006). The new institutional economics and the theory of behaviour
under uncertainty. *Journal of Economic Behavior & Organization, 59*(1), 109-
131. DOI: 10.1016/j.jebo.2004.03.012

Dickson, P. H., Solomon, G. T., & Weaver, K. M. (2008), Entrepreneurial selection
and success: does education matter? *Journal of small business and enterprise
development, 15(2), 239-258*, DOI: 10.1108/14626000810871655

DTI, Republic of South Africa. (2005), *National Strategy for Development and
Promotion of Small Businesses in South Africa.* White paper from the
department of Trade and Industry, Pretoria, Retrieved from: www.thedti.gov.za
on 15th February 2011

Ebben, J. J. (2009). Bootstrapping and the financial condition of small
firms. *International Journal of Entrepreneurial Behaviour & Research, 15*(4),
346-346-363. doi:10.1108/13552550910967930

El Harbi, S., & Anderson, A. R. (2010). Institutions and the shaping of different
forms of entrepreneurship. *Journal of Socio-Economics, 39*(3), 436-444. DOI:
10.1016/j.socec.2010.02.011

Grégoire, D. A., Corbett, A. C. & McMullen, J. S. (2011), The Cognitive
Perspective in Entrepreneurship: An Agenda for Future Research, *Journal of*

Management Studies, 48(6), 1443-1477. DOI: 10.1111/j.1467-6486.2010.00922.x

Hair Jr., J. F., Black, W. C., Babin, B. J., Anderson, R. E. (Seventh Edition). (2010). *Multivariate Data Analysis, A Global Perspective.* Global Edition: Pearson Prentice Hall.

Harris, J. D., Sapienza, H. J., & Bowie, N. E. (2009). Ethics and entrepreneurship. *Journal of Business Venturing, 24*(5), 407-418. doi:DOI: 10.1016/j.jbusvent.2009.06.001

Henrekson, M., and Sanandaji, T. (2011). The interaction of entrepreneurship and institutions. *Journal of Institutional Economics, 7*(1), 47.

Herrington, M., Kew, J., Kew, P. (2010). Tracking Entrepreneurship in South Africa: A GEM Perspective. *African Entrepreneur.* Retrieved from: http://www.africanentrepreneur.com

Hindle, K. (2010). How community Context Affects Entrepreneurial Process: A diagnostic framework. *Entrepreneurship & Regional Development*, 22, pp. 599 — 647. doi: 10.1080/08985626.2010.522057

Iversen, J., Jørgensen, R and Malchow-Møller, N (2008) "Defining and Measuring Entrepreneurship", *Foundations and Trends® in Entrepreneurship*: Vol. 4: No 1, pp 1-63.

Levie, J., & Autio, E. (2008). A theoretical grounding and test of the GEM model. *Small Business Economics, 31*(3), 235.

Lim, D. S. K., Morse, E. A., Mitchell, R. K., & Seawright, K. K. (2010). Institutional environment and entrepreneurial cognitions: A comparative business systems

perspective. *Entrepreneurship Theory and Practice, 34*(3), 491-516. doi:10.1111/j.1540-6520.2010.00384.x

Luiz, J. M. (2009). Institutions and economic performance: Implications for African Development. *Journal of International Development, 21*, 58-75. DOI: 10.1002/jid.1472

Mahadea, D., and Pillay, M. K. (2008). Environmental conditions for SMME development in a South African province. *South African Journal of Economic and Management Sciences, N.S., 11*(4), 431-448.

Mair, J., & Marti, I. (2009). Entrepreneurship in and around institutional voids: A case study from bangladesh. *Journal of Business Venturing, 24*(5), 419-435. DOI:10.1016/j.jbusvent.2008.04.006

Manolova, T. S., Gyoshev, B. S., & Manev, I. M. (2007). The role of interpersonal trust for entrepreneurial exchange in a transition economy. *International Journal of Emerging Markets, 2*(2), 107.

McMillan, J. & Woodruff, C. (2002). The Central Role of Entrepreneurs in Emerging Economies. *Journal of Economic Perspectives. 16*(3), 153-170.

McMullen, J. S., Bagby, D. R. & Palich, L. E. (2008). Economic Freedom and the Motivation to Engage in Entrepreneurial Action. *Entrepreneurship Theory and Practice. 32(5),* 875-895. DOI: 10.1111/j.1540-6520.2008.00260.x

Minniti, M. (2008). The role of government policy on entrepreneurial activity: Productive, unproductive, or destructive? *Entrepreneurship Theory and Practice, 32*(5), 779-790. doi:10.1111/j.1540-6520.2008.00255.x

Minniti, M., & Lévesque, M. (2008). Recent developments in the economics of
entrepreneurship. *Journal of Business Venturing, 23*(6), 603-612.
DOI:10.1016/j.jbusvent.2008.01.001

Muhanna, E. (2007). Conceptual analysis of determinants of entrepreneurship: A
South African perspective. *Problems and Perspectives in Management, 5*(1),
95.

Narayanan, V. K. and Fahey, L. (2005). The Relevance of the Institutional
Underpinnings of Porter's Five Forces Framework to Emerging Economies: An
Epistemological Analysis. *Journal of Management Studies, 42*(1), 207-223

Neck, H. M., & Greene, P. G. (2011). Entrepreneurship education: Known worlds
and new frontiers. *Journal of Small Business Management, 49*(1), 55-55-70.
Retrieved From

http://search.proquest.com/docview/852692289?accountid=14717

Nieman, G., and Nieuwenhuizen, C. (2009). Entrepreneurship: A South African
Perspective, *Van Schaik Publishers,* Second edition.

Pech, R. J., and Cameron, A. (2006). An entrepreneurial decision process model
describing opportunity recognition. *European Journal of Innovation
Management, 9*(1), 61.

Peneder, M. (2009). The meaning of entrepreneurship: A modular concept. *Journal
of Industry, Competition and Trade, 9*(2), 77-99.doi:10.1007/s10842-009-0052-7

Peng, M. W., Sun, S. L., Pinkham, B., & Chen, H. (2009). The institution-based
view as a third leg for a strategy tripod. *Academy of Management Perspectives*,

23(3), 63-81. Retrieved from:

http://aomarticles.metapress.com/content/1223003508K01419

Peng, M. W., Wang, D. Y., & Jiang, Y. (2008). An institution-based view of

international business strategy: a focus on emerging economies. *Journal of*

International Business Studies, 39, 920-936. doi: 10.1057/palgrave.jibs.8400377

Post, G. V., & Pfaff, J. F. (2007). Internet entrepreneurship and economic

growth. *Journal of International Technology and Information*

Management, 16(3), 35-35-II. Retrieved from:

http://search.proquest.com/docview/205859478?accountid=14717

Puffer, S. M., McCarthy, D. J., & Boisot, M. (2010). Entrepreneurship in Russia and

China: The impact of formal institutional voids. *Entrepreneurship Theory and*

Practice, 34(3), 441-467. doi:10.1111/j.1540-6520.2009.00353.x

Rasmussen, E., A., and Sørheim, R. (2006). Action-based entrepreneurship

education. *Technovation*, 26, 185-194. Retrieved from: www.sciencedirect.com

Roxas, H. B., Lindsay, V., Ashill, N., & Victorio, A. (2006). An institutional view of

local entrepreneurial climate*. Journal of Asia Entrepreneurship and*

Sustainability, *3 (1)*, 1-28.

Schwab, K. (2011). The Global Competitiveness Report 2011-2012. *World*

Economic Forum. Retrieved from: www.we**forum**.org

Scott, W. R. (2008). Approaching adulthood: the maturing of institutional theory.

Theory and Society. 37(5). 427-442. DOI: 10.1007/s11186-008-9067-z

Shane, S. and Venkatamaran, S. (2000). The Promise of Entrepreneurship as a

Field of Research. *The Academy of Management Review, 25*(1), 217

Sobel, R. S. (2008). Testing baumol: Institutional quality and the productivity of

   entrepreneurship. *Journal of Business Venturing, 23*(6), 641-655. DOI:

   10.1016/j.jbusvent.2008.01.004

Stam, E., Suddle, K., Hessels, J., Van Stel, A. (2008). High Growth Entrepreneurs,

   Public Policies and Economic Growth. *Hudson Institute Working Research*

   Paper, 8(2). Retrieved from: SSRN:http//ssrn.com/abstract=1019429

Stenholm, P., Acs, Z. J., & Wuebker, R. (2010). Globalization, Institutions, and

   Entrepreneurship: Exploring the relationship between country-level Institutional

   environment and entrepreneurial Activity. Available from SSRN eLibrary

   database. Retrieved from http://ssrn.com/paper=1639433.

Tang, J. (2008). Environmental munificence for entrepreneurs: Entrepreneurial

   alertness and commitment. *International Journal of Entrepreneurial Behaviour*

   and Research, 14(3), 128.

Tang, J. (2010). How entrepreneurs discover opportunities in china: An institutional

   view: APJM. *Asia Pacific Journal of Management, 27*(3), 461.

The Presidency, Republic of South Africa, National Planning Department (2009).

   Development Indicators 2009. Retrieved from www.thepresidency.gov.za

Todd, P. R. (2007). Internationalization of SMEs in india. *International Journal of*

   Emerging Markets, 2(2), 166-166-180. doi:10.1108/17468800710739234

Troilo, M. (2011). Legal institutions and high-growth aspiration entrepreneurship.

   Economic Systems, 35(2), 158-175. doi:DOI: 10.1016/j.ecosys.2010.08.001

Ucbasaran, D., Westhead, P., and Wright, M. (2008). Opportunity identification and pursuit: Does an entrepreneur's human capital matter? *Small Business Economics, 30*(2), 153.

Welter, F. (2011). Contextualizing entrepreneurship: conceptual challenges and ways forward. *Entrepreneurship Theory and Practice, 35*(1), 165-184. doi:10.1111/j.1540-6520.2010.00427.x

Welter, F., and Smallbone, D. (2011). Institutional perspectives on entrepreneurial behavior in challenging environments. *Journal of Small Business Management, 49*(1), 107.

Williamson, O. E. (2000). The New Institutional Economics: Taking Stock, Looking Ahead. *Journal of Economic Literature*, 38(3), 595-613

Appendix A - Survey Instrument

Dear Entrepreneur,

My name is Neil von Hoesslin and I am an aspiring entrepreneur like yourself. I am sure that you have also had to experience the challenge of surveying people in the past and therefore, you understand how important it is to get a good response. Please assist me in advancing entrepreneurship research by taking the time to quickly complete this survey.

I am doing research for my MBA at the Gordon Institute of Business Science (Gibs) in Johannesburg. This research is investigating how the institutional environment influences your perceptions of the growth potential of your start-up business. It will be greatly appreciated if you can assist me with my research by completing this short survey below, which should take no longer than 5 minutes. Your participation is voluntary and you can withdraw at any time without penalty. Please take note that all data will be kept confidential and you will by no means be implicated personally in the results. By completing this questionnaire, you indicate that you voluntarily participate in this research. If you have any concerns, please contact me or my supervisor on the details provided below:

Researcher name: Neil von Hoesslin
Email: Neil@vonhoesslin.co.za
Mobile : 083 652 0926

Supervisor name: Judi Sandrock
Email: Judi.Sandrock@bransoncentre.co.za
Mobile: 074 147 3777

Your participation in this survey will be greatly appreciated and will add substantial value to the fascinating field of entrepreneurship research.

Section A: Demographics

Please select the options most applicable to you in this section.

*1. CD1 - Age:

○ 18 years or younger

○ 19 to 25 years

○ 26 to 35 years

○ 36 to 50 years

○ Older than 50 years

*2. CD2 - Gender:

○ Male

○ Female

*3. CD3 - Region in which you are located:

○ Gauteng

○ Limpopo

○ North West

○ Mpumalanga

○ Freestate

○ Eastern Cape

○ Western Cape

○ Northern Cape

○ Kwazulu Natal

*4. CD4 - Highest Education Qualification

○ None

○ Matric

○ Diploma

○ Undergraduate

○ Post Graduate

○ MBA

○ Entrepreneurial MBA

Other (please specify)

[   ]

Section B: Qualifying Question

This is to determine if you qualify for the defined population of this research

✱1. CD5 - Current stage of Entrepreneurship:

○ I have identified an opportunity, but have not yet exploited it.

○ I have registered my company, but am not officially paying any wages yet.

○ I have been paying wages consistently for at least 3 months.

○ I have been paying wages consistently for more than 3 1/2 years.

Section C: Growth Potential of New Business

This section determines how you currently perceive the future growth potential of your business to be. High-growth entrepreneurship is defined and measured in my research using the 3 factors below.

*1. I believe that my new business will:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD6 - be able to create 20+ jobs within the next 5 years.	○	○	○	○	○	○	○
CD7 - create unique technologically advanced products and services within the next 5 years.	○	○	○	○	○	○	○
CD8 - have the potential to expand internationally in the future.	○	○	○	○	○	○	○

Section D: Institutional Factors

This section will determine how you perceive the influence of different institutional factors on the growth potential of your new business. (Keep in mind the criteria I have just used to measure the growth potential of your business)

*1. I believe I can grow my new business faster knowing that:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD9 - My intellectual property rights are protected.	○	○	○	○	○	○	○
CD10 - My products will not be pirated and sold illegally.	○	○	○	○	○	○	○
CD11 - My patent, copyright and trademark will be legally protected.	○	○	○	○	○	○	○

*2. There is a better chance of my new business being successful if:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD12 - I can register it within 1 week.	○	○	○	○	○	○	○
CD13 - I know that I will pay minimal tax in the first few years.	○	○	○	○	○	○	○
CD14 - Government policies are designed to assist me to grow my business.	○	○	○	○	○	○	○
CD15 - Non-financial start-up assistance from government is widely available and easily accessible (Incubators etc.).	○	○	○	○	○	○	○

*3. I believe that I will be able to grow my new business faster if:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD16 - All businesses that I deal with practice good business ethics.	○	○	○	○	○	○	○
CD17 - Business contracts are always awarded fairly and based on merit.	○	○	○	○	○	○	○
CD18 - I can trust the people I do business with (customers, employees, competitors etc.)	○	○	○	○	○	○	○

*4. I believe that I will be able to grow my new business faster if the following sources of funding are widely available and easily accessible to me:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD19 - Private equity	○	○	○	○	○	○	○
CD20 - Debt funding	○	○	○	○	○	○	○
CD21 - Government subsidies	○	○	○	○	○	○	○
CD22 - Venture capitalists	○	○	○	○	○	○	○

*5. I believe I will be able to grow my new business faster if I have access to:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD23 - an Entrepreneurship MBA degree through a local university of my choice.	○	○	○	○	○	○	○
CD24 - regular & relevant entrepreneurship business and management courses and conferences.	○	○	○	○	○	○	○

*6. I believe I will be able to grow my new business faster if I have access to:

	Strongly disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
CD25 - an extensive road, rail, sea and air transport infrastructure	○	○	○	○	○	○	○
CD26 - an affordable and widely accessible telecommunications infrastructure	○	○	○	○	○	○	○
CD27 - an affordable, broadband internet infrastructure	○	○	○	○	○	○	○

7. CD28 - And it's done! Now that was easy! Please can I ask you one last favour. Take a minute and add extra comments on any other institutional factors that I may have left out and that you believe may influence the growth potential of your new business. You are also more than welcome to add any additional comment you think will help me with my research.
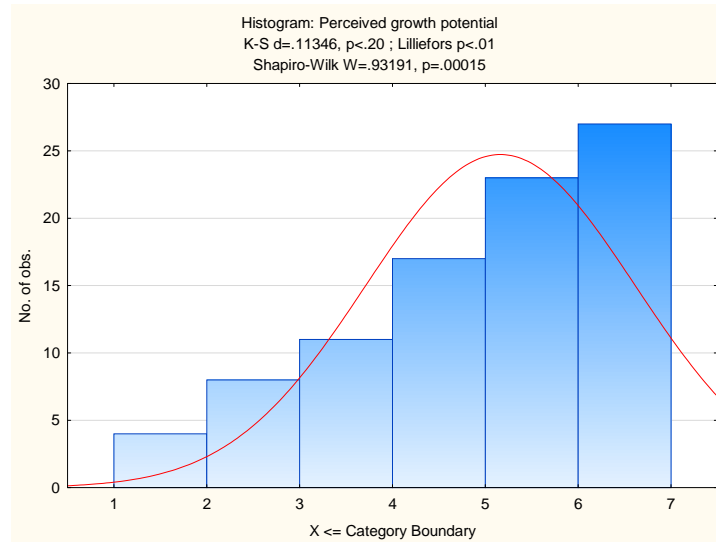
The End.

Thank you for your participation in this survey. It will assist greatly in the advancement of entrepreneurship research. If you would like to receive the results of this survey, please contact me on the details provided.
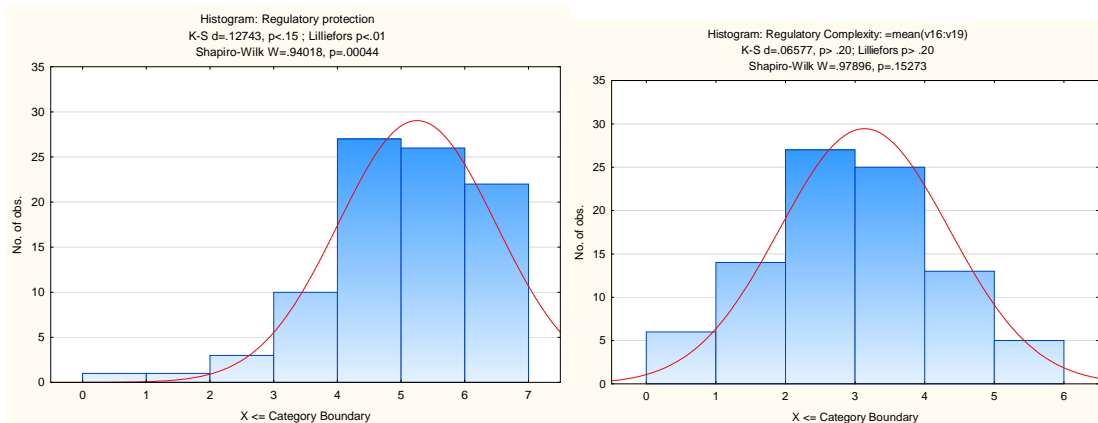
Kind Regards,
Neil von Hoesslin

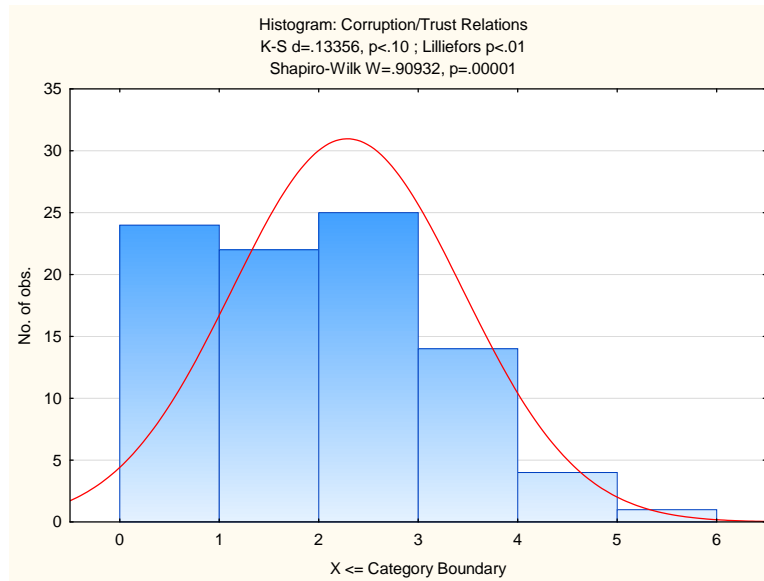## **Appendix B1 –** Shapiro-Wilks tests for normality (non-transformed)
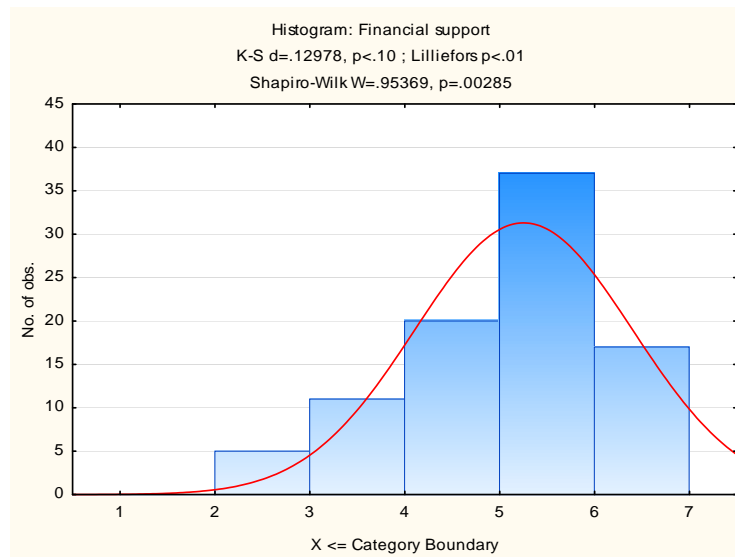
1. Perceived Growth Potential

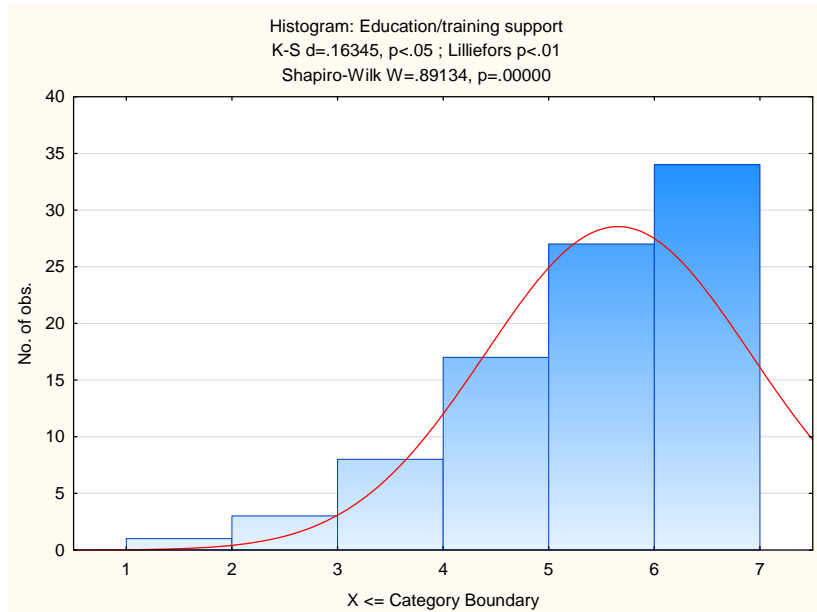### 2. Government Policies and Procedures

3. Corruption/Trust Relations

Histogram: Corruption/Trust Relations
K-S d=.13356, p<.10 ; Lilliefors p<.01
Shapiro-Wilk W=.90932, p=.00001

4. Financial Support

Histogram: Financial support
K-S d=.12978, p<.10 ; Lilliefors p<.01
Shapiro-Wilk W=.95369, p=.00285

5. Education/Training Support

Histogram: Education/training support
K-S d=.16345, p<.05 ; Lilliefors p<.01
Shapiro-Wilk W=.89134, p=.00000

6. Physical Infrastructure Support

Histogram: Physical infrastructure Support: =v34
K-S d=.17719, p<.01 ; Lilliefors p<.01
Shapiro-Wilk W=.89855, p=.00000

7. Technology Infrastructure Support

Histogram: Technology infrastructure Support: =mean(v35,v36)
K-S d=.16796, p<.05 ; Lilliefors p<.01
Shapiro-Wilk W=.88836, p=.00000

Appendix B2 – Shapiro-Wilk tests for normality (transformed scales)

1. Perceived Growth Potential
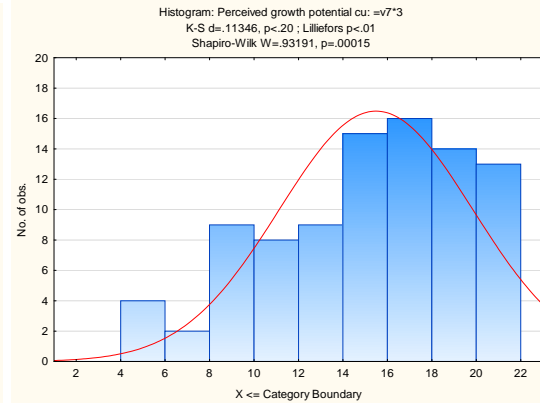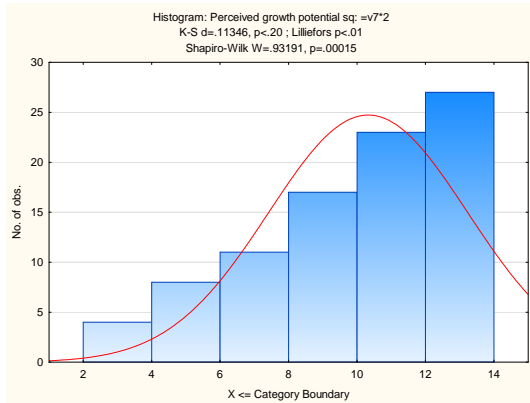
2. Government Policies and Procedures

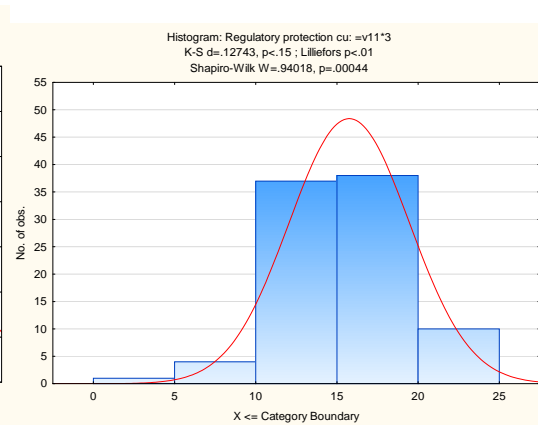## 3. Corruption/Trust Relations

4. Financial Support

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Denkleiers • Leading Minds • Dikgopolo tša Dihlalefi

Influence of Institutional Context on High-Growth Entrepreneurship
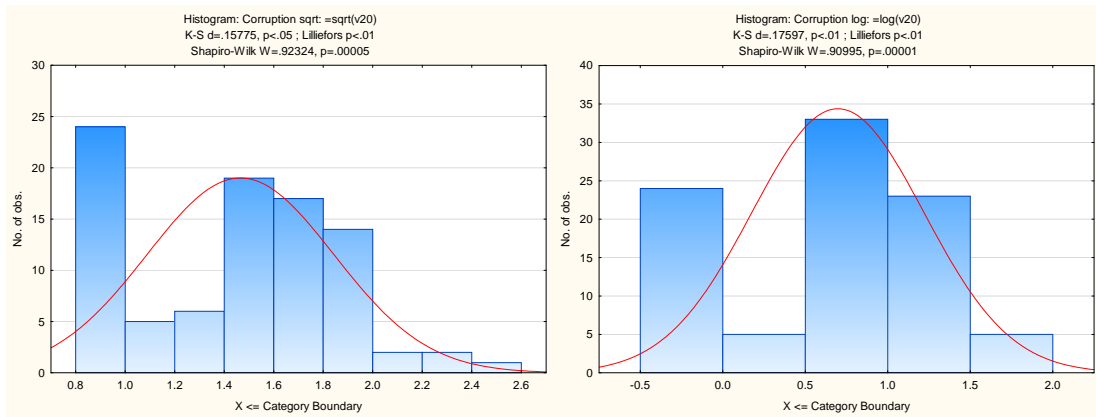
5. Education/Training Support

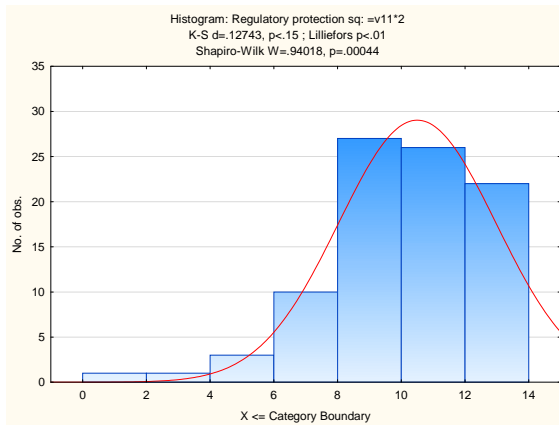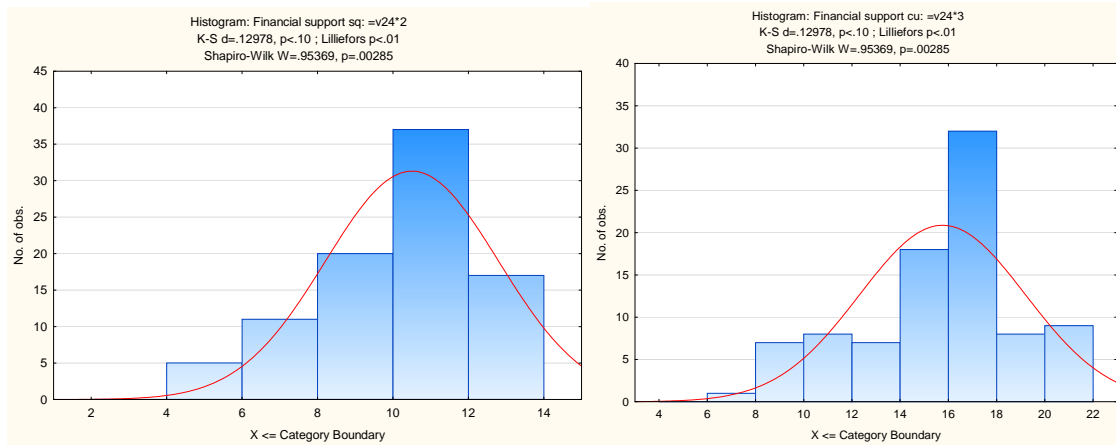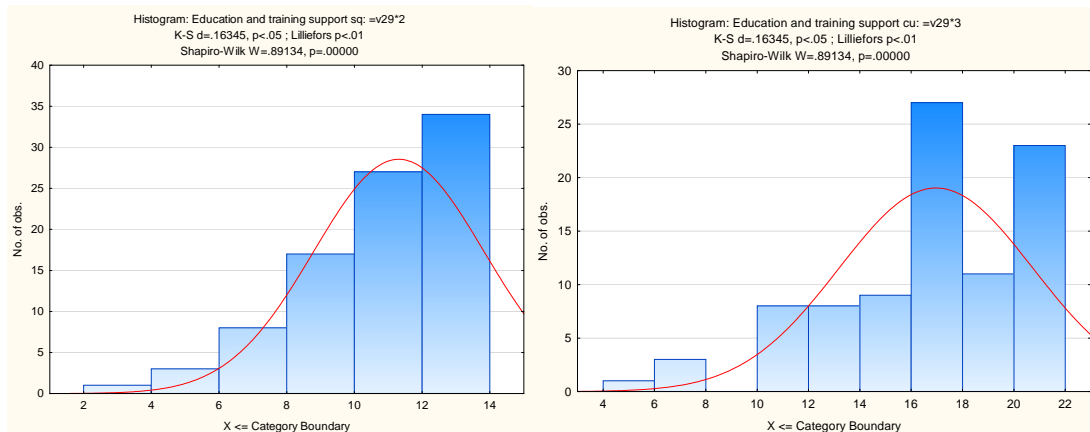## 6. Physical Infrastructure Support
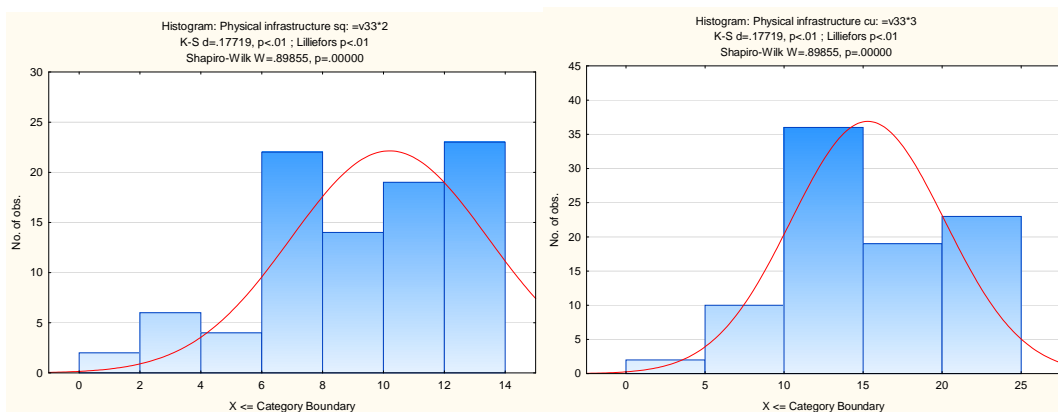
7. Technology Infrastructure Support
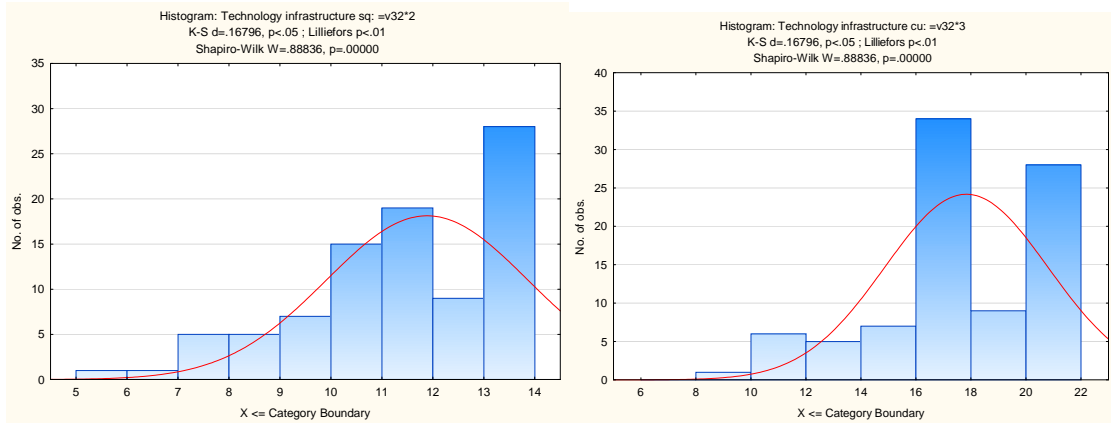
Appendix C - Correlation Scatter Plots

1a. Regulatory Protection

Scatterplot of Perceived growth potential against Regulatory protection
Regulatory protection:Perceived growth potential: $y = 2.7538 + 0.4587 \cdot x$; $r = 0.3907$, $p = 0.0001$

1b. Regulatory Complexity

Scatterplot of Perceived growth potential against Complexity
Regulatory Complexity:Perceived growth potential: $y = 6.6286 - 0.4678 \cdot x$;
$r = -0.3928$, $p = 0.0001$; $r^2 = 0.1543$

2. Corruption/Trust Relations

Scatterplot of Perceived growth potential against Corruption
Corruption:Perceived growth potential: $y = 6.3094 - 0.5009*x$;
$r = -0.3999$, $p = 0.00009$; $r^2 = 0.1599$

3. Financial Support

Scatterplot of Perceived growth potential against Financial support
Financial support:Perceived growth potential: $y = 3.0558 + 0.4011*x$; $r = 0.3169$, $p = 0.0023$;
$r^2 = 0.1004$

4. Education/Training Support

Scatterplot of Perceived growth potential against Education and training support
Education and training support:Perceived growth potential: $y = 2.778 + 0.4217 \cdot x$; $r = 0.3654$, $p = 0.0004$; $r^2 = 0.1335$

5a. Technology Infrastructure Support

Scatterplot of Perceived growth potential against Technology infrastructure
Technology infrastructure:Perceived growth potential: $y = 0.6548 + 0.7584 \cdot x$; $r = 0.5171$, $p = 0.00000$; $r^2 = 0.2674$

5b. Physical Infrastructure Support

Scatterplot of Perceived growth potential against Physical infrastructure
Physical infrastructure:Perceived growth potential: y = 5.2603 - 0.0191*x;
r = -0.0213, p = 0.8420; r^2 = 0.0005

Appendix D – Regression Table

#	R square	No. of Effects	Regulatory protection	Regulatory Complexity	Corruption	Financial support	Education and training support	Technology infrastructure	Physical infrastructure
1	0.385155	7	0.176694	-0.125663	-0.120006	-0.100644	0.207802	0.333336	-0.111786
2	0.380257	6	0.179295	-0.087008	-0.097759		0.182305	0.324537	-0.118302
3	0.378184	6	0.198509		-0.156998	-0.056579	0.174632	0.366822	-0.107488
4	0.377752	6	0.183228	-0.166797		-0.072444	0.224784	0.346813	-0.100998
5	0.376395	5	0.195839		-0.135152		0.164697	0.354413	-0.11258
6	0.375076	5	0.184284	-0.131659			0.203036	0.338236	-0.107464
7	0.374045	6	0.192852	-0.117964	-0.102625	-0.113952	0.185733	0.347288	
8	0.368555	5	0.197167	-0.154283		-0.088381	0.202309	0.35781	
9	0.367888	5	0.212794		-0.138062	-0.072007	0.155321	0.378292	
10	0.367718	5	0.196895	-0.073345	-0.076085		0.155173	0.338176	
11	0.364952	4	0.210225		-0.108738		0.141331	0.362994	
12	0.364514	4	0.199577	-0.109811			0.173617	0.348067	
13	0.364092	5	0.218407			0.005443	0.183545	0.402383	-0.089744
14	0.364072	4	0.219025				0.184813	0.404353	-0.088886
15	0.360895	6		-0.179656	-0.13455	-0.107983	0.261078	0.333586	-0.134109
16	0.356769	4	0.228532			-0.014073	0.166178	0.4085	
17	0.356633	3	0.227139				0.162336	0.403382	
18	0.356567	6	0.230076	-0.043405	-0.15788	-0.028565		0.37482	-0.081237
19	0.356134	5	0.228847	-0.034517	-0.149512			0.370498	-0.084431
20	0.355638	5	0.235203		-0.169817	-0.016007		0.385182	-0.08146
21	0.355489	4	0.2338		-0.163159			0.381214	-0.083398
22	0.35525	5		-0.13899	-0.110885		0.234535	0.324139	-0.141461
23	0.351547	5		-0.228231		-0.076529	0.282423	0.348776	-0.122889
24	0.349562	4	0.243168		-0.153967	-0.031515		0.392533	
25	0.349463	4	0.236469	-0.030156	-0.127613			0.375567	
26	0.34897	3	0.240722		-0.139789			0.384889	
27	0.348559	4		-0.191473			0.259792	0.339723	-0.129855
28	0.34482	4			-0.176152		0.212913	0.374588	-0.1354
29	0.343238	4	0.246135	-0.097468				0.401298	-0.060525
30	0.339661	3	0.249942	-0.08731				0.401715	
31	0.337064	3	0.26826					0.447122	-0.049637
32	0.335621	3	0.263248			0.0368		0.427614	
33	0.334612	2	0.269514					0.44348	
34	0.332866	3		-0.170713			0.229409	0.351964	
35	0.328018	3			-0.147581		0.188711	0.386873	
36	0.323107	3					0.247826	0.445331	-0.107019
37	0.315844	6	0.177073	-0.251177	-0.165437	-0.063047	0.270503		-0.140978
38	0.312379	3				0.014098	0.219166	0.440605	
39	0.312241	2					0.22339	0.445995	
40	0.307779	3			-0.225428			0.416679	-0.101468
41	0.298066	2			-0.199068			0.422465	
42	0.285645	2		-0.160457				0.430521	
43	0.273722	2				0.09054		0.473856	
44	0.27051	2						0.520821	-0.055939
45	0.267395	1						0.517102	