

**THE DETERMINANTS OF TOTAL
ENTREPRENEURIAL ACTIVITY: A SPATIAL
APPROACH**

by

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ABSTRACT

Various bodies and governments from around the world have recognised the importance of entrepreneurship in economic growth and job creation. The rate of start-up businesses and entrepreneurial activity is crucial in every country. The Global Entrepreneurship Monitor (GEM) recognises the contribution of entrepreneurial activity to economic growth and measures it by means of the total entrepreneurial activity (TEA) index. Most recent evidence suggests that regional (or spatial) inequality in many developing countries has increased in recent years, and that regional inequality in these countries has thus become a major setback for governments.

In this study spatial differences in the rate of start-up businesses and entrepreneurial activity in a developing country were investigated. The objectives were to provide an overview of different aspects related to entrepreneurship, describe the different determinants that influence entrepreneurship and describe the situation in South Africa in terms of these determinants.

The general determinants that influence entrepreneurial activity are openness of trade, role of the government, financial markets, technology, infrastructure, management skills and labour markets. The entrepreneurial determinants are physical infrastructure, commercial and professional infrastructure, cultural and social norms, education and training, financial support, government programs, market openness and transfer of research and development. The outcomes set by the government through business creation are economic growth, job creation and innovation.

In this study cross-sectional data on South Africa's 354 regions (magisterial districts) for the years 2003 and 2004 is used. Therefore data could be pooled. The dataset includes data on TEA per region, regional profits, regional unemployment rates, number of banks per region, education levels per region, population per region, population density per region, urbanisation per region, the number of people employed in the informal sector, the disposable income

per family, the gross value added, the economic growth rate and the exports per region.

The results show that profits, education and the number of bank branches in a district are positively associated with start-up rates, with the largest effect being due to profits. At present, economic size (measured by GVA) acts as disincentive for new start-ups in South Africa.

The results also show that the rate of start-ups is not statistically related to the unemployment rate across South Africa's regions. This finding could reflect low survival rates of start-ups in South Africa. It could also suggest, given the significance of profits, that most entrepreneurs in South Africa tend to be "opportunity" entrepreneurs rather than necessity entrepreneurs.

It is clear that some determinants have a bigger effect on entrepreneurial activity than others. This will vary from country to country. Therefore, the continuous investigation on determinants in every country is essential to the quest for achieving national outcomes. The most important determinants in South Africa are physical infrastructure, financial support and education. A country can only improve the entrepreneurial activity by addressing the determinants that have the most significant influence on entrepreneurial activity.

Some of the most important recommendations from this study include:

- The physical infrastructure in a country influences other determinants. Profit has a strong effect on the rate of start-ups and entrepreneurial activity. The implication is that unless structural factors within regions change, the spatial patterns and inequalities in entrepreneurial activity in South Africa will probably persist. Therefore, improving physical infrastructure in the different regions should receive urgent attention.
- Financial support is a determinant of entrepreneurial activity. The number of bank branches in a district is significantly and positively associated with the start-up rate of businesses. It is also important that the South African banks need to improve their service and assistance to

businesses. Financial support has a big influence on entrepreneurial activity. The commercial banks in South Africa should therefore urgently look towards improving their support to businesses.

- The education, training and skills development of entrepreneurs in South Africa is inefficient. The strong effect of education on entrepreneurial activity supports the low rate of TEA in South Africa. Therefore policy choices should focus on improving and expanding entrepreneurship education and training.

OPSOMMING

Entrepreneuriese aktiwiteit en die tempo waarteen nuwe ondernemings opgerig word vorm 'n noodsaaklike komponent van die ekonomiese groei en werkskepping van 'n land. Hierdie belangrikheid word wêreldwyd deur verskeie groepe en regerings erken. Die bydrae wat entrepreneurse aktiwiteit lewer tot 'n land se ekonomiese groei word deur die *Global Entrepreneurship Monitor (GEM)* erken, en aan die hand van *Total Entrepreneurial Activity (TEA)*- indeks gemeet. Talle studies toon aan dat ruimtelike of streeksongelykheid in ontwikkelende lande toeneem, en 'n geweldige terugslag vir die betrokke regerings is.

Die studie stel ondersoek in na die ruimtelike verskille aangaande die syfer van nuwe ondernemings en entrepreneurse aktiwiteit in Suid-Afrika as ontwikkelende land. Die studie stel dit ten doel om die verskillende aspekte van entrepreneurskap te ondersoek en die belangrikste determinante wat entrepreneurskap beïnvloed te ontleed en te beskryf aan die hand van die Suid-Afrikaanse omstandighede.

Algemene determinante wat 'n invloed het op entrepreneurse aktiwiteit sluit in openheid van handel, rol van die regering, finansiële markte, tegnologie, infrastruktuur, bestuursvaardighede en arbeidsomstandighede. Entrepreneuriese determinante sluit in fisiese infrastruktuur, kommersiële en professionele advies, kulturele en sosiale norme, onderwys en opleiding, finansiële ondersteuning, regeringsprogramme, regeringsbeleid, openheid van markte en die oordrag van navorsing en ontwikkeling. Die regering stel dit ten doel om ekonomiese groei, werkskepping en innovasie te bewerkstellig deur die daarstelling van nuwe ondernemings.

In die studie word gebruik gemaak van die deursnit data van 354 magistraatdistrikte vir die uiteindelijke verwerking van gegroepeerde data. Hierdie data per streek sluit in: TEA, wins, werkloosheidsyfer, aantal banktakke, vlak van onderwys, persone werksaam in die informele sektor, besteebare inkomste per gesin, toevoeging van bruto waarde, ekonomiese groeiakoers en uitvoere.

Die resultate toon aan dat wins, onderwys en die aantal banktakke per streek 'n positiewe impak het op nuwe ondernemings. Hiervan toon wins die grootste impak. In Suid-Afrika blyk ekonomiese grootte (soos gemeet deur GVA) 'n negatiewe aansporing vir nuwe ondernemings te wees. Die syfer waarteen nuwe ondernemings opgerig word is nie statisties verwant aan die werkloosheidsyfer in die verskillende streke van Suid-Afrika nie. Hierdie bevinding kan 'n aanduiding wees van die lae oorlewingskoers wat nuwe ondernemings kenmerk. Die feit dat wins 'n sterk invloed uitoefen dui ook moontlik daarop dat entrepreneurs in Suid-Afrika eerder geleentheidsentrepreneurs as oorlewingsentrepreneurs is.

Sekere determinante toon 'n groter invloed op entrepreneuriese aktiwiteite as ander en blyk ook wisselvarierend van land tot land te wees. Die belangrikheid van elke determinant moet bepaal word alvorens 'n regering sy nasionale doelwitte kan bereik. Dit vereis voortdurende ondersoek na hierdie determinante. Die belangrikste determinante in Suid-Afrika is fisiese infrastruktuur, finansiële ondersteuning en onderwys. Hierdeur kan entrepreneuriese aktiwiteit aangespreek word, aangesien daar op die regte determinant gefokus kan word.

Aanbevelings:

- Die fisiese infrastruktuur in 'n land beïnvloed ander determinante. Wins het 'n sterk effek op die tempo waarteen nuwe ondernemings opgerig word en entrepreneuriese aktiwiteit plaasvind. Die gesamentlike effek van onderwys en finansiële intermediasie is slegs die helfte van die effek wat wins op hierdie aktiwiteite het. Indien strukturele faktore nie in streke verander nie, sal ruimtelike patrone en ongelykhede in Suid-Afrika voortduur. Die verbetering van die infrastruktuur in streke verdien dus dringende aandag.
 - Finansiële ondersteuning is 'n determinant van entrepreneuriese aktiwiteit. Die aantal banktakke in 'n bepaalde streek word positief geassosieer met die tempo waarteen van nuwe ondernemings opgerig word. Dit is belangrik dat Suid-Afrikaanse banke voortdurend hul diens
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en ondersteuning aan nuwe ondernemings moet verbeter. Kommersiële banke in Suid-Afrika moet indringend kyk na na die verbetering van hul diens en ondersteuningstelsels.

- Die opleiding en ontwikkeling van entrepreneuriese vaardighede in Suid-Afrika is ondoeltreffend. Die sterk effek van onderwys op entrepreneuriese aktiwiteit ondersteun die lae TEA-syfer in Suid-Afrika. Beleid moet dus fokus om entrepreneurskapsopleiding en -vaardighede te verbeter.

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LIST OF KEY WORDS

Entrepreneurship

Total Entrepreneurial Activity (TEA)

Global Entrepreneurship Monitor (GEM)

Spatial determinants

Start-up / New Business

LYS VAN SLEUTELWOORDE

Entrepreneurskap

Total Entrepreneurial Activity (TEA)

Global Entrepreneurship Monitor (GEM)

Ruimtelike determinante

Nuwe ondernemings

1 INTRODUCTION, MOTIVATION, GOAL AND METHOD

1.1 INTRODUCTION

Various bodies and governments all over the world have recognised the importance of entrepreneurship in economic growth and job creation. Entrepreneurship has a positive impact on markets world-wide, with the creation of new products and the benefits these offer to society (Wickham, 2004:2-3). There are, however, determinants that influence the contribution of entrepreneurial activity to economic growth (Foxcroft, Wood, Kew, Herrington & Segal 2002:10).

Entrepreneurship is continuously contributing to economical growth through the creation of new businesses (Kuratko & Hodgetts, 2004:3). The creation of new businesses drives the economy and improves economic growth (Timmons & Spinelli, 2004:15-19). Entrepreneurship as a root of economic growth creates wealth and employment (Brown & Ulijn, 2004:19).

The Global Entrepreneurship Monitor (GEM) recognises the contribution that entrepreneurial activity makes to economic growth (Foxcroft *et al.*, 2002:10). It is important to be able to measure entrepreneurial activity. One widely accepted international measure of entrepreneurship is the total entrepreneurial activity (TEA). The principal measure of entrepreneurial activity of GEM is the TEA index. This index measures the national rate of the creation of new businesses (Orford, Herrington & Wood, 2004:6).

Various determinants influence the contribution of entrepreneurial activity to economic growth (Foxcroft *et al.*, 2002:10). These determinants can differ among geographic locations. Most recent evidence suggests that regional (or spatial) inequality within many developing countries has increased in recent

years, and that regional inequality within these countries has thus become more pronounced.

The difference in entrepreneurial activity among countries is a result of the role of spatial factors (De Groot, Nijkamp & Stough, 2004:1-2). This is the reason why the rate at which new businesses are created in different countries vary. These spatial variations also exist in different parts of countries (Kirby, 2003:36). In South Africa there is a big difference in entrepreneurial activity across regions (Orford, Wood, Fischer, Herrington & Segal, 2003:30).

1.2 KEY TERMS

Key terms in the study are subsequently discussed.

1.2.1 Determinants

A determinant is an element that identifies the nature of something or conditions of outcomes (Lexico Publishing Group, LLC, 2006). The determinants are a dynamic set of factors that influence entrepreneurial activity in countries.

1.2.2 Total entrepreneurial activity (TEA)

Total entrepreneurial activity (TEA) is based on the proportion of adults between 18 and 64 years who are actively involved in starting a business or are owner-managers of a business (Orford *et al.*, 2003:13). It is defined by the sum of start-up businesses and new businesses.

1.2.3 Start-up business

A start-up business is a business that has not paid wages and salaries for more than three months (Orford *et al.*, 2003:9).

1.2.4 New businesses

New businesses have paid wages and salaries for between 3 and 42 months (Orford *et al.*, 2003:9).

1.2.5 Global Entrepreneurship Monitor (GEM)

The Global Entrepreneurship Monitor was developed in 1998 to investigate the role that entrepreneurship plays in the economic systems of countries. The main focus is the impact of entrepreneurship on the economic growth of countries (Reynolds, Bygrave, Autio, Arenius, Fitzsimons, Minniti, Murray, O'Goran & Roche, 2003:1).

1.2.6 Spatial approach

Spatial refers to something related to space, occupying or having the character of space (Dictionary.reference.com, 2005). The spatial division of countries can be done in a number of ways, e.g. a country can be divided into municipalities, magisterial districts or counties (Davidson, 2004:92–93). In this study the spatial approach looks at the 354 magisterial districts in South Africa.

1.3 BACKGROUND AND MOTIVATION

In the context of a developing country, where the formal business ownership rate is often low, a focus on the factors constraining or assisting the start-up rates of small businesses may be appropriate in order to understand the impact this has on regional inequality. Indeed, even in more developed regions such as the European Union (EU), regional development policies since the 1980s were predominantly aimed at encouraging the start-up of new businesses (Reynolds, Storey & Westhead, 1994:443).

Therefore, regional development in developing countries in particular will be driven by the success of entrepreneurs in starting new businesses. According to Reynolds *et al.* (1994:443) more developed regions in the sample of countries they investigated (such as the USA and Sweden) generally have annual start-up rates that are two to four times higher than is the case in less developed regions.

The rate of entrepreneurship can be measured statically (as the business ownership rate) and dynamically (as the start-up rate of businesses)

(Wennekers, Uhlaner & Thurik, 2002:29). According to Davidsson, Lindmark and Olofsson (1994:395) and Tödtling and Wanzelböck (2003:351) the start-up rate of businesses across regions can be explained according to structural characteristics of the different regions.

Entrepreneurs have the ability to create wealth through job creation and this has an impact on economic growth (Cronje *et al.*, 2004:40). A combination of talent and skills plus opportunity matched with the needed resources and applied in the economy with an entrepreneurial mindset is the key to economic growth (Timmons & Spinelli, 2004:16).

Entrepreneurship in South Africa is crucial because it leads to business creation and development. This, in turn, leads to job opportunities, with the result of raising the standard of living of its people (Orford *et al.*, 2004:5). Entrepreneurship is important for the improvement of the South African economy and a way to create employment (Nieman, Hough & Nieuwenhuizen, 2003:4).

The level of entrepreneurial activity in a country affects economic development and economic growth, therefore a need exists to measure entrepreneurial activity. GEM uses the TEA index to measure the entrepreneurial activity in a country.

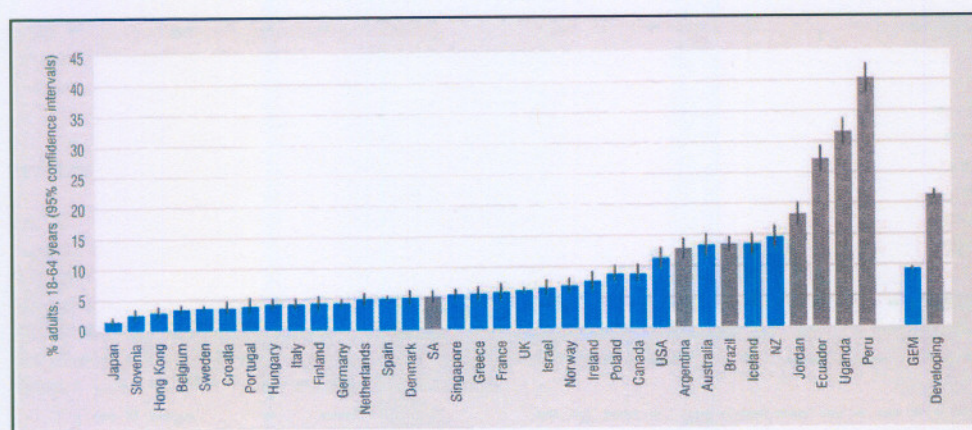
The goal of the GEM study was to focus on entrepreneurial activity. The reasons behind this study were the following (Von Broembsen, Wood & Herrington, 2005:10):

- A comparison of countries in terms of entrepreneurial activity;
- Identification of factors that influence entrepreneurial activity;
- Possible effect of the rate of entrepreneurship on the economic growth of a country; and
- Identification of policies that assist and encourage entrepreneurial activity.

The first GEM study was conducted among 10 countries in 1999. In 2000 the participating countries increased to 21 and in 2001 to 29. South Africa joined this project in 2001 (Driver, Wood, Segal & Herrington, 2001:1).

This study focuses on the 2003 and 2004 data from the GEM survey. The TEA in South Africa in 2003 and 2004 was, among other countries, of the lowest in the world (Orford *et al.*, 2004:10). Figure 1.1 compares the TEA of South Africa with other selected countries.

Figure 1.1 TEA comparison of GEM countries

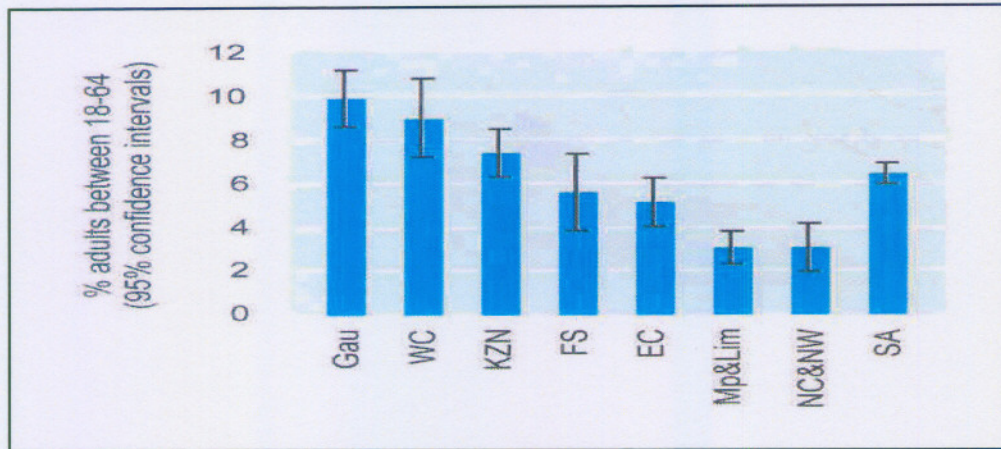


Source: Orford *et al.* (2004:10).

According to Foxcroft *et al.* (2002:13) the TEA for South Africa was 9.45% in 2001 and 6.45% in 2002. In 2003 it was 4.3% (Orford *et al.*, 2004:10). In 2004 the total entrepreneurial activity (TEA) index for South Africa was 5.4% (Orford *et al.*, 2004:10). The problem with entrepreneurial activity in South Africa is continuing, with the TEA in 2005 being 5.1% (Van Zyl, 2006:49).

The purpose of this study is to identify the determinants that are significant to TEA in South Africa. To achieve this, the spatial approach will be used. This approach will be useful in identifying these determinants, since TEA differs widely across different regions in South Africa (Orford *et al.*, 2003:20). Figure 1.2 compares the TEA of the 9 provinces in South Africa.

Figure 1.2 TEA comparison of provinces in South Africa



Source: Orford *et al.* (2003:20).

In addressing the low TEA in South Africa, it is necessary that policy makers become aware of the determinants of TEA. It is important that the influence of each of the determinants has on entrepreneurial activity is determined. The general determinants are:

- openness of trade;
- extent and role of the government;
- efficiency of the financial markets;
- level of research and development;
- physical infrastructure;
- management skills; and
- labour markets.

The entrepreneurial determinants that influence entrepreneurial activity are (Orford *et al.*, 2004:26):

- physical infrastructure;
- commercial and professional infrastructure;
- cultural and social norms;
- education and training;
- financial support;
- government programs;
- market openness; and
- transfer of research and development.

The entrepreneurial process is important and consists of the entrepreneur, the opportunity and the needed resources (Timmons & Spinelli, 2004:57). The creation of new businesses is crucial for the national outcomes of a country. These outcomes are economic growth, job creation and innovation.

1.4 PROBLEM STATEMENT

The TEA is very low in South Africa and a big reason for concern (Orford *et al.*, 2004:10). There are determinants that influence the TEA. Consequently, there is a need to investigate these determinants. The results will assist decision makers concerned with entrepreneurship.

The reason why this study was undertaken is to investigate the important determinants that influence TEA in the different provinces in South Africa.

1.5 GOAL AND OBJECTIVES OF THE STUDY

The goal and objectives of this study are as follows:

1.5.1 Goal

The goal of this study is to investigate the most important determinants that influence TEA in the different provinces in South Africa.

1.5.2 Objectives

The objectives of this study are to:

- Describe the research methodology employed;
- Provide an overview of different views, schools of thought, theories and aspects on entrepreneurship;
- Investigate the different determinants that influence entrepreneurship;
- View the situation in South Africa in terms of these determinants that influence entrepreneurship;
- Describe the empirical analysis; and
- Make recommendations regarding the determinants that influence entrepreneurship in South Africa.

1.6 RESEARCH METHODOLOGY

The research process consists of the following: finding a research topic, defining the research problem, determining how to conduct the study, collecting the data, analysing and interpreting the data and finally writing the report (Welman *et al.*, 2005:12-13).

1.6.1 Literature study

The literature study examines the recent research studies, company data or industry reports that act as a basis for the proposed study (Cooper & Schindler, 2003:101). A search for recent and previous studies on similar issues was conducted through the NEXUS Database System. A literature study on the determinants of TEA was subsequently conducted. Literature was obtained

from sources such as collections, journals, textbooks, published articles and the Internet.

1.6.2 Empirical research

The study will use data gathered by the GEM project in South Africa during 2003 and 2004. The empirical survey was conducted in March 2003 and 2004. In 2003 the survey was conducted with 3 314 questionnaires. The usable data was extracted from 3 263 questionnaires, while 51 questionnaires did not contain reasonable data. In 2004 the survey was also conducted with 3 314 questionnaires of which 3 253 questionnaires were usable and 61 unusable questionnaires could not be used.

The 2004 survey also provides three years of comparable data that provides a measure of confidence that the GEM estimates are stable and reliable. The validity of the GEM measures is confirmed by the comparison between the GEM and the Labor Force Survey (Orford *et al.*, 2004:14).

Regression analysis was done to identify determinants. Using pooled data from GEM 2003/2004, the following function will be estimated using the Ordinary Least Squares (OLS) estimator:

$$\ln y_t = X_{t(n)}\gamma + \varepsilon_t \quad (1)$$

where

y = the start-up rate in a magisterial district;

$X_{t(n)}$ = a vector of determinants of start-ups, including measures to proxy the degree of financial intermediation (number of banks).

(ε) will here include unmeasured attributes affecting start-up rates such as culture, external shocks and climate.

Additional data on determinants of TEA was obtained on 354 magisterial districts from GEM and from Global Insight Southern Africa. The questionnaires were sorted using Excel spreadsheets. The sites where questionnaires were handed out were sorted in alphabetical order and then into magisterial districts.

The following information on the magisterial districts in South Africa exists: TEA, the number of questionnaires, population, population density, education, urbanisation, unemployment, informal sector, disposable income, gross value added, economic growth, gross operating surplus, exports and number of ABSA branches.

1.7 CHAPTER OUTLINE

Chapter 2 discusses the research methodology applied through out the research process, as well as the literature study and the empirical study. The questionnaire as a research method is discussed. This is followed by a discussion of the importance of reliability and validity. Finally, the regression analysis and the use of estimators are discussed.

The focus in chapter 3 is on the different views among researchers on the division of entrepreneurship theories. There include the different schools of thought, the different viewpoints, the different theories and the different aspects of entrepreneurship. The different schools of thought distinguish between the classic and neo classic economics. The different aspects of entrepreneurship are covered by different articles of researchers. The theories can be divided into economic and non-economic theories. Economic theories focus on the entrepreneurial function in economics, while the non-economic theories focus on entrepreneurs in terms of their sociology and psychology.

Chapter 4 looks at the different determinants of entrepreneurial activity. A framework of entrepreneurship is used in this process. The framework consists of the following: general determinants, entrepreneurial determinants, the entrepreneurial process, the formation of new businesses and the national outcomes.

The analysis of the determinants that affect the TEA in South Africa is discussed in chapter 5. The framework of entrepreneurship consists of the following five aspects: general determinants, entrepreneurial determinants, entrepreneurial process, new business and national outcomes. The situation in South Africa is discussed in terms of these determinants.

Chapter 6 discusses the empirical analysis. Three basic sources of data were used. Firstly, data from the 2003 and 2004 GEM Surveys in South Africa were taken, and the total entrepreneurial activity (TEA) rate calculated for each magisterial district that the survey covered. In total, 3 314 individuals were surveyed in 2003 and 2004, of which 3 263 and 3 253 questionnaires from 2003 and 2004 respectively were usable.

Secondly, for looking into the levels of education, profits, size of the regional economy, agglomeration and regional economic growth rates, data from 2003 and 2004 surveys on the 182 districts covered in the GEM Surveys was obtained from Global Insight Southern Africa's Regional Economic Explorer.

Thirdly, the number of ABSA Bank branches (South Africa's largest commercial bank) in each magisterial district was calculated. The number of branches serves as an indicator of financial concentration. This information was obtained from ABSA's internet site. ABSA has the most extensive spatial coverage in South Africa, therefore it is possible to obtain an indication of the relative availability of bank branches across South Africa's different regions.

Chapter 7 consists of findings and recommendations regarding the determinants that influence entrepreneurship. The recommendations made can be applied by policy makers as well as in future research projects.

RESEARCH METHODOLOGY

2

2.1 INTRODUCTION

The purpose of this chapter is to give an overview of the empirical research methods used in this study. It describes the research process and explains the applicable methods and techniques.

Firstly, this study uses both a literature survey and qualitative data analysis. The literature survey is a search for information in books, reference material, journal articles, newspapers, magazines, reports, theses and dissertations. The purpose of the literature study is for the researcher to get familiar with what has been done with regard to entrepreneurship. The results from the literature survey are provided in chapters 3, 4 and 5.

The results of the qualitative data analysis follow in chapter 6. The purpose of the data analysis is to support or deny the theoretical views on the determinants of entrepreneurship (Neuman, 2006:8). In order to discuss the research methods used in these cases, this chapter is structured as follows: the research process, the literature study, the data, the regression analysis, reliability and validity.

2.2 THE RESEARCH PROCESS

A research process consists of the following steps: finding a research topic, defining the research problem, determining how to conduct the study, collecting the data, analysing and interpreting the data and finally writing the report (Welman *et al.*, 2005:12-13). The planning of a research design is a crucial aspect of the research process (Zikmund, 1999:45).

A research design is the detailed blueprint and guide towards the objectives of a research study (Aaker, Kumar & Day, 2004:73). According to Cooper and Schindler (2003:146) the research design

- is an activity- and time-based plan;
- is always based on the research question;
- guides the selection of sources and types of information;
- is a framework for specifying the relationships among the study's variables; and
- outlines procedures for every research activity

2.2.1 RESEARCH PROBLEM

Defining the research problem is where the general interest in a research process is narrowed down to a specific topic. The research problem must be specific enough to be investigated (Welman *et al.*, 2005:13). The step of developing a research question is difficult and requires a careful review of the research literature (Neumann, 2006:14).

The research problem consists of the three sections. The first part looks at the aims and reasons for the study, while the second part is the problem statement and the last part consists of the research questions (Mouton, 2001:48).

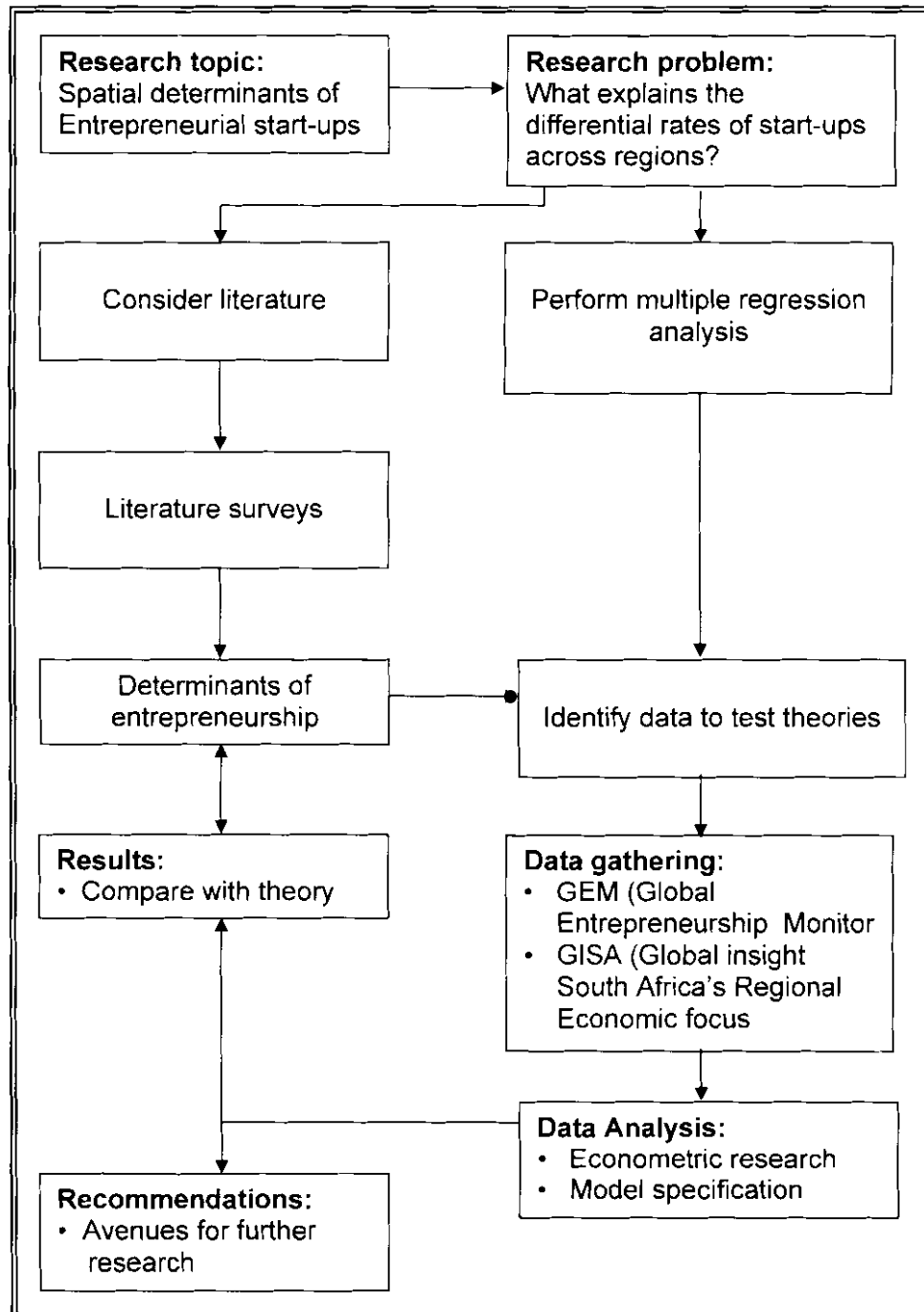
In this study the research problem is the different rates of entrepreneurial activity across regions in South Africa (see figure 2.1). The problem statement is discussed in section 2.2.1.1.

2.2.1.1 Problem statement

According to Foxcroft *et al.* (2002:13) the TEA for South Africa declined from 9.45% in 2001 to 6.45% in 2002. In 2003 it declined even further to 4.3% (Orford *et al.*, 2004:10). In 2004 the total entrepreneurial activity (TEA) index for South Africa was 5.4% (Orford *et al.*, 2004:10).

The problem with entrepreneurial activity in South Africa is continuing, with the TEA declining to 5.1% in 2005 (Van Zyl, 2006:49).

Figure 2.1 Research process followed in this study



This low level of entrepreneurial activity is a big concern. Various determinants such as physical infrastructure, commercial and professional infrastructure, cultural and social norms, education and training, financial support, government programs, market openness, transfer of research and development all influence the TEA. Table 2.1 shows the relationship between determinants and variables in the study.

It is clear that the entrepreneurial activity in South Africa must be attended to and that these determinants have a major impact on the TEA. Consequently, there is a need to investigate these determinants. The results will assist those decision makers who are concerned with the development of entrepreneurship in the country.

The reason why this study was undertaken is to investigate the determinants that influence TEA in the different provinces in South Africa.

Table 2.1 The relationship between variables and framework

Variable	Description	Determinant
Start-up rates	Total entrepreneurial activity as defined in the GEM Survey	New business creation
Population	Total population in 2003 and 2004 in a district	Cultural and social norms
Population density	Persons per square km per magisterial district in 2003 and 2004	Cultural and social norms Infrastructure
Profit	Gross operating surplus per district in 2003 and 2004	Research and development Technology
Unemployment	Rate of unemployment in 2003 and 2004 per district	Job creation
Education	Proportion of the population with a matriculation qualification or higher in 2003 and 2004	Education and training Government policies Government programmes Management skills
Economic Size	Gross Value Added per district in 2003 and 2004	Market openness
Number of banks	Number of current bank branches of ABSA Bank in the district currently	Financial markets Financial support

2.2.1.2 Research question

The problem statement is explained by research questions (Mouton, 2001:46). The researcher must focus on a specific topic and therefore a research question must be developed (Neumann, 2006:14).

The research question for this study is: What are the determinants that influence the TEA in the different provinces in South Africa? The objectives of the study (see section 1.5.2) assist with investigating these determinants.

2.3 LITERATURE STUDY

Figure 2.1 shows that a literature survey is required to specify a model and identify data. The literature study started with a review of literature dealing with the chosen topic. This enables the researcher to formulate a clear research problem (Welman *et al.*, 2005:38). The literature study has the following goals (Neumann, 2006:111):

- to demonstrate knowledge on important issues and establish credibility;
- to show the way that prior research was done and the relation of the current project to it; and
- to provide a summary of knowledge on the specific area and the opportunity to learn from others and stimulate new ideas

A literature study examines the recent research studies, company data or industry reports that act as the basis for the proposed study (Cooper & Schindler, 2003:101). A search for recent and previous studies on similar issues was conducted through the NEXUS Database System. This literature study was conducted on the determinants of Total Entrepreneurial Activity (TEA). Literature was obtained from sources such as journals, textbooks, published articles and the Internet. The study used original authors as far as possible.

The literature used in this literature study originates from South Africa, through Europe to the United Kingdom (UK) and the United States of America (USA). Different theories on entrepreneurship were found in all three volumes of *Advances in Entrepreneurship*. This is a collection containing various articles on different aspects of entrepreneurship.

These three collections focus on the different aspects of entrepreneurship. The first volume looks at entrepreneurship theory, methodological issues in entrepreneurship, the entrepreneurial opportunity recognition, information search and the finance for entrepreneurs.

The following volume focuses on entrepreneurial careers, types of entrepreneurs, the environment for business creation and development, business growth and performance. The last volume focuses on business closure, internationalisation, corporate venturing, family businesses, technology-based businesses and franchising (Westhead & Wright, 2000).

Articles by Gartner (1990), Carland, Hoy, Boulton and Carland (1984), Cooper and Dunkelberg (1986), De Vries (1977), Sandberg (1992), Bygrave and Hofer (1991), Reynolds (1991), Stewart (1991), Lumpkin and Dess (1996), Palich and Bagby (1995), Watson (1995), Covin and Slevin (1991), Baumol (1990) and McGrath, MacMillan and Scheinberg (1992) describe different aspects of entrepreneurship. Table 2.2 indicates the journals used in the study.

The essence of the study is the determinants of entrepreneurial activity in South-Africa. The Global Entrepreneurship Monitor (GEM) reports of South Africa between 2001 and 2005 were thus also used in the literature review.

2.4 DATA

In order to test the determinants, a researcher needs various sources of data. In empirical work, different types of data are used, for example experimental and non-experimental data. In this study non-experimental data is used. As such

three basic sources of data were used, data from the GEM, ABSA and Global Insight Southern Africa's Regional Economic Focus (GISA).

Table 2.2 Journals used in the study

JOURNAL	Web address
Journal of Management Studies	http://www.blackwellpublishing.com/journal.asp?ref=0022-2380
Entrepreneurship Theory and Practice	http://www.blackwellpublishing.com/journal.asp?ref=1042-2587
Academy of Management Review	http://www.aom.pace.edu/amr/
Journal of Business Venturing	http://www.elsevier.com
International Journal of Business Innovation and Research	http://www.inderscience.com/browse/index.php?journalCODE=ijbir
International Small Business Journal	http://isb.sagepub.com
Strategic Management Journal	http://www.jstor.org/journals/01432095.html
International Journal of Entrepreneurship Education	http://www.engineers-international.com/modules.php?name=News&file=article&sid=32
International Journal of Entrepreneurial Behavior and Research	http://www.emeraldinsight.com/info/journals/ijebr/ijebr.jsp
Journal of Entrepreneurship	http://www.joe.sagepub.com/archive/
Academy of Entrepreneurship Journal	http://www.smallbusinessportal.co.uk/njournals.htm
Journal of Small Business and Enterprise Development	http://www.emeraldinsight.com/info/journals/jsbed/jsbed.jsp
Advances in Entrepreneurship, Firm Emergence and Growth	http://www.amazon.co.uk/Advances-Entrepreneurship-Firm-Emergence-Growth/dp/0762300035
American Economic Review	http://www.aeaweb.org/aer/
Journal of Political economy	http://www.journals.uchicago.edu/JPE/
American Journal of sociology	http://www.journals.uchicago.edu/AJS/home.html
Regional Studies	http://www.tandf.co.uk/journals/titles
Journal of Economic Literature	http://www.aea.org/journal.html/00343404asp
Entrepreneurship and Regional Development	http://www.tandf.co.uk/journals/titles08985626.asp

2.4.1 GEM

Firstly, data from the 2003 and 2004 GEM Surveys in South Africa was taken. This was used to calculate the TEA rate for each magisterial district covered in the survey. In total, 3 314 individuals were surveyed in 2003 and 2004, of which 3 263 and 3 253 questionnaires from respectively 2003 and 2004 were usable.

2.4.2 ABSA

The number of branches of ABSA Bank (South Africa's largest commercial bank) in each magisterial district was calculated. This number indicates financial concentration. This information was obtained from the ABSA's internet site (www.absa.co.za). ABSA has the most extensive spatial coverage in South Africa, and allows researchers to obtain an indication of the relative availability of bank branches across South Africa's different regions.

2.4.3 GISA

Apart from the GEM data that was obtained from a survey in 2003 and 2004, and the data on ABSA bank branches obtained from the ABSA website, this study also utilised data on population, population density, profits (measured as gross operating surplus), gross value added and unemployment that was obtained from Global Insight Southern Africa's Regional Economic Focus (REF) for the years 2002 and 2003.

The REF combines together many different sources of sub-national economic information from Statistics South Africa, government departments, development agencies, Regional Services Councils, private research houses and Global Insight's own data. These data components are reworked to ensure that they are internally consistent and add up to the national totals. All indicators are then updated to the current period using Global Insight's suite of forecasting models including the macroeconomic model, industry model and income distribution forecasting model (Global Insight Southern Africa, 2005:4).

2.5 QUESTIONNAIRE

Questionnaires are some of the primary research instruments used in survey research. As such, a questionnaire properly constructed and used is a powerful scientific instrument (Shaughnessy & Zechmeister, 1997:123-124). A questionnaire consists of a set of questions based on the research question, the respondents and type of survey. The researcher uses the questions to find data on variables applicable to the study (Neumann, 2006:276).

The purpose of a questionnaire design is to collect relevant data, compare data, restrict bias, motivate the respondent and the objectives of analysis. The definition of bias is the difference between the given answers by respondents and the actual situation (Tustin, Lighthelm, Martins & Van Wyk, 2005:387-388).

A researcher has two alternatives when using questionnaires. The first is to use existing questionnaires that are relevant to the study, while the second is to construct a new questionnaire (Mouton, 2001:100).

2.5.1 Existing questionnaires

There are advantages and disadvantages when using existing questionnaires. This method can save time and money, while existing questionnaires have probably already been tested for validity and reliability. However, there are also risks associated using existing questionnaires, such as copyright, difficult instruments and the relevance of instruments. The choice of the questionnaire is important because of the important role validity and reliability play in research (Mouton, 2001:100-102).

2.5.2 New questionnaires

The effectiveness of a survey depends on a well-designed questionnaire. The type and quality of questions in a questionnaire affects the results of a research

project. The challenge in designing questionnaires lies in the researcher's ability to compile a relevant and accurate questionnaire (Zikmund, 1999:240).

2.5.3 Questionnaire used in survey

The questionnaire used by GEM is effective for the data needed. The following section provides a discussion on the important aspects of questionnaire design and the evaluation of the GEM questionnaire.

2.5.3.1 Type of questions

This questionnaire consists of three sections. Likert scale questions are used in the first section of the questionnaire. This scale provides an ordinal-level measure of the respondents' attitudes about given aspects. There are closed-ended questions and the respondent must choose the one option which is closest to his/her viewpoint. They used completely true, somewhat true, somewhat false and completely false as alternatives. The use of four alternatives is effective. The researcher can adapt the results with the use of more than two categories (Neumann, 2006:207).

In section two the dichotomous and multiple-choice question types are combined. The dichotomous question has two answers - in the most cases 'yes' and 'no'. The questionnaire contains the options 'yes', 'no' and 'do not know'. The last section of the questionnaire consists of open-ended questions and requires respondents' background information.

2.5.3.2 Other aspects related to the questions

The choice of words used in formulating questions or statements is understandable and clear. Loaded questions also affect outcomes due to the fact that it suggests socially desirable or emotionally charged answers (Zikmund, 1999:246-248). A practice to avoid leading questions will ensure that answers are not negatively influenced (Tustin *et al.*, 2005:389). The use of

negative phrased or double negative questions is a major error in questionnaires (Mouton, 2001:104). The consequence of this type of questions is that respondents are confused and then start guessing. The findings can result in measurement errors (Proctor, 2005:196-197).

The sequence of questions is effective, with multiple-choice questions on different topics and the open-ended questions at the end compiling background information. The different topics are grouped together and this assists the respondents with their line of thought.

Based on criteria for effective questionnaires, one can conclude that this is a quality questionnaire and with an efficient layout. There are enough guidelines and the respondent can complete it without too much difficulty. The questionnaire is not too long and effective numbering is used.

2.6 REGRESSION ANALYSIS

A dependent variable is the criterion by which the results of an experiment are judged; a variable expected to be dependent on the experimenter's manipulation (Zikmund, 2005:409). The independent variable in an experimental design is the variable that can be manipulated or altered independently of any other variable (Zikmund, 2005:410).

The first step in a regression analysis is to plot the relationship between the dependent and the independent variable. This is called the scatter plot. The scatter plot will indicate kinds of relationships that exist between the data. If a linear relationship exists, it is appropriate to derive values for the equation for fitting a straight line to two variables:

$$Y = a + b(X)$$

Y – dependent variable

X – independent variable

a – the y intercept

b – the slope coefficient

Regression analysis fit a line through the data points that minimises the sum of the squared deviations. To be able to position the line, two values must be determined: the intercept and the regression coefficient (Proctor, 2005:298).

Multiple regression analysis is used to introduce more than one variable in a study. There are the analysis that investigate the effect of two or more variables on a single, interval-scaled dependent variable (Zikmund, 1997:373).

2.6.1 Estimators

The question of what is a good estimator is answered by the various criteria for estimators. These criteria are computational cost, least squares, highest R^2 , unbiasedness, efficiency, mean square error, asymptotic properties and maximum likelihood (Kennedy, 1998:10).

2.6.1.1 Classical linear regression model (CLR model)

There are five assumptions of the CLR model. The first one is that the dependent variable can be calculated as a linear function of a set of independent variables plus a disturbance term. There are errors such as wrong regressors, nonlinearity and changing parameters that violate this assumption (Kennedy, 1998:43).

The next assumption is that the expected value of disturbance is zero. The third assumption is that the disturbance terms all have the same variance and are not correlated to each other. Heteroskedasticity, when the disturbances do not all have the same variance, and auto correlated errors, when disturbances are correlated with each other, are problems that this assumption can have (Kennedy, 1998:43).

The fourth assumption is that the observations on the independent variable can be considered fixed in repeated samples. The last assumption is that the number of observations is greater than the number of independent variables and that there are no exact linear relationships between the independent variables (Kennedy, 1998:43-44).

2.6.1.2 Ordinary least squares (OLS) estimator

The OLS estimator is a very popular estimator to use in the CLR model. According to the criteria of estimators OLS is a good estimator (Kennedy, 1998:44). It has little computational cost, it is designed to minimize the sum of square residuals, it will be optimal on the highest R^2 criterion, and the assumptions of the CLR model show that OLS estimator is unbiased. The weakness of OLS is the possibility of a substantial reduction in variance (Kennedy, 1998:45-46).

2.6.1.3 Tobit estimator

The Tobit maximum likelihood estimates can be approximated quite well by dividing the OLS estimates by the proportion of non limit observations in the sample (Kennedy, 1998:255). Most estimators are sensitive to violations of their assumptions, therefore robust estimators are used to address this problem. The topic of robust estimation has become popular and researchers have become aware of the Tobit estimation. This estimation is sensitive to the non-normality of the error term (Kennedy, 1998:298).

2.6.2 Regression analysis in the study

The theoretical model was tested by estimating an equation that expresses the rate of start-ups of new businesses as a function of a number of determinants. The latter has been identified in the model to include education, profits, the number of banks, agglomeration and unemployment. Additional factors, such as openness to trade and export success can also be added as determinants. The

formulation for estimating the determinants of entrepreneurial start-ups can be expressed as follows:

$$\ln y_i = X_{i(n)}\gamma + \varepsilon_i \quad (1)$$

y = the start-up rate in a magisterial district;

$X_{i(n)}$ = a vector of determinants of start-ups, including measures to proxy the degree of financial intermediation (number of banks);

ε = error term - will here include unmeasured attributes affecting start-up rates such as culture, external shocks and climate.

The variable “total entrepreneurial activity” to measure start-up rates in a particular region (district) of South Africa was used. Total entrepreneurial activity is measured as the proportion of adults operating a business that is less than 42 months old.

The data on total entrepreneurial activity was obtained from the 2003 and 2004 Global Entrepreneurship Monitor's (GEM) surveys (for an overview of the GEM Survey in South Africa, see <http://www.gemconsortium.org/categorylist.asp?cid=126>)

Unfortunately the 2003 and 2004 GEM surveys did not cover all of South Africa's 354 magisterial districts, but only a sub-sample of 182 districts. In some of these districts, the number of interviews was low, and in some cases a zero rate of total entrepreneurial activity was found.

This implies that for the sample available for use in this study, the dependent variable is bounded from below, i.e. censored. In such a case, using the OLS estimator on equation (1) will yield biased estimates. As a result a more appropriate estimator, such as the Tobit estimator, is recommended.

Equation (1) above can be re-written as a Tobit model as follow:

$$y_{it}^* = x_{it}\beta_i + \mu_i + \varepsilon_{it} \quad (2)$$

y_{it}^* = a latent variable measuring the potential start-up rate in location i at time t;

Also, x_{it} = a matrix of explanatory variables as discussed;

μ_i = a vector of time-invariant unobservable factors determining start-up rates;
and

ε_{it} = a vector a stochastic disturbances.

Often μ_i and ε_{it} is written as a composite error term, which is assumed to have a normal distribution. In the study the following are assumed $E(\mu_i\mu_j) = 0$; $E(\mu_i \varepsilon_{it}) = 0$ and $E(\varepsilon_{it}\varepsilon_{jt}) = 0$.

Because not all regions have positive start-up rates, we interpret y_{it}^* as a latent variable that represents an unobservable index of ability to start new businesses in a magisterial district (also see McPherson, Redfern & Tieslau, 1998:8). Total entrepreneurial activity will take on a positive value if this measure is positive.

In other words

$$y_{it} = \begin{cases} y_{it}^* & \text{if } y_{it}^* > 0 \\ 0 & \text{if } y_{it}^* \leq 0 \end{cases} \quad (3)$$

We can also write (3) as

$$y_{it} = \begin{cases} \beta'x_{it} + \mu_i + \varepsilon_{it} & \text{if } \beta'x_{it} + \mu_i + \varepsilon_{it} > 0 \\ 0 & \text{otherwise} \end{cases} \quad (4)$$

In estimation (4) one final allowance must be made for the fact that the number of observations from each magisterial district is different, due to sampling. Therefore, the rates of start-ups from each district are a point average that will be influenced by the number of observations in that district.

This can lead to problems on non-random sampling, which we need to correct. This is done by using analytical weights in the regressions, using the total population in each district as weight. Where possible, natural logarithms of the variables were taken. Equation (4) was implemented by using "Tobit" in STATA 9 (see chapter 6).

2.7 RELIABILITY AND VALIDITY

Reliability and validity are desirable aspects of measurement that help to establish credibility in findings (Neuman, 2006:188).

Reliability of research findings depends on the extent to which measures are free of random error and give consistent results (Proctor, 2005:557). The reliability of measurement shows the consistency thereof (Shaughnessy & Zechmeister, 1997:16). Reliability is concerned with the results of the research and the credibility thereof. If a research design is reliable, it can be repeated with the same results (Welman *et al.*, 2005:145).

Validity is the true reflection of a situation. A valid measure measures what it claims to measure (Shaughnessy & Zechmeister, 1997:16). The validity of research findings is the ability to represent what is really happening in a given situation (Welman *et al.*, 2005:142). Research findings are valid if the instruments measure those variables they are intended to measure. Validity

also exists when research findings reflect reality as the average person experiences it (Proctor, 2005:558).

The 2004 survey provides three years of comparable data that suggest that the TEA in South Africa is a relative stable national characteristic with the annual change being the cause of changes in the start-up rate of businesses. This provides a measure of confidence that the GEM estimates are stable and reliable (Orford *et al.*, 2004:14).

The validity of GEM measures in South Africa is confirmed when comparing GEM estimates with those of the Labour Force Survey (LFS). The LFS is published by Statistics South Africa and estimates the working aged population by economic activity, population group and gender.

2.7.1 Target population

The target population consisted of people involved in running their own businesses, named working aged people. According to Orford *et al.* (2004:22) these people are economically active. Table 2.3 indicates the different categories.

Table 2.3 Categories of working people

People working for wages, salaries or commission
People who run their own businesses
Domestic workers working for a salary or for payment in kind
People who work on their own or family's farm or plot
People who provide unpaid help to a family business
People who work on construction on their own home, business or farm
People who fish or hunt in order to sell products

Source: Orford *et al.* (2004:22).

2.7.2 Sampling method

The LFS has detailed information on approximately 68 000 adults of working age living in 30 000 dwellings. Based on this information it is possible to estimate the proportion of working-aged people who are self-employed. The GEM estimate is based on a representative sample survey of 3 274 people (Orford *et al.*, 2004:22).

The study will make use of data gathered by the GEM project in South Africa during 2003 and 2004. The empirical survey was conducted in March 2003 and 2004. In 2003 the survey was conducted with 3314 questionnaires. Table 2.4 indicate the questionnaires used in the survey.

Table 2.4 Questionnaires used in survey

Year	Total number of questionnaires	Unusable questionnaires	Usable questionnaires
2003	3 314	51	3 263
2004	3 314	61	3 253

2.8 SUMMARY

In this chapter the research process relevant to the study was discussed. The process is shown in figure 2.1 and provides an outline of the way in which the literature and empirical study was conducted. Table 2.1 shows the relationship between the determinants of entrepreneurship and the variables applicable to the study.

The literature study focused on the different aspects of entrepreneurship and collections, journals and textbooks were surveyed. The GEM reports of the previous years were also part of the literature study. The purpose of the literature study was to investigate previous studies on the different aspects of entrepreneurship.

The data used in the study is to test the different determinants that influence entrepreneurship. The data from the 2003 and 2004 GEM survey, the number of ABSA Bank branches and the information on different magisterial districts in South Africa obtained from the GISA were used to test these determinants.

This chapter also outlined that the questionnaire used in the survey is of a high standard and is effective for collecting the data needed. There is a balance between the type of questions, as both closed-ended and open-ended questions were used. It has also been indicated that the choice of words, the sequence of questions and the layout of the questionnaire is efficient.

In the regression analysis estimators, the CLR model, the OLS and Tobit estimators are used. The GEM survey did not cover all the magisterial districts, therefore it was expected that the OLS estimator would have biased estimates. As a result, the Tobit estimator is a more appropriate estimator to apply in this study. The problem on non-random sampling is also addressed by using analytical weights in the regression.

The 2004 survey provides comparable data that TEA in South Africa is relative stable. This provides a measure of confidence that the GEM estimates are reliable. The validity of the GEM measures in South Africa is confirmed with the comparison of GEM estimates with those of the LFS.

In chapter 3 the theoretical framework of entrepreneurship is investigated. Entrepreneurship consists of various aspects and the focus of the chapter is to identify certain determinants relevant to entrepreneurship as well as the importance thereof.

THEORY ON ENTREPRENEURSHIP



3.1 INTRODUCTION

What is entrepreneurship? Despite the dramatic increase in research on the topic over the last twenty years it appears that little progress has been made towards understanding the essence of this concept. The current state of the literature is characterised by a proliferation of theories, definitions and taxonomies which often conflict and overlap, resulting in confusion and disagreement among researchers and practitioners about precisely what entrepreneurship entails (Parker, 2003:45).

The purpose of this chapter is to give an overview of theory on entrepreneurship. Entrepreneurship is an interesting field of study with promise and great relevance (Venkataraman, 1997:135). The different roles of the entrepreneur are continuously debated and therefore different schools of thought have emerged. There are two approaches in this regard namely, the classical economists and the neo-classical economists (Kirby, 2003:12).

Research on entrepreneurship focuses on the opportunity, the person and the needed action. The first question relates to the opportunity and addresses the reasons, timing and method that are part of these opportunities. The next focuses on the type of persons and required abilities to utilise these opportunities, while the last question looks at actions and procedures that will ensure effective and efficient exploitation of these opportunities (Shane & Venkataraman, 2000:217-218).

The theory of entrepreneurship consists of economical, psychological and other dimensions (Amit, Glostin & Muller, 1993:824). Theory in entrepreneurship is divided into the economic theories of the entrepreneur (Kalantaridis, 2004:17-

44) and the non-economics (sociology and psychology) of the entrepreneur (Kalantaridis, 2004:45-68). It is important to note that the challenge lies in the aspects that can explain the different performances of entrepreneurs and their businesses.

The chapter is structured as follows: the schools of thought on entrepreneurship, the research on entrepreneurship, theories on entrepreneurship and aspects of entrepreneurship.

3.2 THE SCHOOLS OF THOUGHT ON ENTREPRENEURSHIP

Over time and through various research studies numerous theories on entrepreneurs, their actions and their businesses have been developed. The role of the entrepreneur is subsequently categorised to different schools of thought, namely classical economists and neo-classical economists (Kirby, 2003:12).

3.2.1 Classical economics

This approach concentrates on the economic contribution of entrepreneurship. This theory can be divided into traditions according to countries of origin (Kirby, 2003:12-14). They are subsequently discussed.

3.2.1.1 The French School

The French School of thought started during the 18th century when Cantillon, an economist, recognised the association between entrepreneurship and economics (Cantillon, 1732). In this model, the entrepreneur is seen as the person who undertakes activities in order to try and get a balance between supply and demand markets.

In order to get this balance the entrepreneur utilises opportunities, and makes profit in circumstances of uncertainty and risk (Hisrich, Peters & Shepherd,

2005:6). Say (1815) believed that these activities ensured economic development (Nieman, Hough & Nieuwenhuizen, 2003:5).

3.2.1.2 The Austrian School

Menger (1840-1921) postulated that entrepreneurship is to collect information that will assist decisions made in order to enhance economic change (Kirby, 2003:12). The entrepreneur has the ability to see opportunities through information scans and bares their opportunities on many gaps that exist in the market.

According to Wong, Ho and Autio (2004:5) the Austrian school views the entrepreneur as a person who influences markets by perceiving and exploiting opportunities with the goal to generate profit. The entrepreneur is thus seen as the creative person who links suppliers and customers.

3.2.1.3 The German School

Schumpeter (1928) associated entrepreneurship with innovation and the importance of entrepreneurs on the road to economic development (Nieman *et al.*, 2003:5). The German School focuses on the reward that the entrepreneur receives for his actions associated with specific risks.

Von Thunen (1785-1850) views the entrepreneur as a risk taker and innovator. The entrepreneur is seen as a creator and a person who believes in change. The reward for an entrepreneur lies in for taking risk and solving problems through innovation (Kirby, 2005:13 -14).

3.2.1.4 The American School

This School views the entrepreneur as a person who creates wealth (Kirby, 2004:12). According to Knight (1921:241-242), the environment and its resources has a big influence on entrepreneurship. The entrepreneur must

therefore carefully assess resources and realise the influence of risk and uncertainty (Knight, 1921:269-270).

3.2.1.5 The British School

Smith (1723-1790) and Ricardo (1772-1823) view the entrepreneur as a person who is driven by the reward of making profit. The demand for their products influences their businesses. Bentham (1748-1832) stated that the following factors influence production: the will to create wealth, the knowledge to be able to create wealth and the ability to create wealth (Kirby, 2003:12-13).

3.2.2 Neo-classical economics

This school of thought believes that entrepreneurship is not really possible when the economic system is in equilibrium. The entrepreneur is seen as a manager who coordinates land, labour and capital. According to this tradition, entrepreneurs organise the production process (Kirby, 2003:14).

Marshall (1842-1924) viewed that business development requires the following: knowledge of the trade, technical knowledge, the ability to forecast, identifying opportunities, judgement, leadership and goals to improve performance (Kirby, 2003:14).

3.3 RESEARCH ON ENTREPRENEURSHIP

Research on entrepreneurship can be divided into five periods of development (Niemann *et al.*, 2003:8). There are economic, behaviouristic, management science, social and entrepreneurial perspectives.

3.3.1 Economic viewpoint

In the period between 1700 and 1759 Cantillon, Say and Schumpeter focused on entrepreneurship from an economic point of view. They were interested in

the economy as well as the managerial aspects and development of businesses (Niemann *et al.*, 2003:8).

3.3.1.1 Cantillon

Cantillon was interested in the economy and in the managerial aspects of businesses, business development and business management. He was the first person to create a clear conception of the entrepreneurial function (Cantillon, 1932 [1755] 56).

3.3.1.2 Say

Say stated that the creation of new businesses was the reason for economic development. He viewed entrepreneurs as people who seek opportunities with the objective to make profit, while simultaneously understanding the risks involved (Say, 1830 [1803] 285).

3.3.1.3 Schumpeter

The association between innovation and entrepreneurship was launched by Schumpeter. He underlined the importance of exploring and utilizing new opportunities. He also focused on the important role of entrepreneurship in the development of economics (Schumpeter, 1928:380).

3.3.2 Management science viewpoint

From 1980, Drucker and Mintzberg focused on a management science approach. In this period, the aspects of management such as finance, marketing and human resources started to receive attention in the research on entrepreneurship.

3.3.2.1 Drucker

Entrepreneurship is for people who apply similar principles. This ranges from people in a big company to people who start their own businesses. The rules that apply to an entrepreneur in a public, government or private business are the same. Entrepreneurial management is an integral part of each action (Drucker, 1985:143).

Innovation is the process where entrepreneurs recognise opportunities and change these opportunities into marketable products and services. The most significant part of innovation is the monitoring of the seven sources for opportunity (Drucker, 1985:30).

The first four sources are rooted in the business and are the unexpected occurrence, the incongruity, innovation based on process need and changes in the industry and market structure. The last three sources are situated outside the business and are demographics of customers, changes in their perception and new knowledge they obtain (Drucker, 1985:35).

3.3.2.2 Mintzberg

Any business begins with the entrepreneurial stage and develops from there (Mintzberg, 1979:243). It is very important that management creates an effective climate for entrepreneurship. The ability to achieve this will ensure that management does not frighten people with this approach (Mintzberg, 1973:192).

3.3.3 Social viewpoint

Since 1985 entrepreneurship has been viewed from a social perspective. This approach focuses on the support entrepreneurs need and includes economists, geographers and sociologists (Niemann *et al.*, 2003:8).

3.3.3.1 Gartner

Creating businesses consists of four important determinants namely: the individual, the environment, the process and the business. His framework for the creation of a new business focuses on each of the mentioned determinants and describes the aspects of each of them (Gartner, 1985:702).

3.3.3.2 Bygrave and Hofer

The entrepreneurial process consists of all the activities from recognising the opportunity to creating a new business (Bygrave & Hofer, 1991:14). Entrepreneurs change the environment from one without a business to one with a business. The success of the process depends on the following factors: the profile of the competitors, the availability of resources, the profile of the business and customers needs (Bygrave & Hofer, 1991:17).

3.3.3.3 Reynolds

Sociology (including economics and geography) has a crucial influence on entrepreneurship. This helps to understand the unique behaviour of entrepreneurs. The relationships between different sectors play a significant role in the entrepreneurial process (Reynolds, 1991:111).

3.3.4 Entrepreneurial viewpoint

The last trend is from an entrepreneurship perspective. In the 1990's the research on entrepreneurial action increased dramatically. It focused on entrepreneurial activities and related competencies. Timmons, Vesper and Brockhaus were some of the researchers who investigated entrepreneurial activities since the early 1980's (Niemann *et al.*, 2003:8).

3.3.4.1 Timmons

Successful entrepreneurs have unique attitudes and behaviours. They see the entrepreneurial process as a learning experience and have the belief that they will succeed. Entrepreneurs are determined and committed to their desire to start a successful business (Timmons & Spinelli, 2004:63).

3.3.4.2 Vesper

The entrepreneur needs to collect information and use this information effectively. The entrepreneur's success depends heavily on the quality of information and the reaction to it (Vesper, 1984:28-55).

3.3.4.3 Brockhaus

Entrepreneurs who start businesses often do so in areas where they have worked earlier. They begin businesses in industries that they have knowledge and experience on (Brockhaus, 1982:50-55).

3.4 THEORIES ON ENTREPRENEURSHIP

Entrepreneurship can be divided into economic and non-economic theories.

3.4.1 Economic theories related to the entrepreneur

The first research period from 1700 till 1959 focused on entrepreneurship from an economic view (Kalantaridis, 2004:17-44). Table 3.1 provides a list of researchers who held this viewpoint.

Table 3.1 Researchers with an economic view

Cantillon (1755)	Baumol (1968)
Say (1803)	Schackle (1970)
Hawley (1907)	Kirzner (1981)
Knight (1921)	Casson (1982)
Schumpeter (1928)	Choi (1993)
Hayek (1937) & (1945)	Harper (1996)
Mises (1949)	

Source: Kalantaridis (2004:18).

The viewpoints of each author are subsequently discussed.

3.4.1.1 Cantillon

Cantillon was one of the first people who investigated the entrepreneurial function in economics. Entrepreneurial activity exists in an uncertain environment. This is due to the fact that future market demand is unknown and unpredictable. He also investigated possible factors that influence the supply of entrepreneurial potential in an economy (Cantillon, 1932 [1755] 56).

Cantillon's contribution is that he views the entrepreneur as a third category of individuals. He distinguishes between landowners and labourers on the one side and the entrepreneur on the other. He recognised the important but unobservable role of the entrepreneur in the process of wealth creation (Kalantaridis, 2004:19).

3.4.1.2 Say

Say viewed the entrepreneur as someone with the ability to co-ordinate and combine the factors needed for production (Kalantaridis, 2004:19). Say

distinguished between the function of the entrepreneur and the capitalist (Nieman *et al.*, 2003:5).

Say's contribution is the view that the entrepreneur collects a variety of information from different sources and makes decisions on production. He distinguishes between the philosopher or scientist who studies the theory, the workman who performs the labour and the entrepreneur who creates useful products and delivers excellent services (Say, 1830 [1803] 285).

3.4.1.3 Hawley

Hawley (1907) argued that the entrepreneur is an important link that is often missing in economics (Kalantaridis, 2004:21). The entrepreneur is responsible for production, but not a factor thereof such as land, labour and capital are (Hawley, 1907:108). The entrepreneur operates in uncertain circumstances, motivates and makes decisions on what to produce, how much to produce and how to produce it (Kalantaridis, 2004:21).

3.4.1.4 Knight

Knight (1921) put the entrepreneur in the centre of the free enterprise system. He focused on the distinction between risk and uncertainty. Risk can be insured in a way and the cost of insurance added to the cost of a product. Uncertainty can not be determined not even with previous statistics or information (Kalantaridis, 2004:25).

Another distinction between risk and uncertainty is that the outcome of risk can in some circumstances be known. However, with uncertainty it is impossible to predetermine the outcome. Risk can also be minimised by experience, calculations and statistics (Knight, 1964:233).

Uncertainty forces entrepreneurs to improve their decision-making skills. They often do this by using their knowledge and judgement, vision, managerial skills

and confidence to act according to their judgement. Entrepreneurs take control of risks and absorb the uncertainty through their commitment to be successful and the future reward they will receive (Knight, 1921:269-270).

3.1.4.5 Schumpeter

Schumpeter defined the entrepreneur as an individual who innovates and not take risks (Kalantaridis, 2004:22). The entrepreneur recognises new opportunities, uses resources in different ways and develops new combinations of products and services (Schumpeter, 1928:380). According to Schumpeter five types of innovation are found: a new product, a new method to produce products, a new market, a new resource and the creation of a new industry (Kalantaridis, 2004:22).

Schumpeter created the Theory of Economic Development that is viewed as a theory of economic development. In this theory the entrepreneur is seen as a person who is a mechanism of change. Schumpeter recognised the relationship between the actions of the entrepreneur and continuously changing environment (Brown & Ulijn, 2004:104).

Schumpeter (1939:103) made a clear distinction between invention and entrepreneurship. The entrepreneur is seen as a person who gets things done and the inventor as one who produces something new. He also distinguishes between management and entrepreneurship. This distinction is difficult because of the problem that exists with the clear definition of entrepreneurship.

3.4.1.6 Mises

The entrepreneur is seen as the person with the ability to create changes in the market. The influence of time forces people to react towards the future, plan and act to create a better future (Mises, 1966:100). The positive handling of uncertainties can ensure success. Entrepreneurs can investigate the actions of other and former entrepreneurs because there can present potential

opportunities. The ability to predict the actions of other entrepreneurs is an effective way to react to uncertainty (Kalantaridis, 2004:30-31).

The effective entrepreneur is realistic enough to expect difficulties, but he or she does not become disappointed, discouraged or depressed by failure. All these difficulties motivate them to look for other and new opportunities (Kuratko & Hodgetts, 2004:119). Entrepreneurs are always willing to look at change in a positive way by actively using the possibilities presented by change rather than resisting them (Wickham, 2004:152).

3.4.1.7 Hayek

Hayek (1945:521) postulates that information and knowledge are important in entrepreneurs' decision-making processes. In many cases information is not readily available. Moreover, individuals might lack information and experience. Therefore the need for support is crucial.

The world is a place characterised by constant discoveries. Most of the time their discoveries relates to individuals and their needs. The experience of the individual together with the limited availability of information implies that the entrepreneur plays a critical role in society and the economy (Hayek, 1945:524).

3.4.1.8 Shackle

Shackle (1970:21) views the businessperson as someone dependant on time, who have little control over either the future or the past. He identified two approaches that address the problem of making decisions based on future possibilities. The first approach relates to the worst scenario of an action, while the second relates to the best scenario.

Different scenarios will have different effects on the entrepreneur. This will assist entrepreneurs to assess a situation. Investigating the entire scenario and

considering all possible aspects will be very helpful when entrepreneurs need to take decisions (Shackle, 1970:22).

3.4.1.9 Baumol

According to Baumol (1990:894) entrepreneurs play different roles. These can differ from roles which can potentially damage the economy to roles which actions potentially improve the economy. There are two types of entrepreneurs, namely those who create and operate a business and those who innovate (Baumol, 1995:17-33).

The nature of entrepreneurship can be productive, unproductive and destructive. The way in which the entrepreneur acts is influenced by the benefit structure in the economy. The unique circumstances and rules of a certain society can determine the actions of entrepreneurs (Baumol, 1990:894).

3.4.1.10 Casson

Casson (1982) defines entrepreneurship by referring to two approaches, namely the functional and the indicative approach. The functional approach describes the actions of the entrepreneur, while the indicative approach provides a description of how the entrepreneur can be recognised (Kalantaridis, 2004:36). Integrating of these two approaches can help to simplify the definition of entrepreneurship.

The entrepreneur relies heavily on judgement when making decisions in difficult situations or in the process of co-ordinating resources (Casson, 1995:80). Entrepreneurs have the belief that they are right based on the unique information they possess. The success of entrepreneurial success therefore depends on optimism and self-confidence (Casson, 1998:17).

3.4.1.11 Kirzner

Market opportunities often result from mistakes made by previous entrepreneurs. Their failure of earlier creates the opportunity for new entrepreneurs to discover and satisfy possible needs among customers (Kirzner, 1997:70). These mistakes, together with changes in customers' taste, and the influence of technological developments ensure that markets constantly present new opportunities.

Entrepreneurs are continuously looking to change and transform resources in order to create something while simultaneously being aware of the risk factor. Their ability to learn from mistakes, together with their willingness and readiness to learn is crucial for success (Kirzner, 1997:72).

3.4.1.12 Choi

Choi (1993) identifies sources of uncertainty as a very important factor in the decision-making process. The first problem is that entrepreneurs often have to make difficult calculations with limited capabilities. If the entrepreneur then also does insufficient exploitation of all possible outcomes uncertainty can increase.

The second problem is that the future is largely unknown and influenced by uncontrollable factors. The next source of uncertainty is the interdependence of individual actions. The entrepreneur's mental processes are the fourth source of uncertainty (Kalantaridis, 2004:38).

According to Choi (1993:7) the process of decision-making consists of a perception and logical choice. Every person's paradigm plays a significant role in decision-making under uncertain circumstances. Entrepreneurs are people who think different, take risks and gain personal reward from opportunities where others can not (Choi, 1993:153).

3.4.1.13 Harper

Harper (1996:3) focuses on the process of learning and growth of knowledge. Entrepreneurship is a process of recognising problems that are most of the time not clearly identified and trying to solve them in difficult circumstances. The creativity and learning experiences of entrepreneurs will help them to overcome the mentioned obstacles.

3.4.2 Non-economic theories related to the entrepreneur

The research on entrepreneurship changed with the research of Weber (1922) and his focus on individuals and their attributes in the entrepreneurial function. The sociology and psychology of the entrepreneur started to attract attention (Kalantaridis, 2004:45-68).

Some of the researchers focused on the psychology of the entrepreneur, while other viewed situation approaches. Gartner (1985) developed his conceptual framework and Chell (2000) looked at social constructionism. Table 3.2 shows the researchers with this viewpoint.

Table 3.2 Researchers with a non-economic view on entrepreneurship.

Weber (1922)	De Vries (1977)
Cole (1949)	Hannah and Freeman (1977)
Cochran (1949)	Greenfield and Strickon (1981)
Jenks (1949)	Gilad (1982)
Hoselitz (1961)	Gartner (1985)
McClelland (1961)	Thornton (1999)
Hagen (1962)	Chell (2000)
Rotter (1966)	Aldrich and Martinez (2001)
Glade (1967)	Stam (2002)
Young (1971)	

Source: Kalantaridis (2004:46).

Each author's viewpoints are subsequently discussed.

3.4.2.1 Weber

Weber (1922), a sociologist, was one of the first behaviourists who were interested in entrepreneurship with his view that entrepreneurs are innovative (Nieman *et al.*, 2003:6).

He also believed that an individual's religious belief influences his/her attitude towards entrepreneurship (Wickham, 2004:156). The individual's or entrepreneur's work is seen as a calling and therefore they experience a big responsibility to conduct their work in an ethically acceptable manner (Kalantaridis, 2004:47).

3.4.2.2 Cole

Cole (1949:88) emphasises that the grade of acceptance in a society is crucial to entrepreneurial success. The business unit is a key element for the performance of the entrepreneurial function. The important challenge for entrepreneurs is how they contribute and satisfy the needs of society as a whole.

3.4.2.3 Jenks

Jenks (1949:133) defines roles as action patterns of entrepreneurs in social circumstances. He identifies four ways through which entrepreneurs learn roles. The first one is individuals' perception of the way that others see them in the process of social interaction.

The second one is the experience of learning to react in different circumstances. A distinction between what is appropriate and what is not. Thirdly the influence of role models on the learning of a personal role and lastly the restructuring of social roles into new combinations (Jenks, 1949:133).

3.4.2.4 Hannah and Freeman

Hannah and Freeman (1977:929) give a perspective of the population ecology of businesses. The environment has a very important effect on the structure of businesses and determines future success (Hannan & Freeman, 1977:959).

It is crucial for new businesses to do effective research in their industries before entering the market. Another aspect is the time perspective of a potential business. The type of product plays an important role in this decision (Hannan & Freeman, 1977:959-960).

Research on smaller business was neglected, despite the important role they play in the business environment. Big businesses can link together and this action can have a significant influence on competition (Hannan & Freeman, 1977:960-961).

3.4.2.5 Thornton

Thornton (1999:19-46) recognises four contextual levels: individual, business, market and environmental. The combination of these four levels will be helpful in understanding the influence of individual factors and social structure on the behaviour of individuals (Kalantaridis, 2004:51).

3.4.2.6 Aldrich

According to Aldrich (1990:8-9), three processes influence the rate of new business creation. There are intra-population processes, inter-population processes and business processes.

Intra-population processes are where the resources in any environment determine the number of businesses competing for resources in a specific population. Inter-population processes, on the other hand, influence the distribution and the availability of resources in an environment.

The implications of this theory for entrepreneurship and the rates of new business creation are:

- The environment with its carrying capacity (the number of businesses competing for the same resources) needs more attention;
- The fact that other businesses are part of the environment and affect the establishment and operation of new businesses; and
- The important role relationships and linkages among businesses play in a community (Aldrich, 1990:20).

The weakness of this theory is that it can not predict the number of new business startups because of its use of historical data.

3.4.2.7 Stam

Stam (2002:8) sees the entrepreneur as someone who acts in specific social and physical circumstances, while living in concrete times and places. The time-geography approach stated that time and space can serve as frameworks for analysis. Elements such as when, what and in what order things happen, however, determine the success of the entrepreneur.

3.4.2.8 Glade

Glade (1967:251) starts with the situational approach and shifts the attention from the entrepreneur to the behaviour of entrepreneurs. The change enables researchers to investigate individuals in terms of their choices and decisions in society. The circumstances include economic, social, technological and political change over time. These changes create opportunities for entrepreneurs to explore in future.

3.4.2.9 Reynolds

Sociology, including economics and geography, has a big influence on entrepreneurship. This helps to understand the unique behaviour of entrepreneurs. The relationships between different sectors play a significant role in the entrepreneurial process (Reynolds, 1991:111).

3.4.2.10 Greenfield and Strickon

Greenfield and Strickon (1981:487-488) see the world as being full of individuals who are driven by the desire to achieve specific goals. Learning is the process through which new behaviours are added and most of the old ones replaced. Entrepreneurs are part of communities and perform differently due to a variety of behavioural influences (Kalantadiris, 2004:62-63).

3.4.2.11 Gartner

Business creation rests upon four important determinants. There are the individual, the environment, the process and the business. The individual is the entrepreneur who starts the business, business refers to the kind of business, the environment is the place where the business is situated and forces in the environment which influence new businesses. Process refers to the actions needed by the entrepreneur to be successful in his/her business (Gartner, 1985:698). This framework links the entrepreneur with all the support he/she needs in the entrepreneurial process.

➤ The individual

In his conceptual framework for entrepreneurial activity Gartner (1985:702) viewed the following factors important in influencing the individual as a part of entrepreneurship:

- need for achievement;
- locus of control;
- taking risks;
- job satisfaction;
- work experience;
- parents as possible entrepreneurs;
- age; and
- education.

➤ **The process**

The process as part of Gartner's framework consists of the location of a business opportunity, the utilisation of resources, the marketing of products and services, the production of products, the building of a business and the business' responsibility to the government and society (Gartner, 1985:702).

➤ **The environment**

Gartner (1985:702) divided the environment into different components. The following are most important: the availability of finance, the existence of experienced entrepreneurs, the influence of suppliers, customers, new markets and the government. Also, the availability of learning and training facilities, transportation, populations with its conditions, urbanisation and market situations and part of the environment in Gartner's framework.

➤ **The business**

Gartner's framework lists the following as important aspects related the business (Gartner, 1985:702): the type of new product or service, possible competition, focus, leadership, the influence of reliable supply mechanisms, the influence of customers, the situation of resources and the entry possibilities.

3.4.2.12 Chell

Entrepreneurs are viewed as the ones who distinguish themselves from other people in terms of wealth creation, capital accumulation and their ability to recognise opportunities through sound judgement. Entrepreneurs have a vision for the future, driving them to realise it (Chell, 2000:73).

3.4.2.13 McClelland

McClelland (1961:205) stated that behaviour is influenced by achievement and motivation. The entrepreneur is especially driven and motivated by achievement. McClelland viewed people with high rates of achievement as people who take calculated risks (McClelland, 1961:207).

Their drive for achievement ensures that they are well prepared for any condition and therefore minimise risks (McClelland, 1961:207). In recent studies McClelland changed his focus from achievement to power, as he found that power motivation is a crucial requirement for success and effectiveness (De Vries, 1977:38-39).

3.4.2.14 Hagen

Hagen (1962:242) sees the entrepreneur as a problem solver who is driven by his/her responsibility to achieve something. According to Hagan creativity comes through generations and can be influenced by the way in which children grow up. The latter assists people in both creativity and entrepreneurial activity.

3.4.2.15 Rotter

Rotter (1966:1) focused on the external and internal locus of control. Some of his studies investigate the influence of stress and the consequences thereof on internal and external control. The results on the role of the external and internal

locus of control and the specific locus of control needed by entrepreneurs were, however, not conclusive (Hisrich *et al.*, 2005:62-63).

The behaviour of the entrepreneur is influenced by the way they believe in their ability and actions to control outcomes and things that happen. It can also be outcomes dependant, focusing on luck and other external factors (Rotter, 1966:1).

3.4.2.16 Gilad

Gilad (1982) emphasises the fact that an individual's locus of control influences his/her level of entrepreneurial alertness. The internal locus of control increases alertness and is essential in the process of recognising of opportunities. The entrepreneur with an external locus of control is probably less proactive because of his/her view that external forces influence events (Kalantadiris, 2004:58).

3.4.2.17 De Vries

De Vries (1977:45) views the entrepreneur as a very complex individual who can be influenced in earlier stages of life. Negative influences can result in individuals with a lack of self-esteem and self-confidence. This individual has various jobs, struggles to fit into society and copes in structured working conditions (De Vries, 1977:48).

The result of all these research studies is that entrepreneurs are people who start their own businesses and create structures around themselves. Entrepreneurs are viewed as individuals who can either be very creative or very destructive, depending on the specific stage they find themselves.

The entrepreneurial personality is influenced by forces such as perception or rejection, high perception of control, anger, hostility, identity confusion and a mode of destruction. The entrepreneurial work environment consists of

leadership style, decision-making, time horizon, power, business environment, a super structure and an infrastructure (De Vries, 1977:52-54).

3.5 ASPECTS OF ENTREPRENEURSHIP

Various definitions and theories on entrepreneurship can be found. A common universal definition of entrepreneurship does therefore not exist. Entrepreneurship is the perception and creation of new economic opportunities combined with the location, form and use of resources (Wennekers, Uhlaner & Thurik, 2002:28-29). The following questions can be asked about entrepreneurship (Davidson, 2004:3):

- Is it only part of the economic sector?
- Is it part of or restricted to small and medium-sized businesses?
- Is it a type of behaviour?
- Are entrepreneurial actions always purposeful?
- Is innovation and risk-taking required?
- Does entrepreneurship involve discovering or exploiting opportunities?

The field of research on entrepreneurship is broad, and for this reason the various aspects of entrepreneurship are very important. The following people wrote articles on entrepreneurship theory that covers these aspects (Westhead & Wright, 2000:1-272). Table 3.3 provides a summary of these aspects, with each being discussed in more detail below.

3.5.1 Gartner

Definitions of entrepreneurship vary between the activities associated with becoming an owner of a business to creating a new one. Entrepreneurship is also associated with innovation, purchasing an existing business, creating a

business with profit objectives and creating government organisations (Gartner, 1990:18).

The following eight themes are important in entrepreneurship (Gartner, 1990:21-26): the entrepreneur, innovation, business creation, creating value, issue of profit or non-profit, growth, uniqueness and owner-manager. The definition of entrepreneurship is a difficult matter because the eight themes are all part of it.

Table 3.3 Summary of entrepreneurial aspects

Author	Entrepreneurial aspect
Gartner (see section 3.5.1)	Eight themes on entrepreneurship
Carland, Hoy, Boulton and Carland (see section 3.5.2)	The entrepreneur and small business owner
Cooper and Dunkelberg (see section 3.5.3)	The entrepreneur's way to ownership
De Vries (see section 3.5.4)	Entrepreneurial behaviour
Sandberg (see section 3.5.5)	Strategic management and entrepreneurship
Bygrave and Hofer (see section 3.5.6)	Definitions on entrepreneurship
Reynolds (see section 3.5.7)	Sociology and entrepreneurship
Stewart (see section 3.5.8)	Anthropology of entrepreneurship
Lumpkin and Dess (see section 3.5.9)	Entrepreneurial orientation and performance
Palich and Bagby (see section 3.5.10)	Entrepreneurial risk taking
Watson (see section 3.5.11)	Professional management and entrepreneurship
Covin and Slevin (see section 3.5.12)	Business behaviour model
Baumol (see section 3.5.13)	The influence of society on entrepreneurship
McGrath, MacMillan and Scheinberg (see section 3.5.14)	Entrepreneurial culture

Source: Westwood & Wright, (2000:1-272).

3.5.2 Carland, Hoy, Boulton and Carland

The above researchers looked at the difference between an entrepreneur and a small business owner (Carland, Hoy, Boulton & Carland, 1984:354). There are similarities between an entrepreneur and a small business owner, but the critical difference is innovation. The entrepreneur is also different because of his/her need for achievement, internal locus of control and need for independence (Carland *et al.*, 1984:357).

3.5.2.1 Entrepreneur

The entrepreneur is a person who establishes and manages a business with the goal to make profit and have the potential to expand his/her business activities. Innovative behaviour and strategic management practices are also part of entrepreneurs. The need for achievement is the driving force to make profit and continuously growth businesses (Carland *et al.*, 1984:358).

3.5.2.2 Small business owner

The purpose of a small business owner is to gain personal goals in establishing and managing his business. This type of business is usually not dominant and uses established and known practices. The income of the business is a primary source and the desires of the family have a big influence on it (Carland *et al.*, 1984:358).

3.5.3 Cooper and Dunkelberg

The background characteristics, motivations and attitudes of entrepreneurs affect entrepreneurship (Cooper & Dunkelberg, 1986:53). People who grow up in a family business home have an enormous advantage and often distinguish themselves as entrepreneurs. The same advantage exists with people who previously worked in small incubator businesses (Cooper & Dunkelberg, 1986:66).

The study of Cooper and Dunkelberg (1986:67) focuses on the way that ownership is achieved and they feel that this is another step toward building an overall theory on entrepreneurial activity. This underlined the fact that the processes leading to entrepreneurial activity are complex and could affect entrepreneurial success.

3.5.4 De Vries

According to De Vries, an entrepreneur's personality refers to entrepreneurial behaviour patterns, social, economic and other forces influencing entrepreneurship and a conceptualization of the entrepreneurial personality. The impact of this entrepreneurial behaviour on the environment and management also forms part of it (De Vries, 1977:34).

The important result from De Vries' (1977:62) study is the fact that although the entrepreneur is an important force in the economy he/she pays a high price in an emotional sense in the process of economical growth. It is clear that the entrepreneurial personality plays a significant role in entrepreneurship.

3.5.5 Sandberg

The contribution made by strategic management in the theory of entrepreneurship is difficult because of two obstacles. These are problems with the definition of entrepreneurship and the field of strategic management. Three important aspects guide the relation between entrepreneurship and strategic management (Sandberg, 1992:73).

The first focuses on strategic management, the second on definitions of entrepreneurship and the third on the contributions of strategic management in terms of entrepreneurship (Sandberg, 1992:73).

There are positive prospects for the cross-fertilisation of strategic management and entrepreneurship. The continuous development and refinement of their

theories can create the opportunity of sharing knowledge between their two disciplines (Sandberg, 1992:78).

3.5.6 Bygrave and Hofer

'Theorising about Entrepreneurship' emphasises the problem of finding a definite definition of entrepreneurship. The entrepreneurial event, the entrepreneur as individual and the entrepreneurial process are part of this view on entrepreneurship. The debate on the definition will continue, but this article gives important views on the different aspects of entrepreneurship (Bygrave & Hofer, 1991:13-14).

Entrepreneurship includes the entrepreneur who changes the environment from one without a new business to one with a new business. This action is part of a system that depends on different variables such as competition, resources, positioning in the market, size and possible customers (Bygrave & Hofer, 1991:85). Due to the fact that entrepreneurship consists of various aspects, it is important that the challenge to develop a clear definition continues.

3.5.7 Reynolds

The focus is on the contribution of sociology makes to the field of entrepreneurship. Entrepreneurial activities are complex and no discipline can on its own provide a full understanding of entrepreneurship. Sociology, together with anthropology, economics, geography, history and politics provides an understanding of how societal context affects the entrepreneurial sector.

Together with labour economics, social psychology and personal theory, sociology contributes towards understanding the decisions people take to pursue entrepreneurial behaviour. The importance of entrepreneurship in terms of societal economic growth and a major career choice for talented persons is growing. Therefore it is crucial to have a better and more complete understanding of entrepreneurship (Reynolds, 1991:67).

3.5.8 Stewart

Stewart (1991:71) investigated the affect of anthropology on entrepreneurship. The anthropological interest in entrepreneurship started in the 1950s with the focus on understanding the two related processes, namely social change and economic development.

In the majority publications related to anthropology minimum discussions on entrepreneurship can be found. Despite a few collections in anthropology on entrepreneurship there is a view that entrepreneurship is part of other fields of study. This view is further strengthened by the fact that entrepreneurship is still developing theories, definitions and principles (Stewart, 1991:126-127).

3.5.9 Lumpkin and Dess

The purpose of their article is to investigate entrepreneurial orientation and the relationship between entrepreneurial orientation and the performance of the business (Lumpkin & Dess, 1996:135).

The conceptual framework of entrepreneurial orientation consists of four components, namely: environmental factors, the entrepreneurial orientation, performance and business factors (Lumpkin & Dess, 1996:152). The environmental factors that can influence performance are the dynamism, structural factors, complexity of and characteristics of the industry.

Entrepreneurial orientation consists of autonomy, innovativeness, risk taking, pro-activeness and competitive aggressiveness. Size, structure, strategy, business resources, culture and the characteristics of top management are business factors contained in the framework. The indicators of performance are sales growth, market share, profitability, overall performance and the satisfaction of stakeholders.

Research on processes associated with entrepreneurial activity and the recognition of the nature of entrepreneurial behaviour is crucial for understanding the entrepreneurial orientation and its relationship with the business' performance (Lumpkin & Dess, 1996:166).

3.5.10 Palich and Bagby

The various debates on entrepreneurship have some similarity with entrepreneurial risk-taking. The different views on entrepreneurship have a common aspect, namely risk-taking. Although researchers have different views on the part that risk plays, they recognise the role thereof in entrepreneurship (Palich & Bagby, 1995:174-176).

3.5.11 Watson

There is a strong viewpoint that expansion and growth of businesses force the shift from entrepreneurship to professional management. The need for managers to assure the effective running of a growing business is important. However, entrepreneurial skills are still crucial (Watson, 1995:34).

The challenges in a growing business are enormous and need the attention of all concerned. Management and entrepreneurship form an integral part of an effective business. It is unnecessary to make a distinction between entrepreneurship and professional management, as this will be a waste of crucial time (Watson, 1995:44).

3.5.12 Covin and Slevin

The business-behaviour model of entrepreneurship has advantages over other theories that focus only on the individual entrepreneur. The effectiveness of entrepreneurs can be measured in terms of the performance of their businesses. Business performance also depends on business and individual behaviour.

In this model the focus is on behaviour as an important aspect of entrepreneurship. The actions of entrepreneurs make a big difference in the performance of a business. The level of entrepreneurship in a business and the managerial influence on the entrepreneurial process can be measured (Covin & Slevin, 1991:7).

The behavioural aspect has important implications to management. The manager can manage this behaviour and therefore encourage or discourage entrepreneurship. The elements of entrepreneurship such as risk taking, pro activeness and innovation should be nurtured (Covin & Slevin, 1991:20).

3.5.13 Baumol

The productive, unproductive and destructive aspects of entrepreneurship influence the entrepreneur's action. The type of activities related to entrepreneurship can differ from productive ones such as innovation to unproductive ones such as organised crime. This type of activities is influenced by the type of rewards gained from a society (Baumol, 1990:893).

Entrepreneurial activities can be influenced by rules that determine the type of business reward found in a society. This fact can determine the effect of these activities on economic growth. The laws and legal procedures of a country are a determinant of productive entrepreneurial activities (Baumol, 1990:245).

3.5.14 McGrath, MacMillan and Scheinberg

A possible entrepreneurial cultural pattern and the difference between entrepreneurs and non-entrepreneurs are important parts of entrepreneurship (McGrath, MacMillan & Scheinberg, 1992:119).

Entrepreneurship can be associated with high individualism, high power distance, low uncertainty avoidance and high masculinity. The value of their study lies in the importance of identifying value orientation as a determinant in

the design of economic development policies aimed at entrepreneurs (McGrath *et al.*, 1992:133).

3.6 SUMMARY

The debate on entrepreneurship will continue and the challenge lies in recognising of the different aspects of entrepreneurship. The theory on entrepreneurship can benefit through studies on different aspects of entrepreneurship. It is clear that research on entrepreneurship discovered various factors influencing it. Research on entrepreneurship can only be successful if all concerned recognise the multi-dimensional nature thereof.

The problem with an exact definition of entrepreneurship is the main obstacle in research on this specific topic. Entrepreneurship consists of a process, an environment, the business and the individual. These aspects affect entrepreneurship, some more than other. Researchers' focus also differs, and therefore different theories, schools of thought and aspects on entrepreneurship are developing.

The entrepreneurial process needs more attention in order to develop a theory that can resolve questions, uncertainties and inquiries. This process consists of the following: it is started by action of humans (individuals), happens at the level of the individual business (business), it is part of change, it is part of a discontinuity, it is a holistic and dynamic process (process), it is unique and it has numerous variables that are sensitive to initial conditions (environment).

The research on entrepreneurship consists of different perspectives, schools of thought and theories. It can be seen from different perspectives such as economic, behaviouristic, management science, social and entrepreneurial perspectives. It can also be viewed from different schools of thought namely: the French school, the Austrian school, the German school, the American school and the British school. The theories of entrepreneurship can furthermore be divided into economic and non-economic one.

The following aspects of entrepreneurship are viewed: eight themes on entrepreneurship, the entrepreneur and small business owner, the entrepreneur's way to ownership, entrepreneurial behavior, strategic management and entrepreneurship, sociology and entrepreneurship, anthropology of entrepreneurship, entrepreneurial orientation and performance, entrepreneurial risk taking, professional management and entrepreneurship, business behavior model, the influence of society on entrepreneurship and entrepreneurial culture.

It is clear that every contribution to research related to entrepreneurship is valuable. The challenge lies in the correct attitude towards entrepreneurship. All concerned play a vital role to develop this field and to discover the essentials elements thereof. Entrepreneurship is an important part of future success, not only nationally but globally. The wide field of entrepreneurship, together with its broad definition and variety of components, provides researchers with many challenges. Recognising the mentioned aspects is probably the correct starting point for purposeful research on the field.

4 THE DETERMINANTS OF ENTREPRENEURIAL ACTIVITY

4.1 INTRODUCTION

In the previous chapter the theories of entrepreneurship were discussed. The different aspects of entrepreneurship underline the fact that there are factors which influence entrepreneurial activity. In this chapter the different determinants of entrepreneurial activity are discussed.

There are different views on these factors: Gartner (1985:698) refers to these factors as variables in his conceptual framework on business creation, Gnyawali and Fogel (1994:43-52) refer to it as environmental conditions in their framework for entrepreneurial environments and the Global Entrepreneurship Monitor (Von Broembsen, Wood & Herrington, 2005:12) refer to it as entrepreneurial framework conditions in the GEM conceptual model.

In Gartner's (1985:698) conceptual framework for business creation the following are important: the individual, the environment, the process and the business. The individual is the entrepreneur who starts the business, the business is the kind of business started, the environment is the place where the business is situated and the forces influencing the new business and the process refer to the actions needed by the entrepreneur.

The framework for entrepreneurial environments (Gnyawali & Fogel, 1994:43-52) provides a combination of factors that influence the people's ability to participate in entrepreneurial activities and assistance to support in the process of business creation. Economic, socio-cultural and political factors have a big influence on the entrepreneurial activity, while assistance can either be financial and non-financial.

According to the 2005 GEM report (Von Broembsen *et al.*, 2005:12) the following are the entrepreneurial framework conditions: access to finance, government policies, government programmes, education and training, research and development transfer, cultural and social norms, internal market openness, commercial infrastructure and access to physical infrastructure.

The above paragraphs clearly indicate that specific factors influence entrepreneurial activity. In this study the term “determinants” will be used to describe these factors. This chapter is structured as follows: research on determinants, the framework of entrepreneurship, general determinants of entrepreneurship, entrepreneurial determinants of entrepreneurship, the entrepreneurial process, new businesses and the national outcomes will. The chapter concludes with a summary.

4.2 RESEARCH ON DETERMINANTS

Several other studies such as those conducted by Bruno and Tyebjee (1982), Pfeffer and Salancik (1978), Bygrave (1989), Kent (1984) and Kilby (1971) underline the integral part the environment plays in the entrepreneurial process (Covin & Slevin, 1991:11). The study of entrepreneurship can not focus only on the individual entrepreneur, but must take circumstances into account that influence the process.

An environment that promotes or discourages entrepreneurship is also part of Van de Ven's (1993:211) theory. The Timmons model (Timmons & Spinelli, 2004:57) describes the entrepreneurial process, which consists of three important aspects, namely the entrepreneur or entrepreneurial team, the opportunity and the resources.

Two theories have been used to explain the influence of the environment on entrepreneurship. There are the resource dependence theory and the population ecology theory (Moyes & Westhead, 1990:123-136). The resource dependence theory focuses on the business and its relationship with

environmental factors because of the inability to generate all required resources. The population ecology theory focuses on the importance of resources in the environment.

Business creation is directly related to a business' ability to gain access to and a continuous supply of critical resources. Munificence is when there is a surplus of resources. According to this theory, resources are contained by the environment (Moyes & Westhead, 1990:123-136). This perspective views the business in its attempts to adapt to the environment.

The population of businesses describes the rate of new business creations. The number of businesses in a certain environment is determined by the availability of resources (Wickham, 2004:42). The selection of individual environmental aspects will determine success (Amit, Glosten & Muller, 1993:815-834).

The combination of the two theories mentioned above, namely the resource dependence and population ecology, forms the basis for a model that describes the relationship between the rate of new business creation, the number of businesses competing for the same resources and the possible surplus in environmental resources (Specht, 1993:77).

4.3 THE FRAMEWORK OF ENTREPRENEURSHIP

A framework of entrepreneurship is developed by using the GEM framework and Timmons' model. Figure 4.1 provides a framework of entrepreneurship.

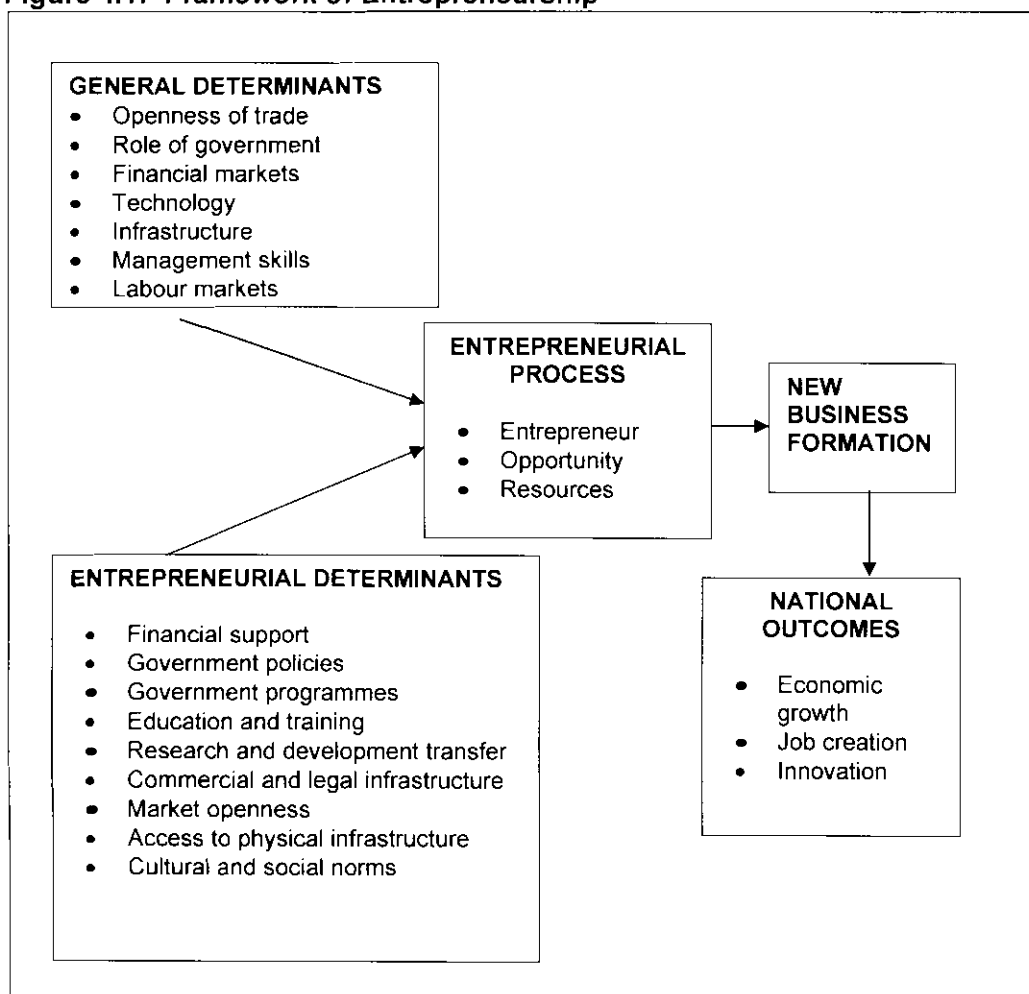
The framework of entrepreneurship consists of the following five aspects:

- general determinants;
- entrepreneurial determinants;
- entrepreneurial process;
- new business creation; and
- national outcomes.

General determinants determine the business environment in a country. These determinants create a unique environment for businesses to operate. The entrepreneurial determinants can create a conducive or limiting environment for the individual to respond to. This initiates the entrepreneurial process and business creation.

This creation of businesses is crucial for achieving national outcomes. A combination of talents and skills plus opportunity, matched with the needed resources and applied with the entrepreneurial mindset in the economy is the key to economic growth (Timmons & Spinelli, 2004:16).

Figure 4.1: Framework of Entrepreneurship



Sources: Timmons and Spinelli (2004:57) and Von Broembsen *et al.* (2005:7).

4.4 GENERAL DETERMINANTS

The general determinants are the following: openness of trade, role of the government, financial markets, technology, infrastructure, management skills and labour markets. These are subsequently discussed.

4.4.1 Openness of trade

Openness of trade refers to a business' ability to trade externally. This ability presents an advantage to businesses and creates various opportunities. The government can influence the openness of trade by forcing restrictions on imports and exports. The following restrictions can be used: more than one exchange rate for imports and exports, different exchange rates for imports and exports and the use of different requirements for both exports and imports (Pan, 1999:108).

4.4.2 Role of the government

The role of the government can be positive by creating an environment that is conducive for entrepreneurship. It can also have a negative influence on entrepreneurial activities because the administrative part that includes tax, labour and other legislation is too difficult to handle. Small businesses often lack the ability and funds to afford people who can handle the administrative duties properly.

4.4.3 Financial markets

Financial markets are the channels where funds are available for people who need it (Cronje *et al.*, 2004:475). The most important institutions for providing funding are financial banks. Both the person with surplus funds (the investor) and the financial institution considers the risk associated with the investment. This aspect has an enormous influence on the availability of finance and therefore on the financial markets (Timmons & Spinelli, 2004:452).

4.4.4 Technology

Technology plays an important role in increasing productivity and wealth (Pearce & Robinson, 2005:84). The consistent change in all aspects of life is usually technologically driven. This has a big impact on all participants in the economy, and especially on the business and the entrepreneur (Anderson & Woodcock, 1996:117-118). Technological breakthroughs have an important effect on new and existing products and services (Cronje *et al.*, 2004:103).

There are, however, benefits for the entrepreneur who uses technology. Economic growth and therefore entrepreneurship depends on the exploitation of scientific knowledge. Most countries try to plan and manage the exploitation of scientific knowledge (Cricelli & La Belle, 1999:127).

4.4.5 Infrastructure

Infrastructure is the resources that people need and that are necessary for developments such as roads, communication, water, air, the climate, oceans and forests. It is very important for every business to optimally use these resources and act in a responsible way (Cronje *et al.*, 2004:117).

4.4.6 Management skills

Management skills are essential to entrepreneurship and determine entrepreneurial activity. The lack of key management skills contributes to low entrepreneurial activity (Tödtling & Wanzanböck, 2003:367). Important managerial skills include: strategic management, planning, marketing, financial, project management, time management, leadership, motivation, delegation, communication and negotiation. These skills are subsequently discussed.

4.4.6.1 Strategic management skills

Strategic management skills are part of the entrepreneur's tool in his/het continued search for opportunities. These skills include commitment, decisions and actions required for a business to achieve strategic competitiveness and earn profitable returns (Hitt, Ireland & Hoskinson, 2003:7).

Strategic management deals with managing the long-term future of a business. This ensures that the business is prepared and can adapt in a changing environment (Rwigema & Venter, 2004:45). The strenghts and weaknesses of a business also play a significant role in its ability to adapt when threats occur. (Kuratko & Hodgetts, 2004:162).

The strategic plan is the instrument required to project current conditions into the future (Rabbior *et al.*, 1996:25). The mistake of implementing old strategies in new environments can negatively influence the business performance (Batjargal, 2006:319).

4.4.6.2 Planning skills

The ability to plan is essential for entrepreneurs. Planning is to take the future in consideration by effectively preparing for the possible impact of the future on the business (Wickham, 2004:153). Effective preparation includes having specific plans for different circumstances (Cronje *et al.*, 2004:52).

The capacity to plan is a response to changing circumstances and evolving opportunities. Effective planning is crucial for future success (Rabbior *et al.*, 1996:24). Planning skills will help to anticipate profitable products and services to satisfy the needs of customers (Rwigema & Venter, 2004:46).

4.4.6.3 Marketing skills

Entrepreneurs want to create sustainable businesses. Therefore the ability to investigate customers with the objective to collect information on their needs is crucial. It is important to know why the customers are satisfied or not and the reasons which cause the satisfaction or dissatisfaction (Wickham, 2004:153).

Effectively scanning the environment has the advantage of collecting information that can be very important to the entrepreneur (Cronje *et al.*, 2004:301). Marketing research and planning may also be a way to ensure that current levels of performance are maintained and improved so that older businesses also perform successfully (Wood, 2006:450).

The entrepreneur needs to focus on the customer because that enables him to continually adjust prices, products, distribution and promotion to ensure effectiveness. The knowledge of specific aspects of marketing is important to the entrepreneur (Rwigema & Venter, 2004:46). The ability to undertake market research is an important part of marketing and the future success of the business (Rabbior *et al.*, 1996:26).

4.4.6.4 Financial skills

Entrepreneurs need to focus on planning finance, funding, investment of capital and financial reporting. The type of funding can differ from equity (own funding) to debt (funding of the bank). The business will need assets in its operations. Therefore, financing assets is required. The control of transactions, cash and inventory is crucial for any business (Broyles, 2003:4-5).

The ability to understand and analyse financial statements is a crucial skill for the entrepreneur. It is important to understand the function of the balance sheet and the income statement and make business decisions based upon the evaluation thereof (Cornwall, Vang & Hartman, 2004:26). Evaluating an

opportunity in terms of profitability, possible costs and cash-flow is important to the success of the business (Rwigema & Venter, 2004:46).

4.4.6.5 Project management skills

This is the ability to coordinate schedules and needed resources at the right place and time to ensure that projects are effective and successful (Wickham, 2004:153). The use of definitive objectives will help to organise projects (Cronje *et al.*, 2004:52). The development of a new product is an example of a project. This project will have a beginning and an end with definite deadlines (Rwigema & Venter, 2004:46).

4.4.6.6 Time management skills

This is the productive use of time and using schedules to prioritise work (Wickham, 2004:153). The changing environment with its difficult challenges forces the entrepreneur to use time productively. This requires discipline and ensuring that all the people in the business complete their work and assignments on time (Rwigema & Venter, 2004:46).

4.4.6.7 Leadership skills

The following components are important in effective leadership: relationships, equipment or education, leadership and attitude (Maxwell, 2003:7). Leadership is the ability to direct, support and help people to achieve their goals. This is the skill to inspire people to do tasks that will help the business to be successful (Wickham, 2004:153).

There are three aspects that form part of effective leadership, namely: the leader, the assignment in question and the surrounding environment. These aspects usually work together, but a strong leader can effectively handle either a difficult assignment or a challenging environment or both (Rwigema & Venter, 2004:47).

4.4.6.8 Motivation skills

Motivation is described as the forces acting to initiate and direct behaviour (Petri & Govern, 2004:16). This is the ability to get people to give their best and full commitment to assignments on hand. The entrepreneur must know what drives people and what they expect from their work (Wickham, 2004:153-154).

People are motivated when they can use their own initiative without interference by supervisors. This ensures that people enjoy their work (Rwigema & Venter, 2004:48). A stimulating workplace where people have fun is a type of compensation that increases their motivation level (Reiss & Cruikshank, 2000:68-69).

4.4.6.9 Delegation skills

The entrepreneur continuously gives and allocates assignments to different people. Defining the assignment is important and must link with the skills of the person who will do the task. This can also be an opportunity for people to develop their skills (Wickham, 2004:154).

Delegation ensures that as many employees as possible participate in the activities of the business. Entrepreneurs do not have the time or skills to perform every assignment, so it is important to delegate these assignments to other people (Rwigema & Venter, 2004:50).

4.4.6.10 Communication skills

This is the ability to speak and write in order to express information in such a way that actions are influenced (Wickham, 2004:154). The entrepreneur must communicate clearly and efficiently to internal and external parties (Rwigema & Venter, 2004:50-51). Communication can only be successful if both parties formulate and understand the message correctly (Cronje *et al.*, 2004:52).

The entrepreneur needs to speak and present effectively to various types of groups, hold efficient meetings with employees and clients and have effective telephone skills (Rabbior *et al.*, 1996:26). Entrepreneurs who have the skill to express their feelings have a big advantage in generating a positive attitude among other people (Baron & Shane, 2005:295).

4.4.6.11 Negotiation skills

Negotiation is the process where two or more people work together to arrive at a mutually acceptable resolution of issues such as a commercial transaction (Cohen, 2002:3). It is also the ability to investigate a situation and consider the best possible outcome to all concern (Wickham, 2004:154).

The important part of negotiation is to build long-term relationships with suppliers, distributors, unions and other groups (Rwigema & Venter, 2004:51). Effective negotiation needs intensive preparation and planning. A big advantage in negotiation is created by enough experience (Cronje *et al.*, 2004:589).

4.4.7 Labour markets

The success of a business depends strongly on its ability to attract and hold capable employees. The nature of the operating environment has a big influence on the business' personnel recruitment and selection (Pearce & Robinson, 2005:106). The type of personnel a business needs is affected by reputation, employment rates and availability of personnel.

The reputation of a business in its operating environment is crucial in its ability to satisfy its personnel needs. A business will attract and retain capable employees if it plays a constructive roll in the community, has competitive compensation packages, is concerned with the welfare of its employees and makes a positive contribution to general welfare.

The stage of a community's growth will determine the supply of skilled and experienced personnel. The relocation of specialised and experienced employees may be necessary to ensure that the best people are found for the jobs.

4.5 ENTREPRENEURIAL DETERMINANTS

The entrepreneurial determinants are the following: financial support, government policies, government programmes, education and training, research and development transfer, commercial and legal infrastructure, market openness, access to physical infrastructure and culture and social norms. These are subsequently discussed.

4.5.1 Financial support

Financial support is the availability and accessibility of financial resources, equity and debt for potential, new and growing businesses (Foxcroft *et al.*, 2002:49). Finance and the availability thereof is crucial in the process of creation a new business. It can be supplied by financial and government institutions (Nieman *et al.*, 2003:13).

The availability of finance plays an important role in relationships with external shareholders and their unique demands (Cronje *et al.*, 2004: 85-86). The access to finance in rural areas is a big disadvantage to entrepreneurs operating in those areas (Fuller-Love, Midmore, Thomas & Henley, 2006:299).

4.5.2 Government policies

Government policies such as tax and regulations can encourage or hinder the creation of new businesses and the support to new and existing ones (Foxcroft *et al.*, 2002:51). The government can limit entry to industries through license requirements and put limits on access to raw materials (Pearce & Robinson, 2005:94).

In South Africa some of the big businesses are protected from competition. However, this situation is changing, creating more opportunities for smaller businesses (Rwigema & Venter, 2004:204). Government policies need to develop incentives regarding entrepreneurship to assist their initiatives. The government can assist businesses through policies that enable them to utilise new inventions (Watkins-Mathys & Foster, 2006:271).

4.5.2.1 Fiscal policy

The fiscal policy is the use of government spending and taxes to influence the output, employment and price level of a nation (Tucker, 2000:499). The change in government spending and inflation can combat recession and inflation (Tucker, 2000:514). These government actions influence entrepreneurial activity.

4.5.2.2 Monetary policy

Monetary policy is the use of open market operations, changes in the discount rate and changes in the required reserve ratio to change the money supply. The use of these three tools can limit and expand deposit creation by the banks and therefore change the money supply (Tucker, 2000:594). The change in money supply will affect the cost of funding and thus business operations.

4.5.3 Government programmes

The presence and efficiency of programmes to promote business creation and assists new and growing businesses at national, provincial and municipal level are crucial for entrepreneurial activity (Foxcroft *et al.*, 2002:51). It is also important that government programmes are known to businesses.

4.5.4 Education and training

The ability of education and training to promote the creation of new businesses and the management of existing ones is essential to entrepreneurial activity. The education system, from primary to tertiary education, must equip students with the needed entrepreneurial skills (Foxcroft *et al.*, 2002:48).

4.5.5 Research and development transfer

Entrepreneurial activity depends heavily on national research and development. The transfer of research and development to the community will affect business creation. Therefore the availability and accessibility of these aspects will determine the influence on entrepreneurship (Foxcroft *et al.*, 2002:54).

4.5.6 Commercial and legal infrastructure

The existence of commercial, accounting and legal services promotes the creation of new businesses and assistance to new and established ones (Foxcroft *et al.*, 2002:56). An excellent way to minimise risks is to get expert advice from, for instance, consultants. Although this is an expensive step, it can be an excellent investment. Successful entrepreneurs attribute their success in part to the existence of a mentor because these people are passionate about and experienced in this area (Reiss, 2000:73).

The inclusion of self-employed friends, suppliers, banks and professionals who have dealt with similar businesses can ensure excellent business associates and support systems. Associations such as trade associations bring together business people from similar industries and facilitate social interaction and the discussion of opportunities (Rwigema & Venter, 2004:71).

Entrepreneurs need to attend conferences that might be relevant to their business or industry. They must interact with as many people as possible with the goal to talk and further understand other businesses and people in the

industry (Kaplan, 2003:275). Entrepreneurs must realise that they are part of the challenges in the business world and must use all the assistance they need to be successful (Nieman, *et al.*, 2003:171).

4.5.7 Market openness

The situation in the market has an important influence on the success of the business (Allen, 1999:32). The five competitive forces of Porter (1998:35) have a significant effect on the business environment. These forces are: the threat of new entrants (entry barriers), the rivalry among existing competitors, the threat of substitute products, the power of suppliers and the power of buyers (Porter, 1998:35).

4.5.7.1 Entry barriers

Creativity can help new businesses to overcome the hurdles and barriers of entering the market (Allen, 1999:35). The new entrants to an industry have the desire to gain market share. The threat of entry is determined by the following sources of barriers to entry: economics of scale, investment in requirements, cost disadvantages independent of scale and access to distribution channels (Pearce & Robinson, 2005:92). These are subsequently discussed:

- **Economics of scale**

This refers to the savings that a business achieves due to increased volume. The following helps to achieve economics of scale: a high level of mechanization and a better coordination of production functions (Pearce & Robinson, 2005:100). Producing a large number of products will assure cost savings and take care of this entry barrier. The business with the ability to distinguish its product as a superior brand can ask a higher price and do not need economics of scale (Rwigema & Venter, 2004:204).

- **Investment in requirements**

The need for huge investment in requirements is a big problem that often prevents businesses from being competitive (Rwigema & Venter, 2004:204). New businesses often use outsourcing to get the necessary requirements (Allen, 1999:34).

- **Cost disadvantages independent of size**

Advantages from the effects of the learning and experience curve, technology advantages, access to the best raw material sources, assets purchased at low prices and favourable locations will ensure a big lead over possible rivals (Pearce & Robinson, 2005:92-93).

- **Access to distribution channels**

The challenge lies in the ability to get access to a distribution channel. The existing members of a distribution channel usually make it difficult for newcomers (Allen, 1999:35). This barrier is often too high for new entrants and forces them to create their own distribution channels (Pearce & Robinson, 2005:94).

4.5.7.2 Rivalry among existing competitors

The competition in a market can be so strong that it keeps out new entrants (Rwigema & Venter, 2004:204). The following factors can determine rivalry (Pearce & Robinson, 2005:96-97):

- Competitors are equal in size and power;
- Industry growth is slow;
- Products lack differentiation;

- Fixed costs are high or demand forced cuts in prices;
- Diverse strategies of rivals; and
- Exit barriers are high.

4.5.7.3 The influence of substitute products

Products without substitutes have no competition (Rwigema & Venter, 2004:204). The business must also compete with products and services that can be substitutes in other industries (Allen, 1999:35). The entrepreneur needs to investigate the industry and environment for the threat of substitute products or services.

4.5.7.4 Supplier power

When there are a few suppliers of a product and no substitutes, the suppliers have enormous power (Rwigema & Venter, 2004:204). According to Pearce and Robinson (2005:94-95) suppliers are powerful if:

- The group is dominated by a few suppliers and is more concentrated than the industry;
- The product is unique or differentiated;
- The product has no competition in the industry; or
- The industry is not important to the supplier group.

4.5.7.5 Buyer power

The customer has the ability to force prices down, to demand higher quality or better service and to play competitors off against each other. Buyers can be powerful if they purchase in large volumes, if the products they purchase are standard or undifferentiated, if they earn low profits, if the product or the industry

is unimportant to the quality of the buyer's product and does not save the buyer money (Pearce & Robinson, 2005:95). The situation in the market has a big influence on the success of the business (Allen, 1999:32).

4.5.8 Access to physical infrastructure

The access of available physical resources such as communication, utilities, transportation, land or space at reasonable prices is important for the improvement of entrepreneurial activity (Foxcroft *et al.*, 2002:55). The infrastructure is influenced by spatial patterns.

4.5.8.1 Spatial patterns

Most countries are spatially divided in various ways. The best known way is the division of countries into municipalities or counties. These divisions can be determined by political, military or religious administrative purposes (Davidson, 2004:93). South Africa is divided into provinces and municipalities.

The environment factors are different in different countries and the role of each varies (Gnyuwali & Fogel, 1994:59). Spatial variations have a major impact on business start-ups in the UK (Keeble & Walker, 1993:225-226). Therefore the rate of new business creation is different in various countries. These spatial variations also exist in different parts of the same country (Kirby, 2003:36).

The spatial variations in entrepreneurial activity are influenced by two demand-side and five supply-side variables. The variables in the demand-side are the previous growth of local income and the changes in the local population. The variables in the supply-side are: local occupations, the size of the businesses, the sectoral structures, the availability of capital and the unemployment rate (Keeble & Walker, 1993:217).

There are three theories that determine spatial variations (Kirby, 2003:36). In the structural theory differences in technology, rates of market growth and

capital requirements impact on the environment. The socio-economic mix, demographics of the population and regional traditions on entrepreneurship are factors of the socio-cultural theory. The economic theory includes factors such as facility, business capital, market demand, educational support, training and research and development.

The regional structure - economics and demographics, regional culture – value and beliefs and entrepreneurship – capabilities are an effective way of dividing factors that influence spatial variation (Davidson, 2004:93). The following are factors that influence the environment: social conditions, economic factors, politics, infrastructure development and the potential of markets (Specht, 1993:80).

4.5.9 Culture and social norms

The following are part of social and cultural norms: culture, social norms, demographics and social capital.

4.5.9.1 Culture

The entrepreneur must know that the local culture plays an important role in the future success of the business (Hisrich *et al.*, 2005:88). The difference in culture and the ability to adapt are essential for a business to provide the needed products and services to the customer (Bolton & Thompson, 2000:342).

4.5.9.2 Social norms

Entrepreneurs must carefully monitor social changes. Social changes provide challenges and opportunities and can indicate new markets, needs for new products or services and changes to existing products or services (Anderson & Woodcock, 1996:117).

4.5.9.2 Demographics

Demographic changes arise from trend changes in age, population, geographic locations and similar factors (Kuratho & Hodgetts, 2004:152). These changes have predictable consequences and often provide new opportunities to entrepreneurs. The change in demographics is highly productive and a dependable innovative opportunity (Drucker, 1999:89).

4.5.9.3 Social capital

Someone has social capital if they have social relationships with the goal to gain access to important knowledge and resources (Davidson, 2004:119-120). It is important that these relationships are based on trust and mutual concern (Cunningham, Dawes & Bennett, 2004:33).

Social capital is the personal ties and networks that give access to all kinds of resources (Sexton & Landstrom, 2002:371-372). The kind of social capital can be integrity, integration, linkage and synergy (De Groot, Nijkamp & Stough, 2004:109).

4.6 ENTREPRENEURIAL PROCESS

The entrepreneurial process consists of the following: the entrepreneur / entrepreneurial team, the opportunity and the resources.

4.6.1 Entrepreneur / Entrepreneurial team

The entrepreneurial team is a key ingredient in the success of a business. The most important aspect of a team is its effectiveness. The entrepreneur is the key towards matching the opportunity and the resources. The team's ability to link these aspects of the entrepreneurial process determines its effectiveness (Timmons & Spinelli, 2004:59).

The entrepreneur is part of the entrepreneurial process. Need for achievement, locus of control, risk taking, previous work experience, entrepreneurial parents, age and aspects of entrepreneurial education are essential to entrepreneurs. The motivation for entrepreneurship is also important. The spirit of entrepreneurship is necessary for the effective functioning of the economic process (Clark & Lee, 2006:1-17).

4.6.1.1 Need for achievement

Entrepreneurs are driven internally by a strong desire to compete against their own self-imposed standards and to pursue and attain challenging goals. They have the ability to retain perspective, to know their own strengths and weaknesses, to laugh and ease tension and to change an unfavourable situation into a more profitable direction (Timmons & Spinelli, 2004:254,255).

Entrepreneurs are motivated to excel and they tend to think big. This is necessary because entrepreneurs are to realise large goals against equally large odds including inadequate finance, inexperience, competition and poor networks (Rwigema & Venter, 2004:61). They are high achievers and tend to take moderate risk because entrepreneurs examine a situation, determine how to increase the odds of success and then push ahead (Kuratko & Hodgetts, 2004:117).

The prospect of success motivates entrepreneurs and money is only a measure of success (Kirby, 2003:112). Entrepreneurs can be distinguished by the extent to which they exhibit a need to achieve and by the degree to which the incentive for accomplishment is internally generated. Entrepreneurs will tend to seek opportunities for accomplishment and will seek the sense of reward found in achieving personal goals (Rabbior *et al.*, 1996:15).

Entrepreneurs distinguish themselves from others by taking initiative in situations where others may not. It is important that ideas are converted into action. Entrepreneurs' need for achievement assures that they act on their

ideas. This motive is converted into drive and initiative that assures accomplishments (Lambing & Kuehl, 2003:27).

4.6.1.2 Locus of control

Internal locus of control is the view that a person has a significant ability to influence the outcome of events in life. People with an internal locus of control tend to believe that they can overcome obstacles in life and are able to influence outcomes and their chances for success (Rabbior *et al.*, 1996:9). People who believe that fate, the economy and other external factors determine success are not likely to succeed as an entrepreneur (Lambing & Kuehl, 2003:27).

The ability to sustain the drive and energy required not only to overcome the inertia in forming something new, but also to manage the new business and make it grow. The drive by an inner need to succeed and win may enhance your entrepreneurial tendencies (Hisrich *et al.*, 2005:63).

Entrepreneurs know what to do and need not be told what to do. They identify tasks and then follow them through without looking to others for direction and encouragement. Entrepreneurs approach their tasks in a different way because of their commitment, interest and motivation to succeed (Wickham, 2004:150).

4.6.1.3 Risk taking

Entrepreneurs need to be willing to accept risk in order to be an agent of change, to start something new, to invest time, money and resources and to overcome obstacles. Entrepreneurs risk their self-image, self-esteem and self-respect, while they also have the welfare of others as concern. They take calculated risks because they do not want to gamble and risk losing control of the odds and outcome. The preparation of entrepreneurs is crucial and will help to analyse the viability of the new business and make a reasonable calculation of its chances for success (Rabbior *et al.*, 1996:20-21).

Many entrepreneurs try to start their businesses while having full- or part-time jobs. They do not put all their resources and time into the business until it appears to be viable. Successful entrepreneurs try to define their risks early in the process and minimise them as much as possible. They see risk differently because of their knowledge of the industry (Lambing & Kuehl, 2003:27).

Entrepreneurs must tolerate risk and uncertainty and manage paradoxes and contradictions. They are willing to take risks, but calculate it carefully and do everything possible to get the odds in their favour. Successful entrepreneurs are comfortable with constant changes, they maximise good results of stress and minimise negative reactions of exhaustion and frustration (Timmons & Spinelli, 2004:253).

Successful entrepreneurs (when they decide to participate in a business) do it in a very calculated, careful manner. They often avoid taking unnecessary risks. Entrepreneurs use strategies such as getting others to share financial and business risks with them. They negotiate with partners and investors to put up money, with creditors for special terms and with suppliers for advance merchandise (Kuratko & Hodgetts, 2004:119).

It is important for entrepreneurs to reconcile the risk that they are prepared to accept with the actual risk required to achieve goals. Entrepreneurs must understand their tolerance threshold and then adjust their goal aggressiveness to match this threshold. It is crucial that employees are well trained and perform with excellently because this will help entrepreneurs to have more confidence to accept risk. If the team is strong, the entrepreneurs' tolerance for risk will increase (Cleveland, 2002:11-12).

4.6.1.4 The entrepreneur's work experience

People are attracted to entrepreneurship due to the independence and freedom from politics and restrictions of work in the corporate world. Some of them hit plateaus, while other do not progress as rapidly as they would like and these

conditions become their motivating factors for being entrepreneurs (Kaplan, 2003:10). People who have worked in a small business or had prior entrepreneurial experience are often positively inclined towards becoming entrepreneurs (Coulter, 2003:18).

The nature of the entrepreneur's previous job responsibilities, the kind of information gained and the nature of ideas will enhance entrepreneurial success (Hitt *et al.*, 2002:205). It is an advantage for a person to firstly work for somebody else, as they can subsequently learn from a successful business at someone else's expense (Bolton & Thompson, 2000:21). The way an entrepreneur conducts business heavily depends on prior business experience (Mcdade & Spring, 2005:37).

4.6.1.5 Entrepreneurial parents

The early family environment plays a big role in the development of an entrepreneur. Entrepreneurs tend to have parents who were entrepreneurial (Coulter, 2003:18). Children often help parents in their businesses and later take over the business (Megginson *et al.*, 2000:431). It is significant that more than 50% of those who starts businesses had parents who owned businesses themselves and more than 70% of graduates in entrepreneurship had entrepreneurial parents (Timmons & Spinelli, 2004:66).

4.6.1.6 Age

The ideal age of entrepreneurs starting businesses is between 22 and 45 (Hisrich *et al.*, 2005:67). The years before the age of 22 are set out for schooling and working experience and the ages between 45-55 years are considered to be the latest starting point (Rwigema & Venter, 2004:70). A career can be initiated before or after these years, although it is not likely because an entrepreneur requires experience, financial support and a high energy level in order to launch and manage a new business successfully (Hisrich *et al.*, 2005:67).

There are concerns related to age, with regard to both early and late careers. During the early career education, gaining work experience and acquiring financial resources play a significant role. Late career concerns relate to family responsibilities, attaining seniority in employment and early investment in a retirement programme (Longenecker *et al.*, 2003:20).

These concerns underline that the ideal time for entering the field of entrepreneurship appears to lie somewhere between mid-20s and mid-30s when there is a balance between preparatory experiences and family obligations (Longenecker *et al.*, 2003:20). People between 22 and 28 years old have had some experience and have usually fewer family and financial commitments (Bolton & Thompson, 2000:20).

4.6.1.7 Aspects of entrepreneurial education

Some of the most important aspects related to entrepreneurial education include the willingness and readiness to learn.

- **Willingness to learn**

It is important for someone who wishes to be an entrepreneur to demonstrate a willingness to learn. Entrepreneurship is a constant learning experience and the entrepreneur who is unwilling to learn will most likely experience failure. Mistakes and failure are also part of the learning process (Rabbior *et al.*, 1996:16).

Effective entrepreneurs are described as quick learners. They have a strong desire to know how they are doing and how they can improve their performance. The entrepreneur has the view that failure, mistakes and setbacks are learning experiences. Entrepreneurs are not afraid of difficult situations. Their self-confidence and optimism translate into a view that the impossible just takes a little longer (Kuratko & Hodgetts, 2004:117).

Successful entrepreneurs accept the fact that they can do things better. They are eager to learn and are aware of their skills and limitations and are receptive to a chance to improve their skills and develop new ones. Entrepreneurs must also be willing to test their ideas in the light of new experiences (Wickham, 2004:151).

- **Readiness to learn**

Entrepreneurs will, amongst others, require literacy, language and numeric skills to learn additional and new information. An individual will need to have the basic tools and skills to be able to learn and handle the basic communication and financial affairs of the business (Rabbior *et al.*, 1996:16).

Entrepreneurs are not more intelligent than other people in other jobs, but are characterised by having an inquisitive nature. They are never satisfied with information they have and constantly seek for more and new information. Successful entrepreneurs prefer to question rather than to make statements when communicating (Wickham, 2004:151).

Entrepreneurs are continuously busy in an unknown environment. They are realistic in recognising what they can and cannot do and where they get help in solving problems. Entrepreneurs do not waste their time on simple or unsolvable problems (Kuratko & Hodgetts, 2004:117).

A business will be faced with challenges and difficulty at every stage of the entrepreneurial process. Success or failure will be determined by entrepreneurs' ability to solve challenges and problems. Exploiting opportunities will be decisive for the entrepreneur (Rwigema & Venter 2004:62).

The environment consists of potential opportunities and threats. Entrepreneurs must be alert to these obstacles and prepared to handle it effectively. Entrepreneurs' success depends on making more correct decisions than incorrect ones (Rwigema & Venter, 2004:62).

4.6.1.8 Motivation for entrepreneurship

GEM divides entrepreneurship on the basis of the motivation of entrepreneurship. Entrepreneurship can be divided into opportunity entrepreneurs and necessity entrepreneurs. The opportunity entrepreneur uses a business opportunity while the necessity entrepreneur has no better work options (Orford *et al.*, 2004:11).

4.6.2 Opportunity

Entrepreneurship starts by isolating, quantifying and refining an opportunity from a chaotic set of ideas. Opportunities can develop from unmet or poorly served needs (Rwigema & Venter, 2004:61). Successful entrepreneurs have the ability to focus on opportunity rather than on resources, structure or strategy. They start with the opportunity and then give attention to the other important factors (Kuratko & Hodgetts, 2004:117).

Entrepreneurs are oriented to the goal of pursuing and executing an opportunity. They are familiar with their customers, industries and competition and the obsession with opportunities guides entrepreneurs' dealings with important issues. Opportunities are a combination of crises and problems. The entrepreneur is obsessed with opportunity (Timmons & Spinelli, 2004:253).

The entrepreneur and the opportunity are both part of the entrepreneurial process. Entrepreneurs need to apply knowledge, experience, vision and creativity in order to identify opportunities as they occur (Rabbior *et al.*, 1996:20).

The successful entrepreneur is always searching and looking for new opportunities. These continuous actions mean that they are never satisfied with the way things are at present. The entrepreneurs' dissatisfaction ensures that he/she never becomes complacent (Wickham, 2004:152).

Entrepreneurs must assess opportunities and determine which ones are worth investigating. The next step is to rank opportunities in terms of their potential. The entrepreneur must maintain an opportunity orientation throughout the life of the business, because he/she must respond to change and find new opportunities (Rabbior *et al.*, 1996:20).

The influence of change creates problems to the general public and is often frightening and something to be avoided. Entrepreneurs see change as normal and necessary. They look and search for change, respond to and exploit it as an idea and possible opportunity. This is the basis of the innovation process (Lambing & Kuehl, 2003:27).

4.6.3 Resources

The following resources are important in the entrepreneurial process: financial resources, assets, people and a business plan (Timmons & Spinelli, 2004:58). It is crucial to maximise the use of all the resources including human, financial, physical and information resources (Cronje *et al.*, 2004:118).

4.7 NEW BUSINESSES

The level of entrepreneurial activity determines the rate of new business creation. The market size and market growth determine the rate of new business development.

4.7.1 Marketing new products

According to Kirby (2003:36) rates of market growth and market demand impacts on the rate of new business development in different regions in a country. This has a direct impact on the entrepreneurial activity in these regions. New businesses prefer larger markets, markets that grow faster and markets that are segmented (Baron & Shane, 2005:36).

Changes in markets are caused by developments such as consumer attitudes, advancements in technology and industry growth (Kuratho & Hodgetts, 2004:151). When established structures disintegrate, it provides the opportunity for entrepreneurs to create a new business. Inefficiencies in existing markets show the limitations in satisfying certain unfulfilled market needs (Fisher & Frohlich, 2001:234).

4.7.2 Competitive forces

The five competitive forces of Porter (1998:35) have a significant effect on a business. The influence of competition on entrepreneurship is enormous and competitive analysis and competitive advantage need attention.

4.7.2.1 Competitive analysis

The entrepreneur needs to investigate competitors. This will enable him/her to identify the strengths and weaknesses of each competitor (Hisrich *et al.*, 2005:221-222). The analysis considers the number of competitors (quantity) and the strength (quality) of each competitor. The capabilities and objectives of competitors is useful information to obtain (Kuratko & Hodgetts, 2004:215).

Kuratko and Hodgetts (2004:171-173) identify the following important steps in examining the industry. The development of a clear definition that describes the focus of the business is very important. This will differ depending on the type of business and its target market. A clear definition will ensure that the entrepreneur knows exactly what the competition is planning.

Defining the industry boundaries has the following advantages: it helps to determine the area in which the business is competing, it helps to focus the attention on the business' competitors, it helps to determine key success factors and it helps to evaluate the goals of the business (Pearce & Robinson, 2005:97-98). It is important to know what the influence on competition will be if the following happens: a rapid increase in market growth, the equaling in size of

direct competitors, the rapid growth of direct competitors and the slowing down of product or service differentiation.

The possible establishment of a relationship with suppliers needs urgent attention. The type of service received from suppliers can be decisive in the final decision on suppliers to use. This is used to determine how much value the entrepreneur adds to the specific product or service. The concept of integration is important. This relates both to backward integration where the movement of the buyer is to acquire supplier services and forward integration where the movements of the supplier absorb the duties of the buyer.

The importance of value adding to the final processing and user consumption determines the occurrence of integration. The examination of the historical progression of the market and its present size helps to project the market growth potential.

4.7.2.2 Competitive advantage

Competitive advantage is when a business consistently offers the customer something different from what competitors are offering. The difference can represent something valuable for the customer (Wickham, 2004:423). This advantage needs careful attention because this is the reason why customers prefer the business over the competition (Lambing & Kuehl, 2003:176).

According to Lambing and Kuehl (2003:176-177) customers will buy a high quality product or service even if it costs more. They want the best product that in the market- the one which satisfies customer needs better than a competitor's product or service. Lower prices of a product or service will attract bargain hunters who want to keep their cost low. A product or service at a lower price can in certain circumstances be better value for money (Wickham, 2004:423).

Businesses are successful because they are conveniently located. Customers might buy products from these businesses although they are more expensive

than others. The customer prefers easier, more convenient and less time-consuming access to products and services (Wickham, 2004:423). The location of a business has a big influence on its success. The economic activity of a local community or region influences the market in terms of size, the possible opportunities and the ability of customers to buy.

Consumers want a choice between different products. A wide product selection will attract several groups of customers. The objective of a business is to satisfy as many people as possible. Personal service to customers is a big advantage because it ensures customer satisfaction. The difference through excellent service addresses needs or solve problems in a more effective way (Wickham, 2004:423).

The competitive advantage can be something as simple as friendliness and helpfulness. The fast delivery of products and services are essential in life nowadays. Products or services with an average quality and cost may be acceptable if it is quickly available (Megginson *et al.*, 2000:167).

4.8 NATIONAL OUTCOMES

Entrepreneurship contributes to economic growth because it plays a big role in the economies of societies (Baron & Shane, 2005:6-7). A high entrepreneurial activity ensures high economical growth and job creation. Entrepreneurs create new businesses that drive the economy and improve economical growth (Timmons & Spinelli, 2004:15-19). Their sense of opportunity, their drive to innovate and their capacity for accomplishment have set the standard for free enterprise (Kuratko & Hodgetts, 2004:3).

4.8.1 Economic growth

Economic growth is the ability of an economy to produce increasing levels of output (Tucker, 2000:40). The economic growth rate is measured by the creation of products and services in a certain period of time, usually annually.

The business must be aware of the fluctuations in this rate because it determines the expenditure of consumers (Cronje *et al.*, 2004:105-107).

During a recession entrepreneurship and new business creation have the advantage to break out of circumstances such as unemployment and low economic growth (Kirby, 2003: 58-59). The business cycle is the different periods of economic growth and decline and can be measured by changes in the gross domestic product (GDP). The GDP is a measure of a nation's economic performance (Tucker, 2000:381).

4.8.2 Job creation

Entrepreneurs are critical contributors to economic growth through leadership, innovation, job creation, competitiveness, productivity and formation of new industries. They are the pioneers of today's business successes (Kuratko & Hodgetts, 2004:3). High entrepreneurial activity ensures job creation through new and established businesses.

4.8.3 Innovation

Innovation is the creation of something new and the successful implementing thereof in markets. It starts with an idea, then it is manufactured and then it must succeed in the marketplace. Innovation is a continuous process and deals with processes, products, services and technology (Brown & Ulijn, 2004:2-3).

Innovation is a key outcome businesses seek through entrepreneurial activity. It is often the beginning of competitive success. Invention is the act of creating a new product, while innovation is the process of creating a commercial product from an invention (Hoskisson, Hitt & Ireland, 2004:378).

Innovation can be radical, developing new products and services, or incremental where products or services are improved (Rwigema & Venter, 2004:65). The majority of successful innovations are simple and focused and

are directed toward a clear and carefully designed application. Through this process new customers and markets are created (Kuratko & Hodgetts, 2004:150).

Innovation is at the heart of entrepreneurship. It is important to believe that the future will be different from the present and that people can act in a way that their actions can influence the changing world. The entrepreneur plays a significant role in this process because he/she is constant busy looking for new opportunities and thus busy with the process of innovation (Wickham, 2004:158).

4.9 SUMMARY

A framework for entrepreneurship consists of general determinants, entrepreneurial determinants, the entrepreneurial process, the formation of new businesses and the national outcomes.

General determinants influence the environment and are specific to every country. These determinants create a unique environment for new, growing and existing businesses. Effective trade and external openness of markets will encourage the creation of businesses because of different opportunities and possibilities. The active role of the government and efficient functioning of financial markets assists the objective of a country to create an environment conducive for entrepreneurship.

The exploitation of technology and the physical infrastructure of a country influences the business environment. The availability of management skills in countries will secure the sustainability of businesses and not the creation of businesses that operate only for short period of time. The situation of the labour market influences the quality of work and determines the future of businesses.

Entrepreneurial determinants are the factors which influence the choice of the individual to start a new business. The availability of financial institutions and

the assistance to entrepreneurs affects effective entrepreneurship. Government policies which assist businesses and minimise administrative procedures will increase entrepreneurial activity. Effective communication between government and businesses will improve the efficiency of government programmes.

The situation of the markets in terms of openness and competition can determine the rate of entrepreneurial activity. The access to physical infrastructure will assist the entrepreneur and determine his/her success. The culture and social norms of the population can determine the entrepreneurial activity in a certain district or region.

Differentiation of products and services can secure enormous advantages to a business. The ability to use innovation to create new products and services is crucial to increase sales and therefore profitability. Analysing competition can assist the business to have continuous competitiveness. The business with a competitive advantage has a big lead over rivals. The suppliers and customers are very important to the business and long-term relationships are crucial.

The entrepreneurial process is the interaction between the entrepreneur, the opportunity and the resources. The individual who wants to be an entrepreneur needs the following: a strong need for achievement, an internal locus of control and the taking of risks. Work experience and entrepreneurial parents presents an advantage in terms of entrepreneurial experience.

Identifying a business opportunity is important to the entrepreneur. Recognising the opportunity, correct planning and exploitation are vital. The timing and fit of the opportunity and needed resources determines the success of the entrepreneur. The effective use of resources is crucial to the outcome of the business.

The national outcomes are the goals established by every government in a country. Every country strives towards positive economic growth. High

entrepreneurial activity can ensure economic growth and the continuous creation of jobs. The ability to innovate has various benefits for all concerned.

Entrepreneurial activity is important and has a significant influence on the living standard of a country. There are determinants which influence entrepreneurial activity and it is vital for entrepreneurs to identify these crucial parts of entrepreneurship. The challenge is to make an efficient contribution to entrepreneurship through an effective investigation of these determinants.

THE DETERMINANTS OF TOTAL ENTREPRENEURIAL ACTIVITY IN SOUTH AFRICA

5.1 INTRODUCTION

Entrepreneurship is crucial for South Africa because it contributes to business creation and development. This in turn, leads to job opportunities, resulting in raising the standard of living of all its people. For policy purposes, it is important to be able to measure entrepreneurship. One widely accepted international measure of entrepreneurship is the total entrepreneurial activity (TEA). The Global Entrepreneurship Monitor (GEM) uses this TEA index.

The TEA index consists of the sum of start-up businesses and the businesses younger than three and a half years (Orford, Wood, Fischer, Herrington & Segal, 2003:9). The TEA of a country is the percentage of people between 18 and 64 years old that are actively involved in starting a business or part of a business younger than three and a half years (Orford *et al.*, 2004:10).

In order for South Africa to increase its economic growth, it is essential to create new businesses. The need for a pool of entrepreneurs with the ability to identify and realise new opportunities to create new businesses will strengthen the entrepreneurial activity (Orford *et al.*, 2004:7).

The 2002 GEM report indicates that South Africa has to create a climate for effective entrepreneurship. It is important that the report encourages opportunity entrepreneurial activity. The length of the life of businesses is important because the business has the responsibility to create and maintain work for its employees (Foxcroft *et al.*, 2002:7).

5.2 FRAMEWORK FOR ENTREPRENEURSHIP

Chapter 4 provided a framework for entrepreneurship and the different aspects of entrepreneurship were discussed. Chapter 5 uses the same framework and the determinants on entrepreneurship, but the situation in South Africa in terms of these determinants is discussed.

General determinants such as openness of trade, the role of the government and financial markets affect the business environment in South Africa. These determinants in South Africa influence the environment in which businesses operate. The majority of entrepreneurial determinants hinder the individual to respond to opportunities. This has a negative influence on the entrepreneurial process and the creation of businesses. Looking at the total entrepreneurial activity the creation of businesses is very low and has a negative impact on the economic growth, creation of jobs and innovation nationally.

5.3 GENERAL DETERMINANTS

The general determinants which influence the situation in South Africa in terms of a supportive or hindering environment are subsequently discussed.

5.3.1 Openness of trade

Globalisation has forced economies to trade with other nations over long distances, in different time zones, across cultural, language and political barriers. The situation in terms of trade in South Africa is starting to improve, but in comparison with other countries it is still low (Cronje *et al.*, 2004:609-611). The effort of the South African government to open markets is highlighted by the GEM report (Von Broembsen *et al.*, 2005:11).

5.3.2 Role of the government

The role of the government influences entrepreneurial activity. In South Africa the government policies and programmes are determinants that hinder entrepreneurial activity. According to the opinions of experts in 2004 the role of the government is the most important factor in entrepreneurial activity. The

experts underline the need for the increased involvement of the government to stimulate entrepreneurial activity (Orford *et al.*, 2004:26-27).

5.3.3 Financial markets

The lack of financial support to entrepreneurs is an obstacle for entrepreneurial activity in South Africa. This is not due to a reluctant financial system, but rather to the accessibility to finance (Von Broembsen *et al.*, 2005:11). The absence of a track record for an entrepreneur is another reason. Financial institutions do not support and assist people who start businesses, because of several policies and procedures (Orford *et al.*, 2004:31).

5.3.4 Technology

An important determinant for entrepreneurial activity is the accessibility to communication and technology. Entrepreneurs need practical training to be able to use computers and find that e-mail and the internet will improve the standard of doing effective business. This can assist with the development of relationships with customers and suppliers (Foxcroft *et al.*, 2002:34-35).

The lack of skills related to science and technology among most of the South African population is the main reason for the low level of technology use. The cost of new technology is another reason that leads to low usage. It is also important to remember that some developments in technology and the implementation thereof take time (Von Broembsen *et al.*, 2005:7).

5.3.5 Infrastructure

In South Africa, entrepreneurs in rural areas have a big disadvantage because metropolitan areas provide more markets, infrastructure and professional services which often lacks in rural areas (Driver *et al.*, 2001:30). The availability and reliability of transport in South Africa is poor. The problem of insufficient transport to entrepreneurs in South Africa townships hinders entrepreneurial activity in these areas. They have to rely heavily on other people to transport the resources they need for their businesses (Foxcroft *et al.*, 2002:23).

Communication is important and cell phones can influence the efficiency thereof. The problem in South Africa is that the cost of cell phones is very high. Luckily, there are actions from the Independent Communication Authority of South Africa (ICASA) to investigate the high cost of cell phones and address this situation (Lowies, 2006).

5.3.6 Management skills

The absence of business skills such as record keeping, drawing up budgets, managing cash flow and writing business plans is a big weakness among many entrepreneurs. The problem with Small Medium Enterprises (SME's) is that they lack the advantage of special departments that look after innovation, training and marketing (De Groot *et al.*, 2004:107).

Potential entrepreneurs must therefore be educated in management and entrepreneurial skills before they even consider an entrepreneurial career (Naude, 2004:10-12). The 2002 GEM report (Foxcroft *et al.*, 2002:23) indicates that entrepreneurs in townships need the following skills: effectively keeping financial records, learning communication skills, effective marketing skills, enough information on legal aspects, the correct business legislation procedure and an ability to speak proper English.

5.3.7 Labour markets

The legislation on labour in South Africa creates various problems for entrepreneurs and in an attempt to avoid problems they are often forced to handle the movement of personnel in a way that reduces flexibility and adaptability (Driver *et al.*, 2001:46-47). The immigration policy affects the entrepreneurial activity because some of these people can have entrepreneurial skills. This issue is sensitive and needs careful attention.

5.4 ENTREPRENEURIAL DETERMINANTS

The following entrepreneurial determinants in South Africa have an impact on the entrepreneurial activity in the country.

5.4.1 Financial support

The second most frequently mentioned weakness by experts in South Africa is financial support (Orford *et al.*, 2003:17). The problem with financial support is a world wide phenomenon and entrepreneurs need to counter it with innovative and creative plans and methods. The lack of internal financial management in many businesses is an important issue that needs to be addressed (Orford *et al.*, 2004:31).

5.4.1.1 Role of commercial banks

The role of the commercial banks in South Africa is crucial in the entrepreneurial process. The difficulty South African entrepreneurs often experience can be related to the lack of help they receive from commercial banks. It is important to remember, however, that these banks are also businesses who try to manage risk (Nieman *et al.*, 2003:173).

Emerging entrepreneurs must conduct effective research on the types of funding available from different commercial banks. This will assist them to get the right type of finance (Nieman *et al.*, 2003:173). The contribution to entrepreneurial development made by the following four commercial banks in South Africa is subsequently discussed: Standard Bank, First National Bank, Nedbank and ABSA.

- **Standard Bank**

Standard Bank has collected valuable information on entrepreneurs through research and development. The entrepreneur needs a bank that can provide effective service in terms of start-up finance or credit. They subsequently developed products to assist entrepreneurs and small business owners (Nieman, *et al.*, 2003:173).

Some of Standard Bank's products are the following: assistance in planning and financing a business; an example of a business plan and loan application; types of insurance; and easy deposits through automatic teller machines. The

problem with these products is, however, that people require a business background to be able to effectively use them (Nieman, *et al.*, 2003:173).

- **First National Bank**

First National Bank supports entrepreneurs in three ways. The first is to help emerging businesses with the necessary funding. The second way is to support small businesses in all their operations and the last way is to assist entrepreneurs with export ventures. Their support also includes guidelines for businesses, technical and business assistance and trade services (Nieman, *et al.*, 2003:174).

- **Nedbank**

Through their assistance to entrepreneurs Nedbank wants to help to create the much needed jobs, improve the level of skills and generate wealth in South Africa. They do, however, not finance businesses in the agriculture, transportation and construction industries (Nieman, *et al.*, 2003:174). Nedbank has an objective to make their services to clients more accessible by bringing the needed services to them (Van Rooyen, 2006:8).

- **ABSA**

ABSA has effective tools to help entrepreneurs through a complete business guide. This guide includes various aspects of starting and managing businesses, but also measures that can help entrepreneurs to achieve success. They understand the importance of innovation, strategic objectives and growth potential (Nieman, *et al.*, 2003:175).

5.4.2 Government policies

The government in South Africa realises the need to encourage entrepreneurship. However, the rate at which these good inventions are implemented is poor. There is potential for growth in South Africa and a variety of business opportunities exist. The crucial role government needs to play is to

assist existing, new and potential entrepreneurs in their attempts to improve entrepreneurial activity (Foxcroft *et al.*, 2002:45).

Investors clearly state that labour regulations make it difficult to do business in South Africa. All these difficulties force businesses to end their operations. It is very clear that the labour laws are too strict (Msiza, 2004).

The assistance of GEM to governments in setting policies to improve entrepreneurship activity in participating countries is a big advantage to them. They help to define various types of entrepreneurs and offer advice to support each of them effectively (Orford *et al.*, 2003:5).

The problem with the implementation of government policies is that they focus on the long-term. The effective way to encourage entrepreneurship and innovation is to monitor it continuously (Von Broembsen *et al.*, 2005:35).

The current regulations on tax and labour discourage entrepreneurial activity. The problem in South Africa is the burdensome tax regulations (Mlambo-Ngcuka, 2006). These regulations hinder expansion, because expansion will lead to additional administrative problems (Von Broembsen *et al.*, 2005:7).

5.4.3 Government programmes

Government programmes aimed at small business development are not efficient enough. The objectives of these programmes are not specific enough and they try to address too many aspects. These aspects range from job creation to improving the international competitiveness in South Africa. The key to success is to specify objectives that target basic problems and achieve results step by step (Driver *et al.*, 2001:47-48).

The implementation of these government programmes is very difficult. The entrepreneur's needs are often complex and the business experiences of the people who handle the programmes is often not up to standard either. The lack of effective communication and the poor marketing of programmes are other obstacles that hinder entrepreneurial activity (Driver *et al.*, 2001:47-48).

5.4.4 Education and training

Education and training is the most frequently mentioned weakness that hinders entrepreneurial activity in South Africa (Orford *et al.*, 2003:17). This weakness is the main reason for the absence of a supportive entrepreneurial environment.

5.4.4.1 Education

The following are aspects related education in South Africa which play a role in entrepreneurial activity in the country: the education system, the former education system, the new education system, primary education, secondary education, tertiary education, solutions and additional courses. These aspects are subsequently discussed.

- **Education system**

The GEM report shows that the level of formal education has a major influence on a person's own perception of his/her abilities. This has very important impact on the possible capabilities of potential entrepreneurs (Foxcroft *et al.*, 2002:21).

The quality and content of the education system has negative implications for entrepreneurship. The problem with integrating entrepreneurship in education, leads to the absence of confidence, initiative and creative thinking among younger people (Orford *et al.*, 2003:17). The focus is neither on entrepreneurial thinking nor the necessary skills.

- **The former education system**

The impact of apartheid education on basic skills negatively influences the whole situation of poor entrepreneurial activity. The lack of interaction with the mainstream economy by either business owners or employees enhances low entrepreneurial activity. The former education system ignored critical thinking and in the process discouraged creativity and initiative (Driver *et al.*, 2001:39-40).

- **The new education system**

There is a big improvement in the new education system, with entrepreneurship capabilities forming part of five of the learning outcomes in the new curriculum. The learning area, Economic and Management Sciences (EMS), focuses on the following:

- Basic skills and knowledge for managing your own life;
- Basics of the economy;
- To become economically literate; and
- To develop entrepreneurial skills.

The Revised National Curriculum Statement (RNCS) for learners from grades R - 9 is very impressive. Entrepreneurship is part of various learning outcomes in EMS and Business studies. The concern for the education department is, however, how this new curriculum is implemented in schools. Many teachers lack the necessary knowledge and skills and therefore most schools do not implement the new curriculum (Von Broembsen *et al.*, 2005:42).

Entrepreneurship in communities receives much attention with the important objective to reduce the gap between the rich and poor people in South Africa (Driver *et al.*, 2001:41).

- **Primary education**

The lack of necessary skills is underlined by the results of a study under learners in grades five and seven. There is a big difference between the abilities of children in traditionally white schools and children in traditionally coloured and Indian schools. The mathematical skills of the latter group of learners are poor and these results in problems with financial calculations (Von Broembsen *et al.*, 2005:8). The integration of management skills into primary school education was not effective because of inadequate attention to entrepreneurship and new business creation (Driver *et al.*, 2001:39-40).

- **Secondary education**

The problem in secondary education is the inability to provide and develop children with entrepreneurial skills (Von Broembsen *et al.*, 2005:7). In comparison to other countries, South African students performed badly in areas such as mathematics and science. The standard of education differs among students and this has a negative effect on entrepreneurial activity. The government must make an effort to increase the development of entrepreneurial skills (Orford *et al.*, 2004:27-28).

- **Tertiary education**

The findings in the 2005 GEM study indicate that the tertiary education system in South Africa provides adequate entrepreneurial skills and knowledge to young people. This compares excellently to tertiary education in other countries participating in GEM (Von Broembsen *et al.*, 2005:7).

- **Possible solutions**

The education system can empower students with sufficient skills, especially in entrepreneurship. The following steps can improve the quality of entrepreneurship education in South Africa: the improvement of creativity and teamwork skills, the improvement of training to educators, the positive commitment of teachers to teach entrepreneurship, the use of business people to tell their stories and experiential learning (Driver *et al.*, 2001:54).

The following actions will also increase education in entrepreneurship locally: the improvement of mathematics and science teaching, the improvement of teachers that teach mathematics and science, the provision of incentives to new teachers in these subjects and the identification of successful schools and their role to help at less successful ones. There is evidence that quality education in entrepreneurship can improve the skills and attitudes and subsequently increase entrepreneurial activity (Orford *et al.*, 2004:52).

- **Additional courses**

The ability to address the need for skills development in entrepreneurship is a key success factor (Foxcroft *et al.*, 2002:35). The challenge in South Africa is to provide the opportunities for entrepreneurs to improve their skills. The improvement of entrepreneurial activity depends on providing individuals with the skills and attitude to become entrepreneurs. A major improvement in education and the effective teaching of entrepreneurs is needed to increase the total number of entrepreneurs (Orford *et al.*, 2004:52).

5.4.4.2 Training

Successful entrepreneurs are continuous learners. Therefore the importance of training for potential entrepreneurs is a prerequisite for success. The lack of experience in business principles and procedures intensifies the whole problem. Training can only be successful if it is sufficiently practical enough (Foxcroft *et al.*, 2002:48).

A positive idea that can promote entrepreneurial activity is that people from different occupations follow entrepreneurial courses. This process of more people learning of entrepreneurship will have many advantages to South Africa and its people (Driver *et al.*, 2001:55).

People without proper education are encouraged to pursue self-employment (Foxcroft *et al.*, 2002:27). These people need to attend as many courses as possible to improve their level of education and develop their skills. Students in entrepreneurship need quality exposure to practicing entrepreneurs in order to learn and understand the difficult field of entrepreneurship. A method that could be very effective is formal interaction between experienced business people and students (Driver *et al.*, 2001:55).

The attitude of trainers towards entrepreneurship is a key to effective training. The training of teachers in entrepreneurship (especially in black schools) needs attention. The development of effective learning material for learners and

support material for trainers will further enhance the situation (Von Broembsen *et al.*, 2005:7).

5.4.5 Research and development transfer

Research in South Africa is done on specific areas, but is often not transferred to the communities that need the information. The result is that the research neither has impact on the community nor on entrepreneurial activity. The other concern is the decrease in public research. Experienced people with business skills are needed to lead research that can make a difference to and a definite impact on entrepreneurial activity (Foxcroft *et al.*, 2002:54).

The incentive to promote research and development for science, technology and innovation through tax deductions is an effective way to improve this situation. In South Africa this type of action will help to increase the effectiveness of research and development (Von Broembsen *et al.*, 2005:35).

5.4.6 Commercial and legal infrastructure

This includes agencies which assist businesses in operating effectively. The local governments also assist businesses in their area with incentives or legislation (Van Aardt, Van Aardt & Bezuidenhout, 2003:118). According to Nieman *et al.* (2003:171) the Local Business Service Centre (LBSC) programme was established with the aim to assist businesses with their development and activities.

The LBSC is a partnership between the government, communities and the private sector. Their objectives are job and wealth creation, transformation and empowerment. According to Nieman *et al.* (2003:171) the functions of this programme are:

- To increase access to support services for local people;
- To increase opportunities for local development;
- To provide towards the expansion and development of local businesses; and
- To improve employment and the flow of capital into the community.

5.4.7 Markets openness

The openness of the market is most often an obstacle to new entrepreneurs in South Africa. The existing businesses prefer to do business with companies with good history and records. These actions make it very difficult for new businesses to make inroads in the market and make a profitable start (Foxcroft *et al.*, 2002:57).

The entrepreneur must know the market or industry environment because it has a big influence on the competitiveness of the business. The industry environment consists of opportunities and threats that need the entrepreneur's careful attention (Allen, 1999:32). The market or industry environment is crucial to future entrepreneurial success. The possible entry barriers and competitive advantage of a business also need entrepreneurs' careful attention.

5.4.8 Access to physical infrastructure

Access to physical infrastructure is an important determinant that influences entrepreneurial activity. Entrepreneurs need suitable places to conduct business. A big advantage is the flexibility to change their business venue in order to expand the market for their product or service. The impact of crime forces some entrepreneurs to relocate their business venues outside townships (Foxcroft *et al.*, 2002:55).

5.4.8.1 Spatial patterns

South Africa is spatially divided into provinces and municipalities. There is a big difference in the entrepreneurial activity among provinces in South Africa. The

primary reason is that those provinces which display higher entrepreneurial activity consist of large urban areas that seem to be more conducive to entrepreneurship (Orford *et al.*, 2003:4).

5.4.9 Social and cultural norms

The third most frequently mentioned weakness in South Africa is cultural and social norms (Orford *et al.*, 2003:17). Existing social and cultural norms affect entrepreneurial activity in South Africa. It can encourage or discourage individual actions that can lead to new ways of conducting business and spread wealth and income more evenly.

The role of the social entrepreneur in South Africa needs to receive more attention. Improvement in a society or community depends heavily on these entrepreneurs. They want to make a positive contribution to the community and are not interested in making profit. The media can take actions to promote these entrepreneurs and the role they play in their communities by giving their efforts more media coverage (Foxcroft *et al.*, 2002:50).

The absence of trust in personal and business relationships is an obstacle to effective business. The problem with people who have low confidence results in the practice of providing others the opportunity to find solutions to problems (Driver *et al.*, 2001:4). Entrepreneurial activity suffers greatly due to negative social perceptions. The 2003 GEM report emphasises the importance of people's beliefs in their ability to start a new business (Orford *et al.*, 2003:13).

Early family environment, role models and the media all affect entrepreneurial activity (Driver *et al.*, 2001:41-42).

5.4.9.1 Early family environment

The early family environment is influenced by the community, race and birth order.

- **Community**

The community can encourage or discourage an environment for entrepreneurial thinking. The community can influence a person's rationale for being an entrepreneur, as well as their wants and desires (Rabbior *et al.*, 1996:7). South Africa can focus more on social entrepreneurs and give more attention to them, as make a positive contribution to the communities they work in (Foxcroft *et al.*, 2002:50).

- **Race**

South African history is responsible for creating disadvantages such as race and gender. The entrepreneurs in townships play an important role in the communities and therefore need attention. They have various disadvantages and problems to overcome. The 2002 GEM survey also covered entrepreneurs in townships and results from this study can be used to create wealth and jobs (Foxcroft *et al.*, 2002:27-28).

- **Birth order**

Firstborn children tend to seek more responsibility and be high achievers. These characteristics correlate with those associated with entrepreneurs (Coulter, 2003:18). A child's birth order plays an important role because it seems that firstborn children tend to receive special attention, resulting in greater self-confidence and spurring entrepreneurial skills (Rwigema & Venter, 2004:69).

5.4.9.2 Role models

In South Africa successful entrepreneurs do not receive the recognition and attention they need. There are sporting heroes, but few entrepreneurs are widely known. Most of the young people in South Africa have a role model from the world of sport who they adore. It is very important, however, that younger people also have entrepreneurial role models (Driver *et al.*, 2001:42).

Learning from observations is very effective and this method can be very useful to improve entrepreneurial activity. Learning from role models with similar

backgrounds will encourage younger people to become entrepreneurs. Potential young entrepreneurs can take heart of the challenges entrepreneurial role models have overcome, and learn to also act positively to challenges they might face (Orford *et al.*, 2003:14).

5.4.9.3 The media

The media in South Africa is a very powerful instrument. South Africans have the privilege to have news and other programmes on television and radio in their own language. As a result the image of entrepreneurship can improve through effective programmes in the media. The use of national, local and especially community newspapers can also be useful in this regard.

The effective launching of competitions to enhance entrepreneurial behaviour can improve entrepreneurial activity. In combination with good media coverage these types of competitions can create entrepreneurial awareness, which could again have a huge impact on entrepreneurship in South Africa. The creation of successful businesses can receive more attention, and new business start-ups could also receive more media coverage (Driver *et al.*, 2001:56).

The contribution to entrepreneurial activity in South Africa will probably occur when the media starts to give more attention to entrepreneurship through public broadcasters as the SABC and eTV. The impact of more expenditure to promote entrepreneurship in South Africa is starting to increase the support to businesses and their successful development (Foxcroft *et al.*, 2002:8). The media received praise for their past efforts to highlight role models and to make them part of the population (Von Broembsen *et al.*, 2005:11).

5.5 ENTREPRENEURIAL PROCESS

The entrepreneurial process consists of the entrepreneur, the opportunity and the needed resources.

5.5.1 Entrepreneur

The need for achievement, the work experience of the entrepreneur, entrepreneurial parents, age and gender, and aspects of entrepreneurial education play a big role in South Africa. These elements are subsequently discussed.

5.5.1.1 Need for achievement

The positive developments in South Africa in terms of the nature of political transformation established the foundation for effective entrepreneurship in the future. The results of the 2002 GEM report also strongly show that South Africans have the right abilities for entrepreneurship such as resilience, tenacity, self-reliance and creativeness to successfully create and manage businesses (Foxcroft *et al.*, 2002:45).

5.5.1.2 Work experience of the entrepreneur

Work experience is an excellent learning experience and people who have both proper education and practical training and experience have a big advantage. Potential entrepreneurs' lack of working experience is another contributing factor to low entrepreneurial activity in South Africa (Driver *et al.*, 2001:42).

5.5.1.3 Entrepreneurial parents

Parents' occupation is important because there is strong evidence that entrepreneurs tend to have self-employed or entrepreneurial fathers (Hisrich *et al.*, 2005:65). The social status of parents also seems to spur entrepreneurial careers, because those parents with higher social status encourage independence among their children (Rwigema & Venter, 2004:69).

The father's career has a strong influence on a child (Bolton & Thompson, 2000:18). The GEM report emphasises the fact that individuals exposed to family or friends with entrepreneurial experience have a big advantage in terms of entrepreneurial capabilities (Foxcroft *et al.*, 2002:21).

5.5.1.4 Age and gender

In South Africa people between 25 and 44 years old are the most actively group involved in entrepreneurship. The comparison with other developing countries, however, indicates that entrepreneurial activity is lower in South Africa (Orford *et al.*, 2003:12). The role of the female entrepreneur is furthermore hindered by the business culture in South Africa.

According to Orford *et al.* (2003:5) education in entrepreneurship is crucial for young people and especially young men. The difference between the entrepreneurial activity rates among men and women is determined through opportunity entrepreneurship. As such, it was found that men are more involved in opportunity entrepreneurship than women (Foxcroft *et al.*, 2002:22).

The situation in the individual provinces also indicates that men are more involved in entrepreneurship than women. The men in Gauteng, the Western Cape, Kwazulu-Natal, Mpumalanga, Limpopo, North-West and the Northern Cape are more entrepreneurial than women.

It is interesting that there is no difference between the entrepreneurial activity of men and women in the Free State and Eastern Cape (Foxcroft *et al.*, 2002:22). The findings of 2005 GEM report indicate that men are the job creators, with their job creation potential estimated at 2.3 times higher than that of women (Von Broembsen *et al.*, 2005:7).

5.5.1.5 Aspects of entrepreneurial education

Education in entrepreneurship can have a big impact on the following areas crucial to entrepreneurship: the self-confidence of individuals about their ability to start a new business, people's correct understanding of financial and business aspects, individual's desire to start their own business, and their desire to go for higher education (Orford *et al.*, 2004:4).

South African individuals need the correct mindset to be entrepreneurs. South Africans are seen as people who can cope in difficult circumstances, make

sacrifices and determinately strive for success. The problem in South Africa is, however, that failure and criticism is not seen as a learning opportunity, but rather as a negative element (Foxcroft *et al.*, 2002:50).

5.5.2 Opportunity

GEM divides entrepreneurship on the basis of the motivation behind entrepreneurial activity. Entrepreneurship can be divided into opportunity entrepreneurs and necessity entrepreneurs. The opportunity entrepreneur uses a business opportunity, while the necessity entrepreneur has no better work options (Orford *et al.*, 2004:11).

5.5.2.1 Opportunity entrepreneurs

Opportunity entrepreneurship in South Africa (compared to that in other countries) features more prominently than necessity entrepreneurship. This is a very interesting fact, because South Africa has a huge problem with unemployment and poverty (Driver *et al.*, 2001:16).

Entrepreneurs who create many jobs are high-potential entrepreneurs. This type of entrepreneurs can make a big impact on economic growth of a country. The opportunity entrepreneur has the ability to become a high-potential entrepreneur if he/she has the required skills and the correct attitude (Driver *et al.*, 2001:49).

In 2003 approximately 63% of entrepreneurs in South Africa took advantage of business opportunities. Opportunity entrepreneurship exceeded necessity entrepreneurship more than twice in Gauteng and the Western Cape (Orford *et al.*, 2003:21).

The rate of opportunity entrepreneurship in South Africa from 2002 to 2004 is as follows (Orford *et al.*, 2004:13): 3.2% (2002), 2.9% (2003) and 2.8% (2004). In 2005 the rate of opportunity entrepreneurship in South Africa was only 2.95% (Von Broembsen *et al.*, 2005:7).

5.5.2.2 Necessity entrepreneurs

In South Africa the necessity entrepreneur is more of a survivor and tries to get the income he/she requires to operate a business. This type of entrepreneur usually lacks the needed skills and available resources to create a growing business. This type of entrepreneurship in South Africa will not relieve poverty or stimulate growth because of its limited potential to create work (Driver *et al.*, 2001:51).

In 2003 approximately 37% of entrepreneurs in South Africa were necessity entrepreneurs (Orford *et al.*, 2003:21). In Kwazulu-Natal was the only province in South Africa where the necessity entrepreneurs exceeded the opportunity entrepreneurs. The rate of necessity entrepreneurship in South Africa from 2002 to 2004 is as follows (Orford *et al.*, 2004:13): 2.3% (2002), 1.5% (2003) and 2.4% (2004). In 2005 the necessity entrepreneurial activity rate was a very low 2.05% (Von Broembsen *et al.*, 2005:7).

5.5.3 Resources

The problem of scarce resources is also part of the challenge facing businesses in South Africa. It is crucial to maximise the use of all available resources. These resources include human resources, financial resources, physical resources and information resources (Cronje *et al.*, 2004:118).

5.6 NEW BUSINESSES

The Western Cape and Gauteng have higher entrepreneurial activity rates than the Northern Cape and North-West provinces. Table 5.1 provides the entrepreneurial activity rates in South Africa's nine provinces.

Table 5.1 TEA in provinces

Province	TEA (%)	Province	TEA (%)
Gauteng	10	Limpopo	3
Western Cape	9	Mpumalanga	3
Kwazulu-Natal	7	Northern Cape	3
Free State	5	North-West	3
Eastern Cape	5		

Source: Orford *et al.* (2003:5).

5.7 NATIONAL OUTCOMES

Entrepreneurial activity influences economic growth, job creation and innovation.

5.7.1 Economic growth

Entrepreneurs create new businesses that drive the economy and improve economical growth (Timmons & Spinelli, 2004:15-19). The TEA of a country is the percentage of people between 18 and 64 years old who is actively involved in starting a business or part thereof which has been in operation for less than three and a half years (Orford *et al.*, 2004:10).

According to Foxcroft *et al.* (2002:13) the TEA for South Africa was 6.45% in 2002. In 2003 it decreased to 4.3%. In 2004 the total entrepreneurial activity (TEA) index for South Africa was 5.4% (Orford *et al.*, 2004:10).

This problem with entrepreneurial activity in South Africa is continuing, with the TEA decreasing to 5.1% in 2005 (Van Zyl, 2006:49). It is clear that the economic growth in South Africa will not improve until the TEA increases.

5.7.2 Job creation

SME's in South Africa currently provide more employment and business turnover than big businesses and public organisations together (De Groot *et al.*, 2004:107). South Africa has the lowest TEA of all the developing countries that participated in the GEM survey (Von Broembsen *et al.*, 2005:7). A high

entrepreneurial activity ensures job creation, but with the current situation in South Africa unemployment will most probably increase.

5.7.3 Innovation

The following types of innovation exist: customer-orientated innovation, competitor-orientated innovation and technology-orientated innovation. These are subsequently discussed.

5.7.3.1 Customer-orientated innovation

The continuous process of product development is a characteristic of the customer-orientated innovation. Businesses can be classified in terms of whether their products are known, new to some of their customers or new to all their customers. In South Africa the majority of businesses do not innovate, and therefore this type of innovation is low. The low rate of customer-orientated innovation, however, is a global trend (Von Broembsen *et al.*, 2005:31-32).

5.7.3.2 Competitor-orientated innovation

A business can innovate through the way it differentiates itself from their competitors. The number of competitors that offers the same product or service to potential customers shows the competitor differentiation. The increase in competition is dramatic and it has intensified lately (Von Broembsen *et al.*, 2005:32).

This type of innovation can influence the business in two ways. On the one hand, the business must defend market share with resultant lower profits. An increase in competitors ensures the efficiency of markets. This situation should benefit customers because of the different businesses competing for the same disposable income of customers (Von Broembsen *et al.*, 2005:32-33).

The situation abroad is that businesses strive for innovation to differentiate them from competitors. In South Africa it seems that competition is an obstacle for businesses to differentiate them from one another. The business owners in

South Africa rather employ strategies of imitation (Von Broembsen *et al.*, 2005:33).

5.7.3.3 Technology-orientated innovation

The use of technology determines the rate of technology-orientated innovation. Using technology older than a year indicates that the business has a low technology orientation. Businesses which use the very latest technology, on the other hand, have a high technology orientation (Von Broembsen *et al.*, 2005:33).

Business owners in South Africa have a low technology orientation due to the fact that most businesses lack the ability to effectively use technology. The advantages in using the latest technology in products, services and processes are enormous. The big challenge is, however, to transfer the needed skills to people working in these businesses (Von Broembsen *et al.*, 2005:33-34).

5.8 SUMMARY

Entrepreneurship in South Africa is influenced by general determinants, entrepreneurial determinants, the entrepreneurial process, the formation of new businesses and the national outcomes.

General determinants influence the environment and are specific to South Africa. The government in South Africa has a positive attitude towards external openness of markets. The role of the South African government, however, hinders entrepreneurial activity. The government needs to look urgently at the many regulations applicable to businesses and the difficult tax system. The accessibility of finance is a concern and currently receives attention. Technology, infrastructure, management skills and the status of the labour market hinder entrepreneurial activity in South Africa.

Entrepreneurial determinants in South Africa are furthermore hampering entrepreneurial activity. Financial support is often inefficient, because assistance is not consumer friendly. Procedures associated with funding

businesses are complex. Plans of incentives for entrepreneurs exist but the implementation thereof needs attention. The programs of the South African government are poorly executed and uncoordinated.

The goals of institutions to develop and assist potential and existing entrepreneurs are ineffective. It is time to use experienced and credible business people to lead these programs. The outcomes must be monitored and performance is crucial. Education and training in South Africa in terms of entrepreneurship is insufficient. The lack of mathematical and language skills is a major obstacle in education. This problem underlines the fact that most businesses in South Africa fail because of weak financial and other management.

The national infrastructure is excellent in urban areas, but some informal settlements and rural areas have poor or non-existent infrastructure. The influence of cell phones can have a positive effect on communication in South Africa, if the cost thereof can be lowered. Transportation infrastructure currently receives urgent attention, especially in urban areas. Furthermore, programmes that promote the development of computer networks are also being implemented.

The South African community is starting to realise the importance of entrepreneurship in the country. Entrepreneurs are seen as people who can help to increase the standard of living in communities. The attitude of the population in terms of entrepreneurship has changed, and through the influence of the media the positive aspects thereof increased. The use of role models to promote entrepreneurship is effective, but should still receive more attention.

The entrepreneurial process consists of the interaction between the entrepreneur, the opportunity and the resources. Entrepreneurs in South Africa have a strong need for achievement, but the lack of experience has a negative influence on them. Another stumbling block is the negative attitude towards failure and criticism, as this is often not seen as a learning experience or opportunity.

According to the TEA rate of 5%, the formation of new businesses in South Africa is low. Moreover, the TEA in some provinces is even lower than the national rate. This clearly shows the enormous weak status of entrepreneurial activity in the country. This is a major setback for the government in their quest to achieve the national outcomes of economical growth, job creation and innovation.

The government in South Africa strives towards achieving the national outcomes. Economic growth is positive, but the unemployment rate is high. High entrepreneurial activity can ensure economic growth and the continuous creation of jobs. The level of innovation is a concern and thus needs urgent attention.

6 EMPIRICAL ANALYSIS

6.1 INTRODUCTION

In the previous chapters the determinants which influence entrepreneurial activity were discussed. General determinants such as openness of trade, role of the government, financial markets, technology, infrastructure, management skills and labour markets were outlined. Entrepreneurial determinants refers to financial support, government policies, government programmes, education and training, research and development transfer, commercial and legal infrastructure, market openness, access to physical infrastructure and cultural and social norms.

The determinants of entrepreneurial start-ups and therefore entrepreneurial activity are most often discussed in the literature. Access to finance (financial intermediation) is a crucial element of entrepreneurial success. The empirical evidence from different developing countries tends to underline the fact that financial intermediation can have a serious and binding constraint on entrepreneurship.

This is not to imply that other constraints may be less binding. Certainly, the contributions from endogenous growth theory and the new economic geography, (such as education and agglomeration) have a potentially important role in explaining differential growth performance in regions. Per implication these also explain the differential rates of entrepreneurial start-ups.

In this study, cross-sectional data on South Africa's 354 regions (magisterial districts) for the years 2003 and 2004 are used, allowing the researcher to pool data. This chapter is structured as follows. In section 6.2 the regression model is discussed. The variables and data are discussed in section 6.3, with the estimation results in section 6.4. The chapter concludes with a summary.

The dataset includes data on TEA per region, regional profits, regional unemployment rates, number of banks per region, education levels per region, population per region, population density per region, urbanisation per region, the number of people employed in the informal sector, the disposable income per family, the gross value added, the economic growth rate and the exports per region.

6.2 REGRESSION MODEL

The theoretical model is tested by estimating an equation that expresses the rate of new business start-ups as a function of a number of determinants. The latter has been identified in the model to include education, profits, the number of banks, agglomeration and unemployment. Additional factors, such as openness to trade and export success, can also be added as determinants.

The formula for estimating the determinants of entrepreneurial start-ups can be expressed as follows:

$$\ln y_i = X_{i(t)}\gamma + \varepsilon_i \quad (1)$$

Where y = the start-up rate in a magisterial district; $X_{i(t)}$ = a vector of determinants of start-ups, including measures to proxy the degree of financial intermediation (number of banks). The error term (ε) will here include unmeasured attributes affecting start-up rates such as culture, external shocks and climate.

The variable "total entrepreneurial activity" is used to measure start-up rates in a particular region (district) of South Africa. Total entrepreneurial activity is measured as the proportion of adults who operate a business in operation for less than 42 months. The data on total entrepreneurial activity was obtained from the 2003 and 2004 GEM surveys (see <http://www.gemconsortium.org/category-list.asp?cid=126>).

Unfortunately, the 2003 and 2004 GEM surveys did not cover all of South Africa's 354 magisterial districts, but only a sub-sample of 182 districts. In some

of these districts, the number of interviews was low, and in some cases a zero rate of total entrepreneurial activity was found.

This implies that for the sample the dependent variable is bounded from below, i.e. censored. In such a case, using the OLS estimator on equation (1) will yield biased estimates. It is subsequently recommended that a more appropriate estimator, such as the Tobit estimator, is used.

Equation (1) above can be re-written as a Tobit model as follows.

$$y_{it}^* = x_{it} \beta_j + \mu_i + \varepsilon_{it} \quad (2)$$

Where y_{it}^* = a latent variable measuring the potential start-up rate in location (i) at time(t); Also, x_{it} = a matrix of explanatory variables as discussed; μ_i = a vector of time-invariant unobservable factors determining start-up rates; and ε_{it} = a vector of stochastic disturbances.

Often μ_i and ε_{it} are written as a composite error term, which is assumed to be normally distributed. Then also assume $E(\mu_i \mu_j) = 0$; $E(\mu_i \varepsilon_{it}) = 0$ and $E(\varepsilon_{it} \varepsilon_{jt}) = 0$.

Because not all regions have positive start-up rates, y_{it}^* is interpreted as a latent variable that represents an unobservable index of ability to start new businesses in a magisterial district (see also McPherson *et al.*, 1998:8). Total entrepreneurial activity will take on a positive value if this measure is positive. In other words:

$$y_{it} = \begin{cases} y_{it}^* & \text{if } y_{it}^* > 0 \\ 0 & \text{if } y_{it}^* \leq 0 \end{cases} \quad (3)$$

Equation (3) can be written as

$$y_{it} = \begin{cases} \beta'x_{it} + \mu_i + \varepsilon_{it} & \text{if } \beta'x_{it} + \mu_i + \varepsilon_{it} > 0 \\ 0 & \text{otherwise} \end{cases} \quad (4)$$

In estimation (4) one final allowance must be made for the fact that the number of observations from each magisterial district is different, due to sampling. Therefore, the start-up rates from each district is a point average that will be influenced by the number of observations in that district.

This can lead to problems related to non-random sampling. Therefore the need exists to correct this. This problem is addressed by using analytical weights in the regressions, and using the total population in each district as weight. Where possible, natural logarithms of the variables were taken. By using Tobit in STATA 9, (4) is implemented. The results are discussed in section 6.4

6.3 VARIABLES AND DATA

Three basic sources of data were used. Firstly, data from the 2003 and 2004 GEM Surveys in South Africa was taken, together with the total entrepreneurial activity (TEA) rate calculated for each magisterial district covered in the survey. In total, 3 314 individuals were surveyed in 2003 and 2004, of which 3 263 and 3 253 questionnaires from respectively 2003 and 2004 were usable.

Secondly, Data from the 2003 and 2004 surveys on the 182 districts covered in the GEM surveys on levels of education, profits, size of the regional economy, agglomeration and regional economic growth rates, was obtained from Global Insight Southern Africa's Regional Economic Focus (2005).

Thirdly, the number of branches of ABSA Bank (South Africa's largest commercial bank) in each magisterial district was calculated. The number of branches is as an indicator of financial concentration. This information was obtained from the ABSA internet site (www.absa.co.za). ABSA has the most extensive spatial coverage in South Africa, and allows researchers to obtain an

indication of the relative availability of bank branches across South Africa's different regions.

Table 6.1 provides the variables, their definitions, basic descriptive statistics and main sources.

Table 6.1 Variables used in this study

Variable	Description	Source	Mean	Standard Deviation
Start-up rates	Total entrepreneurial activity as defined in the GEM Survey	Global Entrepreneurship Monitor Survey 2003 and 2004	3.5%	7.5%
Population	Total population per district in 2003 and 2004	Global Insight Regional Economic Explorer, 2006	209 616	199 512
Population density	People per square km per magisterial district in 2003 and 2004	Global Insight Regional Economic Explorer, 2006	512	1 378
Profit	Gross operating surplus per district in 2003 and 2004	Global Insight Regional Economic Explorer, 2006	R 3 087 892	R 6 969 703
Unemployment	Unemployment rate in 2003 and 2004 per district	Global Insight Regional Economic Explorer, 2006	42%	18%
Education	Proportion of the population with a matric (Grade 12) qualification of higher in 2003 and 2004	Global Insight Regional Economic Explorer, 2006	4.8%	3.5%
Size of the economy	Gross Value Added per district in 2003 and 2004	Global Insight Regional Economic Explorer, 2006	R 4 966 136	R1 200 000 000
Number of banks	Number of current ABSA bank branches	Calculated from ABSA's website (www.absa.co.za)	1.9	3.4

A final remark can be made on the choice of indicators used in the regression analysis. As can be seen from Table 6.4 measures of population density and economic size will alternatively be used to capture the effects of the forces of agglomeration on start-ups. Population density is often used in studies on

economic geography as a proxy of market access and a positive coefficient is expected.

Table 6.2 shows the relation between the determinants used in the framework and the variables.

Table 6.2 Relation between variables and determinants

Variable	Determinant	Section in study where discussed
Start-up rates	New business creation	Section 2.3, 4.7 & 5.6
Population	Cultural & social norms	Section 4.5.9 & 5.4.9
Population density	Cultural & social norms	Section 4.5.9 & 5.4.9
	Infrastructure	Section 4.4.5, 4.5.8 , 5.3.5 & 5.4.8
	Labour markets	Section 4.4.7 & 5.3.7
Profit	Research & development	Section 4.5.5 & 5.4.5
	Technology	Section 4.4.4 & 5.3.4
	Innovation	Section 4.8.3 & 5.7.3
Unemployment	Job creation	Section 4.8.2 & 5.7.2
Education	Government policies	Section 4.4.2 , 4.5.2 , 5.3.2 & 5.4.2
	Government programmes	Section 4.5.3 & 5.4.3
	Management skills	Section 4.4.6 & 5.3.6
	Education	Section 4.5.4 & 5.4.4
Size of economy	Market openness	Section 4.4.1 , 4.5.7 , 5.3.1 & 5.4.7
Number of banks	Financial markets	Section 4.4.3 & 5.3.3
	Financial support	Section 4.5.1 & 5.4.1

In Table 6.3 the possible effect of the variables on entrepreneurial activity is discussed.

6.4 ESTIMATION RESULTS

Equation (4) was estimated using a Tobit-estimator (see chapter 2, section 2.5.1.4). For comparative purposes, OLS estimates (see chapter 2, section 2.5.1.3) are also provided. Due to potential difficulties with Tobit estimates in the presence of heteroskedasticity (see chapter 2, section 2.5.1.2), the researcher used bootstrapping to calculate robust standard errors for the Tobit estimates.

Table 6.3 Variables and theoretical discussion

Variable	Description	Expected effect on entrepreneurial activity
Start-up rates	TEA as defined in the GEM Survey	
Population	Total population in 2003 and 2004 per district	Positive or negative. A larger population can create various opportunities for entrepreneurs (demand-driven). Greater competition may hinder start-ups.
Population density	People per square km per magisterial district in 2003 and 2004	Positive or negative. A larger population can create various opportunities for entrepreneurs (demand-driven). Greater competition may hinder start-ups.
Profit	Gross operating surplus per district in 2003 and 2004	Positive. Profits will be an incentive for start-ups.
Unemployment	Unemployment rate per district in 2003 and 2004	Positive and negative. Unemployment can force people to create their own businesses in order to obtain income (necessity entrepreneurs). However, if the unskilled sector of the population becomes unemployed they may not be able to exploit opportunities.
Education	Proportion of the population with a matric (Grade 12) or qualification higher in 2003 and 2004	Positive. Effective education and training is crucial in the quest for the entrepreneurial activity.
Size of the economy	Gross Value Added per district in 2003 and 2004	Positive or negative. The value added can help to increase entrepreneurial activity (agglomeration effect). Increased competition can have a negative influence on entrepreneurship.
Number of banks	Number of current ABSA bank branches in the district	Positive. The number of banks in a region will stimulate start-ups due to closer proximity and lower monitoring costs.

Table 6.2 contains the OLS-estimates for comparative purposes and Table 6.3 the Tobit estimates. Table 6.2 shows that all of the explanatory variables are statistically significant determinants of start-up rates across South Africa's districts. The signs of the coefficients are distributed according to expectations, and it can be seen that the number of bank branches (an indicator of financial

concentration) suggests that with less concentration there will be an increase in the business start-up rate.

Likewise, education and profits have a positive impact on start-ups. Overall, the impact of profits is the strongest - almost twice as strong as the impact of educated entrepreneurs. It is also noticeable from table 6.2 that (with the coefficients analytically weighted by the population size of the district) the size of the coefficient on education falls by approximately half - from 0.40 to 0.22, and the coefficient on profits increases from 0.71 to 0.77.

Thus, in the weighted regression, profit rates exert an influence almost four times stronger than that of either education or the number of banks. When the unemployment rate is included in the regression, the coefficient estimates are positive, but not statistically significant. This suggests the absence of an association between unemployment and entrepreneurial start-up rates in South Africa.

The negative coefficient on Gross Value Added (GVA) is negative. This could reflect diminishing returns to entrepreneurship as an economy becomes larger, with higher levels of competition and more significant barriers to entry in the larger South African districts acting as a disincentive for entrepreneurial start-ups. One of the five forces of Porter is entry barriers (see chapter 4, section 4.5.7). Entry barriers for entrepreneurs are major obstacles in South Africa (see chapter 5, section 5.4.7).

Thus, agglomeration only has positive effects on entrepreneurial start-up rates. This needs not always be the case. Table 6.4 shows that the weight of the coefficients does not significantly affect the size of the coefficients related to either economic size or the number of banks.

Table 6.4: OLS Estimates of the Determinants of Total Entrepreneurial Activity in South Africa (dependent variable Log of Total Entrepreneurial Activity)

Variable	Coefficient	Weighted Coefficient
Intercept	9.20 (6.91)**	7.04 (4.04)**
Profits	0.71 (1.67)*	0.77 (1.81)*
Size of the economy	-1.08 (-2.59)**	-1.04 (-2.46)**
Education	0.40 (2.50)**	0.22 (1.38)**
Number of Bank branches	0.21 (1.72)*	0.21 (2.00)*
Adj R ² N = 93	= 0.24	=0.12

(t-ratio's in brackets: a * indicates significance at the 5% level and ** at the 1% level)

Table 6.5 contains the Tobit estimates, with uncorrected and corrected (bootstrapped) standard errors and with weighted coefficients. The results are fairly similar to those obtained using OLS. It can also be seen that using weights reduces the size of the coefficient on education, as in the case of the OLS estimates.

Table 6.3 confirms that profits, education and the number bank branches in a district are positively associated with start-up rates, with the largest effect due to profits. Also, in South Africa at present, economic size (measured by GVA) acts as disincentive for new start-ups. The financial support (number of banks) is important to entrepreneurial activity (see chapter 4, section 4.5.1). In South Africa the financial support is a weakness in the effort to improve entrepreneurial activity (see chapter 5, section 5.4.1).

Table 6.5: Tobit Estimates of the Determinants of Total Entrepreneurial Activity in South Africa (dependent variable Log of Total Entrepreneurial Activity)

Variable	Coefficient	Bootstrap standard errors	Weighted Coefficients
Intercept	9.26 (1.31)**	(1.58)**	7.10 (1.7)**
Profits	0.72 (0.414)*	(0.483)	0.78 (0.419)**
Size of the economy	-1.09 (0.411)**	(0.493)**	-1.06 (0.418)**
Education	0.39 (0.15)**	(0.167)**	0.22 (0.159)
Number of Bank branches	0.23 (0.12)*	(0.124)*	0.22 (0.105)**
Pseudo R ² = N=93	0.14	0.14	0.06

(Standard errors in brackets. A * indicates significance at the 5% level and ** at the 1% level)

6.5 SUMMARY

This study started from the observation that growing spatial inequality within developing countries may be due to differences in the rate of growth among business start-ups among regions. Given that recent advances in endogenous growth theory and the new economic geography emphasised factors such as education and agglomeration in the regional growth process, and given the fact that these factors are consistent with the various determinants of entrepreneurship most often recognised in the economic literature, the study proceeded to investigate the role of and determinants of start-ups in a developing country context.

The contribution of the study is twofold. Firstly, despite the plausible role for the rate of small business start-ups in explaining regional inequality in developing countries, relatively little theoretical and empirical work has tried to formalise these ideas – most of the focus has been on gathering empirical evidence in developed countries such as Sweden, Denmark, and the USA.

In this study, a theoretical model is provided of business start-ups within a developing country context that takes on board issues of endogenous regional growth dynamics. The model generated a number of predictions, such as that increased education and access to banks will increase the rate of business start-ups and that agglomeration's effects can be both positive and negative.

The study provided empirical evidence on the determinants of business start-ups from a developing country context, namely South Africa. The analysis established that the most important determinants of start-up rates across South Africa's magisterial districts are profit rates, educational levels, agglomeration as measured by the economic size of a district, and the number of bank branches in a district.

Unemployment was not found to be significant, suggesting that start-up businesses do not contribute significantly to reduce unemployment in South Africa and that unemployment does not act as a spur to entrepreneurship. One reason for such a lack of correlation between unemployment and start-up rates could be due to the fact that the failure rate of start-ups is high (in South Africa 80% fail within three years) and that their growth is slow.

As for the signs of the effects of the significant variables, it was found that profits and education have significant positive effects on the rate of start-ups, as was expected. Profits have by far the strongest effect – almost three times as strong as that of education. This, together with the insignificance of unemployment for start-ups, may imply that start-ups in South Africa are mainly opportunity-driven, as opposed to being necessity-driven.

A further finding is that the number of bank branches in a district is significant and positively associated with the start-up rate. In some cases a higher entrepreneurial activity can lead to more bank branches being established in a specific area. The effect is about similar to that of education in size, and supports various anecdotal reports on the constraining effect of lack of finance on start-ups. This particularly suggests that with more banks per population or nascent entrepreneur, more entrepreneurs may obtain access to finance.

The positive impact can come through easier access, competition among bank branches as well as lower monitoring costs when banks serve fewer clients in a particular geographic area. Finally, the theoretical model implied that agglomerations may have either a positive or a negative impact on start-up rates.

The positive effects are due to the market-size effects created by density and scale of economic activity. This includes localisation and urbanisation economies. The negative effects are due to decreased returns that set in with size, caused by "congesting" factors such as greater competition, tougher barriers to entry, monopolistic behavior under conditions of increasing returns, and more difficulty to be innovative.

The empirical evidence pointed to the fact that in South Africa, agglomerations do not provide a positive impetus to start-ups anymore. Rather, districts with larger economies tend to have relatively lower rates of start-ups: although they tend to have higher business participation rates, the growth of new businesses in these areas has slowed down.

The implications from the study are that underlying structural factors that determine profit rates in different regions of South Africa will have an important effect on start-up rates in those regions. It is also anticipated that these effects will differ among regions. In this regard, structural factors include economic resources, worker productivity and infrastructure.

Policy choices, such as those that focus on education, training and skills development for entrepreneurs and those that aim to extend financial intermediation to entrepreneurs, will have positive impacts on start-ups in aggregate and in narrowing the gap among different regions.

However, the strengths of the effects of education and financial intermediation combined is only half of that of profits. The implication is that unless underlying structural factors within regions change, the spatial patterns and inequalities in business start-ups and regional growth in South Africa will probably persist.

It is clear that some determinants have a bigger influence on entrepreneurial activity than others. Therefore the continuous investigation on determinants in every country is essential towards achieving national outcomes. The importance of each determinant should be identified. A country can only try to improve its entrepreneurial activity by addressing the determinants that have the most significant influence on entrepreneurial activity.

7

SUMMARY, FINDINGS AND RECOMMENDATIONS

7.1 INTRODUCTION

The purpose of this dissertation was to identify the determinants that influence TEA in the different provinces or regions in South Africa. This study surveyed the literature on the determinants of entrepreneurial activity and used empirical methods to identify these determinants in South Africa.

The study consists of 6 chapters. In chapter 1 the problem statement with the goal and objectives were outlined. In chapter 2 the research methodology was discussed with the focus being on entrepreneurial theories in chapter 3. The determinants that influence entrepreneurial activity were discussed in chapter 4 by using a framework for entrepreneurship and the occurrence of these determinants in South Africa were outlined in chapter 5. The empirical study was discussed in chapter 6.

7.2 FINDINGS

The following findings were made in the different chapters of the study.

7.2.1 Research methodology

A diagram of the process followed in the study was given (see chapter 2, section 2.2). The information of GEM, ABSA and GISA 2005 was used. Regression analysis and estimation were used in the empirical study to recognise the influential variables. The relationship between the different determinants and these variables was shown (see chapter 2, table 2.1)

7.2.2 Entrepreneurship theory

The history of entrepreneurship clearly shows a continuous debate on the theoretical roots of entrepreneurship. Researchers have a clear preference to highlight an individual aspect of entrepreneurship. They focus on the chosen aspect and subsequently develop a theory. Entrepreneurship does not have a

universal definition and therefore the above mentioned practice is insufficient. It is clear that research on entrepreneurship can only be successful if all concerned recognise the broad scope thereof.

Entrepreneurship consists of a process, the environment, the business and the individual. All these aspects affect entrepreneurship, some more than others. The purpose of this study was to identify the determinants that influence entrepreneurship in South Africa. Therefore, it is important to view entrepreneurship from different angles, and to focus on all its aspects.

There are different views on entrepreneurship, as researchers analyse it from different perspectives, schools of thought and aspects. There are also different theories on entrepreneurship, including economic, behaviouristic, management science, social and entrepreneurial perspectives.

The different schools of thought on entrepreneurship originated in various countries. These focus on the entrepreneur as undertaker (French), opportunity recogniser (Austrian), innovator (German), wealth creator (American) and profit seeker (British).

The contribution of economics in entrepreneurship is the cornerstone of the economic theory on entrepreneurship. Cantillon, Say and Schumpeter are some of the researchers who hold this viewpoint. The actions of Weber changed this viewpoint and shifted the focus to the individual and his attributes to entrepreneurship. Therefore the sociological and psychological started to attract more attention. Some of the researchers who hold this viewpoint are McClelland, Rotter, De Vries and Gartner.

Entrepreneurship is still a developing field in terms of definitions and theories. Therefore, the possible relationship or influence on other fields such as strategic management, sociology, anthropology and professional management is difficult to recognise. Investigating articles on these different aspects clearly shows the different determinants that influence entrepreneurship. The literature has frameworks that discuss these determinants. In this study the focus is on the

frameworks of Gartner (his conceptual framework), Gnyawali and Fogel (their framework for entrepreneurial environments) and the GEM framework.

7.2.3 Determinants of entrepreneurship

A framework for entrepreneurship was developed from the above-mentioned frameworks and the model of Timmons. The framework consists of general determinants, entrepreneurial determinants, the entrepreneurial process, the formation of new businesses and the national outcomes.

General determinants influence the environment and are specific to every country. These determinants create a unique environment for start-up, new, growing and existing businesses. External openness of markets will create opportunities and possibilities for entrepreneurs. The positive attitude of the government and efficient functioning of financial markets can create an environment conducive to entrepreneurship.

The exploitation of technology and the physical infrastructure of a country have a noticeable influence on the business environment. The availability of management skills in countries will secure the sustainability of businesses. These businesses can create jobs and increase employment. The situation of the labour market influences the quality of work and determines the future of businesses.

The individual's decision to start a business is influenced by the entrepreneurial determinants. The availability and assistance of finance to entrepreneurs is crucial for them to successfully start and maintain businesses. Government's assistance to businesses is applaudable, but administrative procedures are too complex for people trying to access the assistance. The flow of information between government and businesses is one of the most important factors that influence the efficiency of government programmes.

The barriers of entry to markets determine the rate of entrepreneurial activity. The access to physical infrastructure will assist the entrepreneur and determine

their success of them. The cultural and social norms of the population affect the entrepreneurial activity in a certain district or region.

Differentiation of products and services secures benefits to a business. The ability to use innovation to create new products and services is crucial to increase sales and therefore profitability. Analysing competition creates a definite advantage for the business to secure continuous competitiveness. The business with competitive advantage has a big lead over rivals. One of the most important business goals to establish and maintain is a long-term relationship with customers.

The entrepreneurial process entails the interaction between the entrepreneur, the opportunity and the resources. The individual who wants to be an entrepreneur needs, among other: a strong need for achievement, an internal locus of control and the tendency to take risks. Factors such as work experience and entrepreneurial parents provide an advantage in terms of entrepreneurial experience.

Identifying a business opportunity is important to the entrepreneur. Recognition the opportunity, the correct planning and the exploitation of opportunities are vital. The timing and fit of the opportunity and needed resources determines the entrepreneur's success. The effective use of resources is crucial to the outcome of the business.

National outcomes are one of the most important goals of any government while, every country strives towards positive economic growth. High entrepreneurial activity can ensure economic growth and the continuous creation of jobs. The ability to innovate has various benefits for all concerned.

7.2.4 Determinants in South Africa

The situation in terms of the above-mentioned determinants in South Africa is unique and specific to the country. The South African government has a positive attitude towards external openness of markets. The political environment in South Africa is, however, not always conducive to entrepreneurial activity. South

Africa has a complex tax system, especially applicable to smaller businesses and there are many laws that these businesses must comply with during business start-up and growth phases. The accessibility of finance is also a concern. Technology, infrastructure, management skills and the unstable nature of the labour market also hinder entrepreneurial activity in South Africa.

Looking at the above, it is clear that entrepreneurial determinants in South Africa are hindering entrepreneurial activity. The commercial banks provide financial support, but are most of the time not consumer unfriendly. The procedures associated with funding of businesses are difficult. The South African government needs to evaluate their goals in terms of business development. Another obstacle is that government programmes are poorly executed and uncoordinated.

The development of and assistance to potential and existing entrepreneurs are also ineffective. The time is right to use experienced and credible business people to lead programmes with the focus on continuous monitoring and performance. Entrepreneurial education and training in South Africa are insufficient, with the lack of mathematical and language skills being major obstacles. The above-mentioned problem contributes the majority of businesses in South Africa fail because of weak financial management.

The national infrastructure available to entrepreneurs is good in urban areas, but informal settlements and rural areas have difficulty in this area. Cell phones can have a positive effect on the communication in South Africa if it could become more affordable. The high cost is, however, a negative factor. Transportation and development of computer networks are receiving urgent attention, especially in urban areas.

The South African community realises the importance of entrepreneurship in the country. Entrepreneurs are increasingly seen as people who can help communities to increase their standard of living. The attitude of the population in terms of entrepreneurship is changing, and with the influence of the media

playing a positive role in this regard. The use of role models to promote entrepreneurship plays an important role, and is not utilised enough yet.

Entrepreneurs in South Africa have a strong need for achievement, but the lack of experience negatively influences them. The negative attitude towards failure and critical feedback is not considered a learning opportunity.

According to the TEA rate of 5% the formation of new businesses in South Africa is low. In some provinces the TEA rate is even lower than the national rate. This clearly shows the weak situation of entrepreneurial activity, being a major challenge faced by the government.

The South African government strives towards achieving the national outcomes related to economic growth, job creation and innovation. Economic growth is positive, but the unemployment rate is still very high. Increased entrepreneurial activity can ensure economic growth and continuous job creation. The level of innovation is a concern and needs urgent attention.

7.2.5 Empirical analysis

This study started from the observation that growing spatial inequality within developing countries may be due to differences in the growth rate of business start-ups among regions. This is given the finding that recent advances in endogenous growth theory and the new economic geography emphasised factors such as education and agglomeration in the regional growth process, and given the fact that these factors are consistent with the various determinants of entrepreneurship most often recognised in the economic literature. The study proceeded to investigate the determinants and role of start-ups and therefore entrepreneurial activity in a developing country context.

The study provided empirical evidence on the determinants of business start-ups from a developing country context, in this case South Africa. The analysis established that the most important determinants of start-up rates across South Africa's magisterial districts are profit rates, educational levels, agglomeration

(as measured by the economic size of a district), and the number of bank branches in a district.

Unemployment was not found to play a significant role, suggesting that start-up businesses do not contribute significantly to reduce unemployment in South Africa and that unemployment does not act as a spur to entrepreneurship. One reason for the lack of relationship between unemployment and start-up rates could be due to the fact that the failure rate of start-ups is high and that their growth rate is slow.

As for the effects of significant variables, it was found that profits and education have significant positive effects on the rate of start-ups, as was expected. Profits have by far the strongest effect – almost three times as strong as that of education. This, together with the insignificant effect of unemployment on start-ups, may imply that start-ups in South Africa are mainly opportunity-driven, as opposed to being necessity-driven.

A further finding is that the number of bank branches in a district is significantly and positively related to the start-up rate. In some cases a higher entrepreneurial activity can lead to more bank branches being established in a specific area. The effect is about similar to that of education, and supports various anecdotal reports on the effect of a lack of finance available to start-ups. This particularly suggests that more banks per population or nascent entrepreneur, could increase entrepreneurs' ability to access finance.

Agglomeration may have a positive or negative impact on the rate of start-ups. The positive impact can come through easier access, competition between bank branches as well as lower monitoring costs when banks serve fewer clients in a particular geographic area. The positive effects are due to the market-size effects created by density and scale of economic activity, which include localisation and urbanisation economies.

The negative effects are due to decreased returns that set in with size, caused by factors such as increased competition, tougher barriers to entry, monopolistic

behavior under conditions of increasing returns, and a greater difficulty to be innovative and novel. Table 7.1 provides a summary of the most important findings on the determinants of TEA.

Table 7.1 Summary of findings on the determinants of TEA

Determinant	Effect
Financial support	Financial support has a big influence on entrepreneurial activity. The number of branches in a province has a significant effect on the entrepreneurial activity.
Government policies	Government policies have a negative influence on entrepreneurial activity because of a complex tax system, many laws and a non- conducive environment in general.
Government programmes	Government's financial programmes are poorly executed and the implementation thereof insufficient. The incentives are also poorly marketed.
Education and training	Educating and training entrepreneurs is inadequate and a definite determinant that hinders entrepreneurial activity and development.
Research and development transfer	The inability of most people to utilise information technology negatively influences on research and development transfer, and thus entrepreneurial activity.
Access to physical infrastructure	The infrastructure in some the provinces needs urgent attention if these provinces and regions want to improve regional entrepreneurial activity.
Market openness	The barriers to entry in South Africa negatively influence entrepreneurial activity.
Commercial and legal infrastructure	The effect of insufficient entrepreneurship education and training negatively influence on the commercial and legal assistance as a determinant for entrepreneurial activity.
Cultural and social norms	The population's perception of entrepreneurship is changing and that will have a significant effect on entrepreneurial activity.

The empirical evidence underlines the fact that agglomerations in South Africa do not provide a positive impetus to start-ups, but that districts with larger economies tend to have relatively lower start-up rates. Although they tend to have higher business participation rates, the growth of new businesses in these areas has slowed down.

The implications from the study are that underlying structural factors in different regions of South Africa which determine profit rates, such as economic resources, worker productivity and infrastructure, will have an important effect

on start-up rates in those regions. It is also likely to affect start-up rates between regions.

Policy choices, such as those that focus on education, training and skills development for entrepreneurs and those that aim to extend financial intermediation to entrepreneurs, will have a positive impact on start-ups in general and in narrowing the gap among different regions. However, given the finding that the strength of the effects of education and financial intermediation combined is only half of that of profits, implies that unless underlying structural factors within regions change, the spatial patterns and inequalities in business start-ups and regional growth in South Africa will probably persist.

It is clear that some determinants have a bigger influence on entrepreneurial activity than others. This will vary from country to country. Therefore it is essential to continuously investigate determinants in every country. The importance of each determinant should be identified. A country can only try to improve the entrepreneurial activity by addressing those determinants that have the most significant effect on entrepreneurial activity.

7.3 RECOMMENDATIONS

From this study, recommendations can both be made for policy purposes as well as further research aimed at the field of entrepreneurship. These include

- Knowledge of determinants will assist governments to identify the most influential ones relevant to their countries. This will assist them to address the most significant determinants in terms of entrepreneurial activity. Therefore, the government in a country should identify and prioritise determinants. The study shows that the following determinants have a significant influence on entrepreneurial activity in South Africa: infrastructure, education and financial support. Therefore the South African government should focus their attention on these determinants.
- Financial support is a determinant of entrepreneurial activity. The number of bank branches in a district is significantly and positively associated with

the start-up rate of businesses in that district. To assist entrepreneurs South African banks should extend their branches to more areas and improve their service and assistance to businesses.

- Many government policies and programmes hinder entrepreneurial activity in South Africa. Despite this, government assistance to businesses is applaudable. However, complex administration and red tape limits effective implementation. The process of starting and managing a business is a daunting task. The government should review legal and administrative factors that influence businesses and strive to simplify the tax system to create a more conducive business environment.
- The education, training and skills development of entrepreneurs in South Africa is inefficient. The strong effect of education on entrepreneurial activity supports the low rate of TEA in the country. Policy choices should therefore focus on enhancing entrepreneurship education and training.
- The inability of most people in South Africa to use information technology is a major obstacle. As a result, the transfer of research and development is insufficient. This has a negative effect on entrepreneurial activity. Ways to optimise the use of information technology in South Africa should therefore be investigated.
- The physical infrastructure in a country influences other determinants. Profit has a strong effect on the rate of start-ups and entrepreneurial activity. The implication is that unless structural factors within regions change, the spatial patterns and inequalities in entrepreneurial activity in South Africa will probably persist. Therefore, improvement in physical infrastructure in different regions should receive urgent attention.
- There were 354 magisterial districts in South Africa during the 2003 and 2004 surveys. The GEM survey was done in a sub sample of 182 magisterial districts. To make the findings more representative the survey should include more districts and especially rural areas.

- Based on findings it is clear that some determinants have a bigger influence on entrepreneurial activity than others. Their influence will also differ from country to country. Future research on these determinants will assist all concerned with entrepreneurship. This includes improving entrepreneurial activity and performance. Therefore every government should continuously investigate the determinants in their quest to achieve national outcomes.

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