

**An assessment of the determinants of corporate entrepreneurship
in agricultural businesses: An integrated framework**

Henry Mearie Lotz

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Promoter: Prof. S.P. van der Merwe

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ABSTRACT

The role of entrepreneurship and innovation are becoming increasingly important for businesses to maintain and enhance their competitiveness. This also holds true for agribusinesses in the agricultural sector as an important contributor to the South African economy and its vital role in the food security of any country. Agribusinesses play a vital role in the agricultural sector as the suppliers of farming requisites, marketers of agricultural commodities, and providing services such as storage and transport.

Agribusinesses in South Africa however face a number of challenges that have a negative effect on their ability to compete internationally. Agricultural sector related challenges include the deregulation and liberalisation of the agricultural sector, capacity constraints in terms of arable land and water and a lack of funds in agricultural research and development. The international competitiveness of agribusinesses has also shown a decline over the past number of years. More specific challenges include "unfair competition" in the form of government subsidies paid to South Africa's main agricultural trading partners.

The primary objective of this study is twofold: Firstly, to investigate the determinants of corporate entrepreneurship in agribusinesses in South Africa and secondly to propose an integrated framework that can facilitate the process of establishing and maintaining an entrepreneurial climate within agribusinesses in South Africa. The study included a literature review on corporate entrepreneurship and the determinants required to foster an entrepreneurial climate within businesses. Structured questionnaires were administered to all managers in the five largest agribusinesses in South Africa. Three smaller agribusinesses also indicated their willingness to participate in this study and were included and 533 usable questionnaires were returned.

Construct validity of the measuring instrument was assessed by means of a principle component exploratory factor analysis and by calculating Cronbach alpha coefficients.

Regarding the entrepreneurial orientation survey, five factors describing the theoretical dimensions of **proactiveness**, **autonomy**, **risk-taking**, **innovativeness** and **competitive aggressiveness** were extracted. The relationship between the five extracted factors was examined by means of Pearson's correlation coefficients (r). The results indicated that there are statistical significant correlations between all the variable combinations. Furthermore, practical significant correlations were calculated between the variable *proactiveness* and two other variables **innovativeness** and **competitive aggressiveness**. The differences in mean values between the demographic variables and the entrepreneurial orientation variables were examined by independent t-test (p -values) and effect sizes (d -values). The results indicated no practical significant difference for any of the variables.

Regarding the entrepreneurial climate survey, seven factors describing the theoretical dimensions of **management support/encouragement**, **customer orientation**, **rewards/incentives**, **strategic intent**, **idea generation**, **discretionary time** and **organisational learning** were extracted. The relationship between the seven extracted factors was examined by means of Pearson's correlation coefficients (r). The results showed that practical significant correlations were calculated between the variable *management support/encouragement* and four other variables **customer orientation**, **rewards/incentives**, **strategic intent** and **idea generation**, between the variable combinations of *rewards/incentives* and **strategic intent** and **idea generation** and finally between the variable combination of *strategic intent* and **idea generation**. The differences in mean values between the demographic variables and the entrepreneurial climate variables were examined by independent t-test (p -values) and effect sizes (d -values). The results indicated no practical significant difference for any of the variables.

As far as the perceived success survey is concerned, two factors describing the theoretical dimensions of **business development** and **improvement and business growth** were extracted. The relationship between the two extracted factors was examined by means of Pearson's correlation coefficients (r). The results showed that practical significant correlations were calculated between the two variables. The differences in mean values between the demographic variables and the entrepreneurial climate variables were examined by independent t-test (p -values)

and effect sizes (*d*-values). The results indicated no practical significant difference for any of the variables.

Section B of the questionnaire was to determine the extent to which managers at agribusinesses were inclined towards an entrepreneurial mindset and consisted of a self assessment and superior assessment of the entrepreneurial characteristics. The results indicated that in general respondents viewed themselves as well as their superiors as having the ability to behave in an entrepreneurial way. There was however a number of important characteristics that poses some concern for entrepreneurial behaviour to manifest itself within the agribusinesses. In order to determine how respondents' perceptions of their relative entrepreneurial characteristics compare to those of their superiors, the mean scores are compared by means of a dependent or paired t-test (*p*-values) and effect sizes (*d*-values) in terms of the entrepreneurial characteristics measured. The results indicated that more than half of the entrepreneurial characteristics showed a statistical significant difference, however none were of practical significance.

Finally, recommendations were proposed by means of an integrated framework that could assist agribusinesses to establish and maintain corporate entrepreneurship within these businesses.

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CHAPTER 1

NATURE AND SCOPE OF THE STUDY

1.1 INTRODUCTION

Today's business environment is characterised by continuous change as a result of fast changing technologies, ever increasing changes in customer demand and the growing levels of intense global competition (Ireland & Webb, 2009:469). Many businesses, in their quest for sustained competitive advantage, have reacted to these new set of challenges by downsizing, unbundling, focussing on core business, reengineering, decentralisation, outsourcing, restructuring and relying on self-directed work teams (Burns, 2008:10). Unfortunately, sustained competitive advantage can no longer be found in simply lowering costs, higher quality and better service as these factors have now become the minimal criterion for remaining in the competitive game (Morris, Kuratko & Covin, 2008:7).

The rules of the competitive game has changed as today's business environment has given rise to an entirely new competitive situation (referred to as "hyper-competition") where the key competitive success factor is the ability to constantly develop new products, processes or services and providing customers with increased functionality and performance (Drejer, 2006:143). Sustained competitive advantage, according to Morris *et al.* (2008:8), now lies in adaptability, flexibility, speed, aggressiveness and innovation which comes down to one word, namely entrepreneurship.

Corporate entrepreneurship, broadly defined as entrepreneurship within an existing business (Heinonen & Toivonen, 2008:583), is increasingly being viewed as a tool that allows businesses to rejuvenate and revitalise and to create new value through innovation, business development and renewal (Bhardwaj, Agrawal & Momaya, 2007:131). It is the process of enhancing the ability of the business to acquire and utilise the creative and innovative skills and capabilities of all the business's members (Rutherford & Holt, 2007:429). It represents a framework for the facilitation of ongoing change and innovation in large businesses and transcends the strategy,

structure, culture, human resource management practices and control systems of a business (Morris *et al.*, 2008:20).

Agribusinesses play an important role in the development of a countries' agricultural sector as suppliers of farming requisites, marketers of agricultural commodities and providing services such as storage and transport (Ortmann & King, 2007:62). In South Africa the primary agriculture sector contributes about 2.5% of gross domestic product however, with the strong backward and forward linkages into the economy the agri-industrial sector is estimated to comprise about 15% of GDP (Standard Bank 2008a:1). Agricultural exports contribute on average about 8% of total South African exports and it is estimated that the income of around 10 million South Africans are dependent in part on direct and indirect agricultural activities (Anon., 2007:73). For the purpose of this study, agribusinesses are all those businesses formerly known as Agricultural Co-operatives.

Finally this chapter presents the nature and scope of this study and more specifically aims to explain the problem on which the study is based and provide a reason for undertaking the study, present the primary and secondary objectives of the study, describe the scope of the study, provide a summary of the research methodology used in this study, present the limitations to the study and briefly describe the layout of the study.

1.2 PROBLEM STATEMENT

The transition to democracy in South Africa initiated many policy reforms in the form of the deregulation and liberalisation of the agricultural sector (Piesse, Doyer, Thirtle & Vink, 2005:198). The most important policy initiatives include land reform, trade policy, institutional restructuring in the public sector, deregulation of the marketing of agricultural products and labour market policy reforms. The purpose of these reforms was, amongst others, to get the agricultural sector on a growth path and to enhance the international competitiveness of the sector (Sandrey & Vink, 2007:324).

Notwithstanding these changes, South African agricultural co-operatives also faced challenges such as increasingly international competition, a changing social

environment based on equity principals and increasingly complex consumer demand (Doyer, D'Haese, Kirsten & Van Rooyen, 2007:495). Several co-operatives subsequently converted to investor-oriented firms (IOF's) with the view to obtain easier access to various sources of capital, to align the interest of shareholders with those of customers and to instil an entrepreneurial flair often missing from conventional co-operatives (Ortmann & King, 2007:47-48).

To maintain competitiveness and sustainability within this ever changing global environment, Esterhuizen, Van Rooyen and D'Haese (2008:44) suggest that agribusinesses in South Africa must recognise the important role of corporate entrepreneurship (innovation) within these businesses. The policy reforms and challenges faced by agribusinesses demand that decision makers effectively manage uncertainty and their business's resources to position their business in ways that will allow it to adapt to these changes and challenges. Corporate entrepreneurship represents a set of activities that agribusiness managers can use in an effort to enhance their business's competitive ability while successfully coping with changes and challenges within its external environment (Ireland & Webb, 2009:2). It can provide a tool for business development, revenue growth, enhanced profitability and pioneering the development of new products, services and processes that could lead to a sustained competitive advantage (Baran & Velickaité, 2008:22).

Unfortunately, as Morris, Van Vuuren, Cornwell and Scheepers (2009:429) point out, the inherent tendency of businesses as they evolve is to move away from entrepreneurship and businesses naturally drift in the direction of control, structure and bureaucracy. The challenge therefore lies in creating a business environment within agribusinesses that will allow their employees to recognise and act upon their entrepreneurial potential. Developing corporate entrepreneurship within a business requires taking deliberate steps in business dimensions such as strategy, structure, culture, human resources practices and control (Harper, Glew & Rowe, 2008:13).

Although empirical research on corporate entrepreneurship is growing increasingly rich, there is a gap between theoretical and empirical knowledge regarding the effective conduct of corporate entrepreneurship (Bhardwaj, Agrawal & Momaya, 2007:131). In order to bridge this gap, this study is conducted among agribusinesses in South Africa. From the findings of the study, a framework of practical guidelines

will be developed to facilitate the process of creating and maintaining an entrepreneurial climate within agribusinesses.

In view of the above problem statement, the research objectives can now be determined for this study.

1.3 RESEARCH OBJECTIVES

The following primary and secondary objectives were set for this study:

1.3.1 Primary objective

The primary objective of this study is twofold: Firstly, to investigate the determinants of corporate entrepreneurship in agribusinesses in South Africa and secondly to propose an integrated framework to facilitate the process of establishing and maintaining corporate entrepreneurship within agribusinesses in South Africa.

1.3.2 Secondary objectives

In order to achieve the primary objectives, the following secondary objectives were formulated to:

- Define corporate entrepreneurship.
- Obtain insight into the phenomena of corporate entrepreneurship by means of a literature study.
- Investigate creativity and innovation as key dimensions of corporate entrepreneurship.
- Determining the internal business factors that have an influence on the corporate entrepreneurial climate within a business.
- Obtain an understanding of agribusinesses within the agricultural industry in South Africa.
- Assess the determinants of corporate entrepreneurship within agribusinesses.

- Investigate the correlations between the corporate entrepreneurship variables.
- Compare the mean differences between the demographic variables with regard to the corporate entrepreneurship variables.
- Assess the entrepreneurial characteristics of managers and their superiors in agribusinesses.
- Propose an integrated framework to assist in establishing and maintaining corporate entrepreneurship in agribusinesses.

1.4 SCOPE OF THE STUDY

This section describes the field of study, industry demarcation and the geographical demarcation.

1.4.1 Field of study

The field of this study falls within the subject of entrepreneurship in existing businesses, i.e. corporate entrepreneurship and includes terminologies such as intrapreneurship and corporate venturing.

1.4.2 Industry demarcation

This study is limited to agribusinesses in South Africa and more specifically those agribusinesses formally known as Agricultural Co-operatives. These agribusinesses are (in no specific order): Senwes Limited, Afgri Limited, Overberg Agri Limited, NTK Limpopo Agric Limited, Suidwes Holdings Limited, Kaap Agri Limited, NWK Limited and Oos Vrystaat Kaap Operations Limited.

1.4.3 Geographical demarcation

The area of operation for each agribusiness that took part in the study is indicated in figure 1.1.

Figure 1.1: Area of operation of agribusinesses

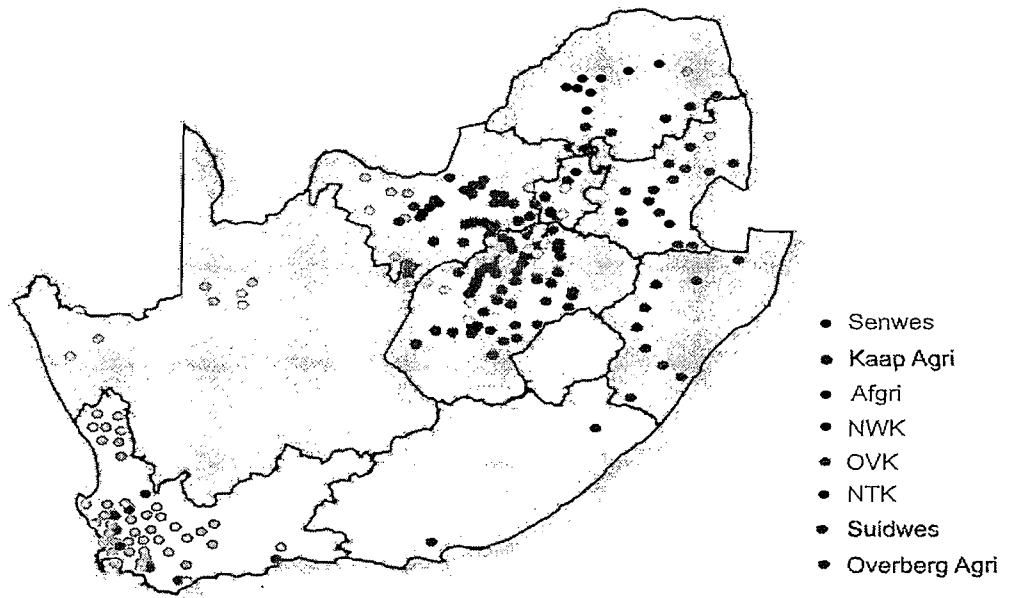


Figure 1.1 shows that agribusinesses are well represented in most of the provinces in South Africa. Senwes Limited operates in the North-West, Free State and Cape provinces. Kaap Agri Limited is concentrated in the Western Cape with branches in the Northern Cape, Gauteng and Mpumalanga provinces. Afgri Limited is represented in most provinces operating in the Limpopo, Mpumalanga, Free State, Kwazulu Natal, Eastern Cape and Western Cape provinces. Suidwes Holdings Limited operates in the Free State and North-West provinces. NWK Limited, NTK Limpopo Agric Limited, Oos Vrystaat Kaap Operations Limited (OVK) and Overberg Agri Limited are area bound operating in Limpopo province, Eastern parts of the Free State and Overberg area in the Western Cape province respectively.

1.5 RESEARCH METHODOLOGY

This study was conducted in two phases. Phase one consisted of a literature review and phase two of an empirical research.

1.5.1 Literature review

The literature review for this study focused on the various aspects of the nature of corporate entrepreneurship. More specifically it focused on:

- A definition for corporate entrepreneurship and its dimensions.
- Discussing creativity and innovation as key dimensions of corporate entrepreneurship.
- Determining the internal business factors that have an influence on the corporate entrepreneurial climate within a business.
- Finally, the literature review focussed on the industry within which the study was conducted namely the broad agricultural industry and more specifically on the changes and challenges faced by agribusinesses.

The literature review consisted mainly of an analysis of secondary sources such as books, journal articles, unpublished theses and dissertations, papers and internet sources such as websites. The literature review aided in acquiring a thorough understanding of the problem that is being investigated, assisted in preparing a suitable empirical research methodology and formed the basis of the questionnaire.

1.5.2 Empirical research

Empirical research primarily deals with the means of data collection and the use of data (Riley, Wood, Clark, Wilkie & Szivas, 2007:18). The empirical research, for this study, consisted of the research design, sample design, the research instrument, method of data collection and the procedures for data analysis. Chapter 6 offers a detailed discussion on the above empirical research process and will only be presented briefly in this section.

1.5.2.1 Research design

A quantitative research design was followed in this study and more specifically descriptive research was used as the basis for the research design.

The descriptive research consisted of a cross-sectional analysis which was conducted by means of a sample survey that made use of questionnaires as research measuring instrument to gather the required quantitative data (see section 1.6.2.2 and 1.6.2.3). Descriptive research attempts to determine the extent of differences in the needs, perceptions, attitudes and characteristics of subgroups (Zikmund, 2003:57).

In this study an attempt was made to determine the extent to which managers in agribusinesses perceived their business climate as conducive to corporate entrepreneurship. For the purpose of this study, business climate is defined as employees' perceptions of the events, practices and procedures and the kind of behaviours that are rewarded, supported and expected in a business (Wei & Morgan, 2004:378). Furthermore, an attempt was also made to determine the extent of differences between various demographic subgroups and their perception regarding the conduciveness of their business climate for corporate entrepreneurship. Finally, an attempt was made to determine the extent of differences between how managers rated themselves on a number of entrepreneurial characteristics and how they rated their superiors in terms of these same entrepreneurial characteristics.

1.5.2.2 Study population

The study population for this study consisted of two populations. The first study population consisted of agribusinesses in South Africa and secondly, managers within these agribusinesses.

The first study population was selected by means of a non-probability sampling technique, judgement sampling, where a researcher selects the sample based on his or her judgement (Zikmund & Babin, 2007:412). Five of the largest agribusinesses (in terms of group turnover and group assets) were identified. Three smaller

agribusinesses also indicated their willingness to participate in this study and have been included in this study.

The second study population consisted of a total study population since it included all the managers (senior, middle and junior levels) within these agribusinesses. No sampling technique was therefore required. With the assistance of the human resource manager in each of the agribusinesses, management levels were identified by means of the particular job grading system used by that specific agribusiness. A list of all the managers was subsequently provided by the human resource manager for each of the participating agribusinesses.

1.5.2.3 Constructing the research instrument

The research instrument selected for this study was a structured questionnaire (see appendix A). The questionnaire, named Corporate Entrepreneurial Climate Questionnaire, consisted of a front page and a covering letter which included the instructions to the questionnaire. The questionnaire was divided into three sections namely:

Section A: Corporate entrepreneurial climate – The purpose of this section was to determine the corporate entrepreneurial climate within agribusinesses. From the literature review fourteen constructs were identified. These constructs and the number of items per construct are indicated in table 1.1.

Table 1.1: Constructs and number of items

No	Construct	Number of items
1	Autonomy	5
2	Innovativeness	9
3	Risk-taking	5
4	Pro-activeness	4
5	Competitive aggressiveness	4
6	Vision	4
7	Structure	8
8	Culture	21
9	Human resource practices	13
10	Financial measures	3
11	Customer/market measures	6
12	Process measures	3
13	People development	3
14	Future (long-term) success	2
Total		90

The items in this study were developed from scales used in the following previous studies:

- Knight (1997).
- Covin and Slevin (1989).
- Antoncic and Hisrich (2001).
- Hornsby, Kuratko and Zahra (2002).
- Hill (2003).
- Morris *et al.* (2008).
- Oosthuizen (2006).

This section consisted of 90 questions and/or statements. Respondents were requested to select the number, on a 1 to 5 Likert scale (where 1 indicates they strongly disagree and 5 they strongly agree with the statement – see chapter 6 section 6.3.2.2), which best describes their opinion about a specific question or statement.

Section B: Core attributes of entrepreneurs – Section B of the questionnaire was aimed at determining the extent to which respondents at agribusinesses are inclined towards an entrepreneurial mind. This section consisted of 30 entrepreneurial characteristics (developed by Oosthuizen, 2006 and adapted by Jordaan, 2008) and was subdivided into two subsections, section B1 and section B2. In section B1

respondents were requested to evaluate themselves on a 1 to 5 Likert scale in terms of how well each of the characteristics applies to them. Similarly, in section B2 respondents were requested to evaluate their supervisor/manager (superior). Section B2 is an evaluation of how respondents viewed their superior in terms of the specific entrepreneurial characteristic.

Section C: Demographical information – For determining possible relationships between demographical information and the opinions expressed in the survey, respondents were requested to supply their age group, gender and race classification as well as their managerial level, highest academic qualification and the division in which they were functioning.

1.5.2.4 Collection of data

The actual gathering of the data was done by means of the following procedure:

- An e-mail was sent to each of the Chief Executive Officers (CEO) of the respective agribusinesses explaining the purpose of the study and requesting permission to distribute questionnaires within the business.
- After permission was obtained, a designated person (in most instances the Human Resource Manager) was appointed by the CEO whom acted as a contact person and also assisted with the distribution and subsequent collection of the questionnaires.

This greatly simplified the data gathering process, since all the questionnaires were sent to one person within each agribusiness whom distributed the questionnaire to all the managers within that agribusiness. Upon completion of the questionnaire, respondents forwarded the questionnaire to this designated person who in return forwarded all the completed questionnaires to the researcher. A total of 533 usable questionnaires were returned. Collection of the data is presented in more detail in chapter 6 (see section 6.3.5).

1.5.2.5 Data analysis

The data collected were statistically analysed, using Statistica (Statsoft, 2008) and Statistical Package for Social Sciences (SPSS) (SPSS, 2008).

Frequencies and percentages were calculated for the demographic variables age, gender, race, highest qualifications and functional division in which the respondents worked in according to predefined categories.

To measure the construct validity of the measuring instrument an exploratory factor analysis was conducted. The reliability was determined by means of Cronbach alpha coefficients.

Furthermore, the relationships between the extracted constructs were investigated by calculating the Pearson correlation coefficients (r). Effect sizes were measured to determine whether the effect of the relationship between two constructs were important or meaningful.

The results of the corporate entrepreneurial survey were presented showing the arithmetic mean and standard deviation for each of the constructs.

A comparison of the mean differences between the demographic variables and entrepreneurial climate variables were also examined by means of independent t-tests (p -values) and effect sizes (d -values).

The arithmetic mean and standard deviation was calculated for each of the entrepreneurial characteristics regarding the self- and superior assessment. In order to determine how respondents' self perceptions of the entrepreneurial characteristics compare to their perception of their superiors, the mean scores of each of the entrepreneurial characteristics were compared by means of a t-test (p -values) and effect sizes (d -values).

1.6 LIMITATIONS OF THE STUDY

This study attempts to make a contribution to the existing knowledge of corporate entrepreneurship. The following limitations regarding the study are presented:

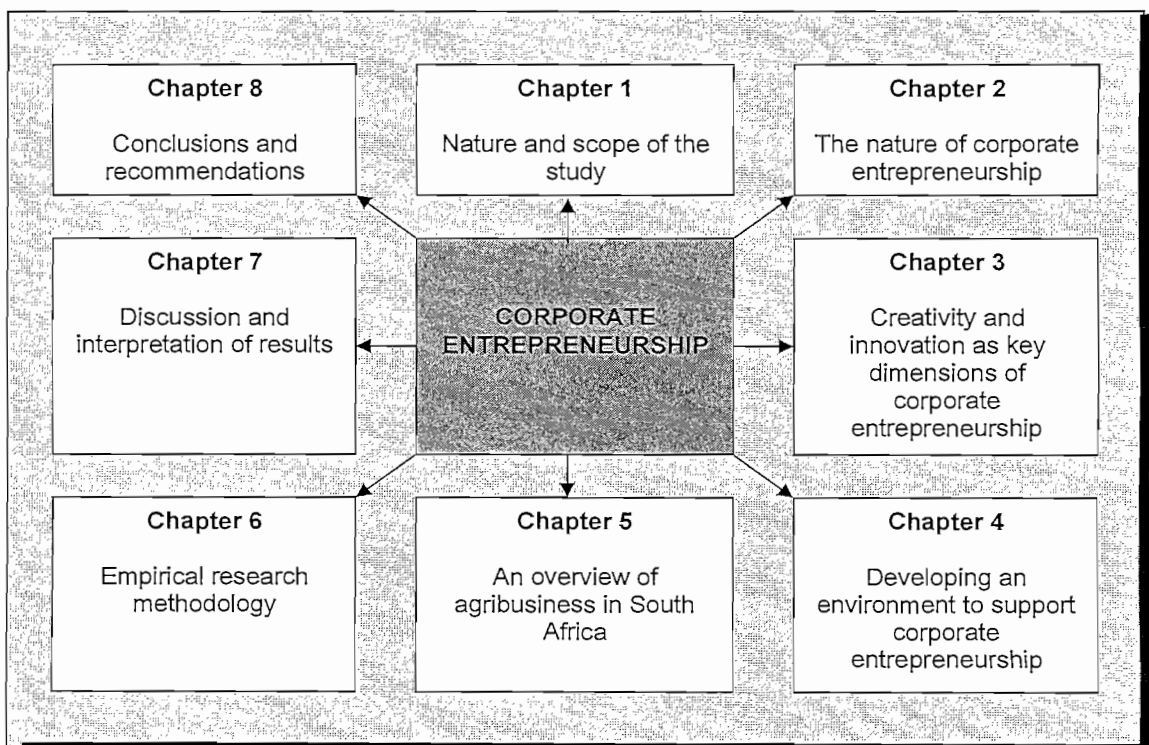
- Corporate entrepreneurship consists of two main antecedents. One pertains to the internal business and the other to the external environment of the business (Heinonen & Toivonen, 2008:584). This study is limited to the internal business environment.
- The sampling method used to determine the agribusiness study population was a non-probability sample. Furthermore, only agribusinesses previously known as agricultural co-operatives were considered for this study. The findings can therefore not be considered to be representative of all agribusinesses in South Africa. Care should therefore be exercised in the interpretation and utilisation of the results and the findings of the study cannot be generalised to all agribusinesses. In other words, the typical agribusiness could be underrepresented in the sample.
- The low response rate from some of the agribusinesses may also skew the findings towards those agribusinesses with a higher response rate.
- In this study the exploratory factor analysis of the measuring instrument assessing the entrepreneurial climate and perceived success in agribusinesses provides some evidence of construct validity and reliability. Further research is needed before the measuring instrument can be utilised to diagnose these issues in corporate businesses.
- The list of entrepreneurial characteristics is admittedly incomplete, as new characteristics are continually being added. This study, only assessed some of the entrepreneurial characteristics and can be regarded as an exploratory study. More comprehensive research is still needed to enhance our understanding of these characteristics.

- Although it has been determined in this study which entrepreneurial characteristics can enhance entrepreneurial behaviour and which entrepreneurial characteristics may hamper entrepreneurial behaviour, no scientific reasons can be presented why some entrepreneurial characteristics have been rated high whilst others have been rated low. It is suggested that further research be conducted to determine the reasons.

1.7 CHAPTER DIVISION

A brief description of the main elements and focus of the study is set out below. A schematic representation of the chapter outlay is shown in figure 1.2.

Figure 1.2: Schematic representation of chapter outlay



- **Chapter 2: The nature of corporate entrepreneurship**

An understanding of the nature of corporate entrepreneurship has to be preceded by an explanation on entrepreneurship. This chapter begins by offering a definition on entrepreneurship as well as some characteristics and outcomes of entrepreneurs. Subsequently, the nature of corporate entrepreneurship is discussed and includes a definition of corporate entrepreneurship, the factors that make up an entrepreneurial orientation within a business, the similarities and differences between start-up entrepreneurship and corporate entrepreneurship, a comparison between a traditional business and an entrepreneurial business and finally, some obstacles to corporate entrepreneurship are identified.

- **Chapter 3: Creativity and innovation as key dimensions of corporate entrepreneurship**

Understanding the concepts of creativity and innovation are important to create a corporate entrepreneurial business. The focus of this chapter is to explain these concepts. Creativity is defined and the process of creativity is discussed as well as the management of creativity within a business context. Whilst creativity refers to the generation of novel ideas, innovation deals with the implementation of these ideas. Innovation is therefore explained in terms of a definition, various types of innovations, some of the important barriers to innovation and importantly, an innovation system is presented since innovation is a process that cannot be done in a haphazard way. Finally, the concept of an innovation portfolio is introduced to assist in prioritising innovation projects.

- **Chapter 4: Developing an environment to support corporate entrepreneurship**

Chapter 4 reviews the factors that are required to develop an environment to support corporate entrepreneurship. This chapter therefore discusses aspects such as strategic management and corporate entrepreneurship (a phenomenon known as strategic entrepreneurship), how business structures can enhance corporate

entrepreneurship, developing an entrepreneurial culture, the role of human resource management in fostering corporate entrepreneurship and finally, control within an entrepreneurial context.

- **Chapter 5: An overview of agribusinesses in South Africa**

This chapter provides an overview of agribusinesses in South Africa and consists of the contribution of agriculture to the South African economy, the evolution of agribusiness in South Africa, the competitiveness of South African agribusinesses and finally concludes with the casual factors that led to this study.

- **Chapter 6: Empirical research methodology**

This chapter explains the business research process identifying a problem statement, creating a research design, selecting a research method, the procedure involved in selecting a sample, the collection of the data, data analysis and reporting the results.

- **Chapter 7: Discussion and interpretation of results**

Chapter 7 presents the research findings of the study. The statistical methods that were used for interpreting the data are presented and the results that were obtained from each section of the questionnaire are described.

- **Chapter 8: Conclusions and recommendations**

The final chapter concludes on the research findings and presents recommendations in the light of the results that were obtained. It also outlines the link between the objectives of the study and the main findings relating to the objectives. An integrated framework is further proposed to facilitate developing and maintaining an entrepreneurial climate within agribusinesses. The chapter concludes with an indication of the achievement of the objectives and suggestions for future research.

CHAPTER 2

THE NATURE OF CORPORATE ENTREPRENEURSHIP

2.1 INTRODUCTION

Corporate entrepreneurship promotes entrepreneurial behaviour within a business. It uses the fundamentals of management, but adopts a behavioural style that challenges bureaucracy and encourages innovation through the examination of potential new opportunities, implementation, exploitation and commercialisation of new products/services (McFadzean, O'Loughlin & Shaw, 2005:351). Importantly, corporate entrepreneurship is a vision-directed, business-wide reliance on entrepreneurial behaviour (Ireland, Kuratko & Morris, 2006:11) as a method of stimulating innovation by utilising the creative energies of all employees within the business (Amo & Kolvereid, 2005:8). Unfortunately, traditional management practices such as highly regulated practices, strict hierarchy, narrowly defined jobs, amongst others, lead businesses onto a bureaucratic pathway, often ignoring the need for change and smouldering innovative initiatives. In such businesses, entrepreneurially-minded employees and executives tend to rather leave the business (Maes, 2003:1). Fostering corporate entrepreneurial behaviours and practices has therefore assumed major importance in the strategies of many businesses where creating innovation is perceived as a means of establishing and sustaining a competitive advantage (Ireland *et al.*, 2006:10) as well as a method for corporate renewal (Kuratko, Ireland, Covin & Hornsby, 2005:700).

A review of the literature of corporate entrepreneurship reveals an ambiguity in the terminology used. According to Thornberry (2003:331), there is agreement on the features that are unique in corporate entrepreneurship, but often different terms are used. The origin of the problem in defining corporate entrepreneurship can be attributed to the lack of a generally accepted definition of its underlying construct namely entrepreneurship (Maes, 2003:2), since corporate entrepreneurship is viewed as entrepreneurship within an established large business (Antoncic & Hisrich, 2004:520). It is thus important to firstly establish what is meant by the term

entrepreneurship to derive a definition for corporate entrepreneurship. Following a definition of entrepreneurship the various terms used to describe the phenomena of corporate entrepreneurship is presented and subsequently, a definition of corporate entrepreneurship is proposed.

The success of corporate entrepreneurship is strongest in businesses where management and culture together generate a strong impetus to innovate, take risks and aggressively pursue new opportunities. This idea is captured by the concept known as entrepreneurial orientation (Dess & Lumpkin, 2005:147). Five dimensions of an entrepreneurial orientation will be discussed.

To further indicate the nature of corporate entrepreneurship, the similarities and differences between start-up entrepreneurship and corporate entrepreneurship are presented. The traditional business in contrast with an entrepreneurial business is also briefly discussed.

Finally, some obstacles to corporate entrepreneurship, which are present in many businesses, are presented.

2.2 DEFINING ENTREPRENEURSHIP

The term entrepreneurship derives from the French verb “entreprendre”, which means to “undertake” or “go between” (Hisrich, Peters & Shepherd, 2008:6). One of the earliest references to the term entrepreneurship has been traced to Richard Cantillon’s work (1734) who was the first to associate entrepreneurship with risk bearing. To Cantillon entrepreneurship was self-employment with an uncertain return (Lambing & Kuehl, 2007:16).

Schumpeter categorically launched the field of entrepreneurship (1947), not only by associating entrepreneurs with innovation, but also by demonstrating the importance of entrepreneurs in “creative destruction” and hence economic development (Venter, Urban & Rwigema, 2008:13).

Defining entrepreneurship has, been problematic as academics and researchers fail to come to a generally accepted definition of the term entrepreneurship (Burns, 2008:7). The following section will present a number of definitions on the term entrepreneurship.

2.2.1 Entrepreneurship defined

Hisrich *et al.* (2008:6-7) believe that the development of the theory of entrepreneurship parallels to a great extent to the development of the term itself and provides a summarised timeline as reflected in table 2.1.

Table 2.1: Development of entrepreneurship theory

Time	Meaning of entrepreneurship
Middle ages	Actor and person in charge of large-scale projects
17 th century	Entrepreneur bears risk of profit/loss – buy at certain price and sell at uncertain price
18 th century	Person with capital were distinguished from person who needed capital. Entrepreneurs (capital users) were thus distinguished from capital providers (venture capitalists)
19 th and 20 th century	Entrepreneur organises and operates a business for personal gain Entrepreneur is viewed as an innovator that develops something unique.

Source: Hisrich *et al.* (2008:6-7)

Stevenson and Jarillo (1990:23) define entrepreneurship as the process by which individuals, either on their own or inside organisations, pursue opportunities without the resources they currently control.

Sightler (2001:20) defines entrepreneurship as the process through which individuals and teams create value by bringing together a unique collection of resources to take advantage of opportunities. It can occur in any organisational context and results in a variety of possible outcomes, including new ventures, products, services, processes, markets and technologies.

Entrepreneurs have the ability to see and assess opportunities and more importantly, are able to initiate the appropriate actions to ensure success. Kirby (2003:11) is of

the opinion that it is this last factor that distinguishes an entrepreneur from an inventor. Kirby (2003:11) subsequently defines entrepreneurship as the ability to create and build something from practically nothing. It is initiating, doing, achieving and building a business, rather than just watching, analysing or describing one. It is the knack for sensing an opportunity where others see chaos, contradiction and confusion (Timmons & Spinelli, 2009:79).

Further emphasis to the process notion comes from Rwigema and Venter (2004:5) that define entrepreneurship as the process of conceptualising, organising, launching and through innovation, nurturing a business opportunity into a potentially high growth venture in a complex, unstable environment.

Also, Morris *et al.* (2008:10) define entrepreneurship as the process of creating value by bringing together a unique package of resources to exploit an opportunity.

Hisrich *et al.* (2008:8) define entrepreneurship as the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic and social risks and receiving the resulting rewards of monetary and personal satisfaction and independence.

From a human orientation, Timmons and Spinelli (2009:79) define entrepreneurship as a way of thinking, reasoning and acting that is opportunity obsessed, holistic in approach and leadership balanced.

Taking the key concepts from the above definitions, the following aspects of entrepreneurship, amongst others, can be identified namely:

- Entrepreneurship involves a process. According to Shane, Locke and Collins (2003:270), this process is manageable, can be broken into steps and is ongoing. Furthermore, it can be applied in any business context (Collins, Smith & Hannon, 2006:190).

- Entrepreneurship creates value where there was none before. The creation of this value has to have both value to the entrepreneur (Nieuwenhuizen, 2003:9) and value to the audience for whom it was developed (Hisrich *et al.*, 2008:8).
- Entrepreneurs put together resources in a unique way. Unique combinations of money, people, procedures, technologies, materials, facilities, packaging, distribution channels and other resources (Thornberry, 2003:332).
- Entrepreneurs are opportunity driven (Kirby, 2003:11). The ability of entrepreneurs to spot an opportunity arising out of change or even create it and then focus resources on delivering what the market wants is the essence of their success (Burns, 2008:6).
- Assuming the risk is the final aspect of entrepreneurship. Risk is inherent in the unknown future and is enhanced by the novelty intrinsic to entrepreneurial behaviour, such as the creation of new products, services or processes (Hisrich *et al.*, 2008:8-9).

Entrepreneurship thus results in the creation, enhancement, realisation and renewal of value which encompasses the process of creation and/or recognition of opportunities. It therefore requires a willingness to take calculated risks and then to do everything possible to reduce the chances of failure. Entrepreneurs, typically, would devise ingenious strategies to marshal and control their limited resources (Timmons & Spinelli, 2009:79).

Another perspective in defining entrepreneurship has been to focus on the “who” and the “what” of entrepreneurship in an effort to try and distinguish between entrepreneurs and non-entrepreneurs (Venter *et al.*, 2008:6). In this regard Baran and Velickaité (2008:21) identify two distinct clusters of thought on the meaning of entrepreneurship. The first group of scholars focuses on the characteristics of entrepreneurs (the who) while the second group focuses on the outcomes of entrepreneurship (the what).

2.2.2 Characteristics of entrepreneurs

The first approach, which focuses on the person of the entrepreneur, researchers has tried to identify traits or characteristics of individuals in an effort to differentiate entrepreneurs from non-entrepreneurs (Maes, 2003:4). Personality traits are defined as dispositions to exhibit a certain kind of response across various situations. Therefore, it is assumed that personality traits are predictors of entrepreneurial behaviour (Rauch & Frese, 2007:355) and can be viewed as the psychological underpinnings of the human capital existing in a business, as it refers to the stock of experience, skills and knowledge accumulation by its members over time (Marcati, Guido & Peluso, 2008:1579). The characteristics of individuals are therefore fundamental to nurture and sustain entrepreneurial behaviour (Hayton & Kelly, 2006:407). Whether these entrepreneurial tendencies exist at birth or are developed as a person matures, certain characteristics are usually evident in those entrepreneurs who enjoy success (Lambing & Kuehl, 2007:18).

Below follows a list of some of the most cited entrepreneurial characteristics. The list is admittedly incomplete, as new characteristics are continually being added. It does however provide some important insights into the entrepreneurial perspective.

- **High levels of commitment**

Commitment is viewed as more important than any other factor since an entrepreneur must overcome many obstacles and setbacks (Kuratko & Hodgetts, 2004:116). Entrepreneurs therefore show sheer determination and an unwavering commitment to succeed often against odds that many people would consider insurmountable (Rwigema & Venter, 2004:60). Total commitment is required in nearly all entrepreneurial ventures and almost without exception, entrepreneurs live under constant pressure. A new venture demands top priority for the entrepreneur's time, emotions and loyalty (Timmons & Spinelli, 2009:48).

- **High levels of creativity and innovativeness**

Creativity is the soul of corporate entrepreneurship (Morris *et al.*, 2008:137) whilst innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service (Zhao, 2005:28). It assumes a willingness and interest to look for new and novel ways of doing things (Rauch & Frese, 2007:358). This imagination and ability to envisage alternative scenarios is one of the reasons, according to Lambing and Kuehl (2007:20), why entrepreneurs are successful.

- **High energy levels**

The heavy workload and stressful demands placed on entrepreneurs requires high energy levels (Kuratko & Hodgetts, 2004:121). Many entrepreneurs fine-tune their energy levels through careful monitoring their diets, engage in exercise and knowing when to get away for relaxation (Bolton & Thompson, 2003:63).

- **Low support needs**

The desire for independence translates into entrepreneurs having low support needs. This independency, according to Burns (2008:25), may mean different things to different people such as controlling your own destiny, doing things differently or being in a situation where you can fulfil your potential. Their frustration with rigid bureaucratic systems, coupled with a sincere commitment to make a difference adds up to an independent personality trying to accomplish tasks their own way (Kuratko & Hodgetts, 2004:122). This, does not imply that entrepreneurs are lone wolves and super-independent. They do realise the reality that it is rarely possible to build a substantial business working alone and also actively build a team (Timmons & Spinelli, 2009:51).

- **Calculated risk-taking**

In most instances decisions in entrepreneurial ventures are made in uncertain situations. Inevitably risk is at the heart of every venture (Rauch & Frese, 2007:359). Managing this risk is however one of the qualities of any successful entrepreneur (Lambing & Kuehl, 2007:19). Entrepreneurs thus take calculated risks (Morris *et al.*, 2008:146). They calculate the risk very carefully and thoroughly do everything possible to get the odds in their favour (Timmons & Spinelli, 2009:52).

- **High levels of perseverance**

The many hurdles and obstacles that must be overcome, requires that entrepreneurs must be consistently persistent (Bolton & Thompson, 2003:63). Sheer determination and an unwavering commitment to succeed often win against odds that many people would consider insurmountable (Rwigema & Venter, 2004:60). Many successful entrepreneurs succeeded only after they have failed several times (Lambing & Kuehl, 2007:19).

- **Ability to take responsibility**

Entrepreneurs willingly put themselves in situations where they are personally responsible for the success or failure of a venture (Kuratko & Hodgetts, 2004:117). Bessant and Tidd (2007:258) also argue that the ability to take responsibility is closely associated with the need to achieve. Entrepreneurs therefore do not believe that fate, luck, or any other powerful external source will govern the success or failure of their venture (Timmons & Spinelli, 2009:53).

- **Problem-solving skills**

Decisiveness is a virtue in the running of any business and entrepreneurial thinking therefore demands a high degree of problem solving propensity (Venter *et al.*, 2008:56). Individuals who are more oriented toward solving problems will always view difficult, unfamiliar and poorly-structured work tasks as solvable (Raab,

Stedham & Neuner, 2005:75). Furthermore, Burns (2008:28) is of the opinion that where others see problems, entrepreneurs often see an opportunity. This general optimism, according to Timmons and Spinelli (2009:49), seem to translate into a view that the impossible just takes a little longer.

- **Capacity to inspire others**

Entrepreneurs have an uncanny ability to make heroes out of the people they attract to the venture by giving them responsibility and sharing credit for accomplishments (Timmons & Spinelli, 2009:51). Dynamic businesses depend upon the commitment and drive of the business' members, customers and suppliers (Rwigema & Venter, 2004:63) and entrepreneurs engage the energies of everyone in their domain, both inside and outside the business.

- **Self-reliance**

Entrepreneurs are self-reliant and prefer a degree of autonomy when accomplishing a task. The perception that they have room to manoeuvre in affecting their own destiny is highly valued (Morris *et al.*, 2008:147). This does not necessarily imply that entrepreneurs want to make all the decisions, but they want to make the important ones (Kuratko & Hodgetts, 2004:121).

- **Courage**

Courage, in this instance, does not refer to simple bravery, but has its source in broadly understood knowledge, experience and integrity. According to Lambing and Kuehl (2007:19), entrepreneurs often have an in-depth knowledge of the market and the industry, and they have conducted months of investigation. Timmons and Spinelli (2009:49) identify at least three important aspects of courage. First, it implies moral strength and principles. The second is being a fearless experimenter and thirdly a lack of fear of failing.

- **Self-confidence and optimism**

Although entrepreneurs often face major obstacles, their belief in their ability seldom weavers. They believe that they have the ability to accomplish whatever they set out to do (Lambing & Kuehl, 2007:19). In this regard Burns (2008:30) remarks that entrepreneurs must have confidence in the future of their business, otherwise, how can they expect others to do so? Entrepreneurs, according to Kuratko and Hodgetts (2001:111), maintain a high level of enthusiasm even through rough times which also causes others to believe in them.

- **Ability to manage ambiguity and uncertainty**

Ambiguity and uncertainty tolerance is the ability to exist in complex situations, to endure contradictions and to tirelessly work at surmounting complex problems (Raab *et al.*, 2005:76). The very nature of the entrepreneurial process demands that entrepreneurs demonstrate a high tolerance for ambiguity (Morris *et al.*, 2008:146). Entrepreneurial life is unstructured with many uncontrollable factors and no guarantee of success. Entrepreneurs feel comfortable with this uncertainty (Lambing & Kuehl, 2007:20).

- **Ability to see opportunities in market**

Entrepreneurs require general management competencies in order to capitalise on an opportunity. The specific task of identifying opportunities however is unique to entrepreneurs (Muzychenko, 2008:369). Entrepreneurs realise that good opportunities are far and few between and rely heavily on their own experience (or frustrations as customers) to come up with opportunities. In their best creative mode, entrepreneurs are constantly thinking of new ideas, watching trends, spotting patterns and connecting the dots (Timmons & Spinelli, 2009:51). According to Goel and Karri (2006:486), the single-minded pursuit of opportunities is a common characteristic of entrepreneurs.

- **Generosity**

Successful entrepreneurs do not take all the credit for their effort. This is especially important within a corporate setting and Timmons and Spinelli (2009:51) state that this is an essential attribute for entrepreneurial managers. Furthermore, these entrepreneurs also try and make the pie bigger and better, rather than jealously clutching a tiny pie which is all theirs (Bessant & Tidd, 2007:258).

- **Integrity and reliability**

Successful entrepreneurs insist on the highest personal standards of integrity and reliability. They do what they say they are going to do because they have a long-term perspective (Rauch & Frese, 2007:359). These high personal standards are the glue and fibre that hold together successful personal and business relationships and makes them endure (Timmons & Spinelli, 2009:54).

- **Good judge of people**

Entrepreneurs are good judges of people. They know when to use logic and when to persuade, when to make a concession and when to exact one. Running a successful business requires entrepreneurs to get along with many different people, often with conflicting aims (Timmons & Spinelli, 2009:51). Entrepreneurs get involved and energise networks of relationship, exploiting the expertise and resources of others (Bessant & Tidd, 2007:41) whilst being interpersonally supporting (Timmons & Spinelli, 2009:51).

- **Patience**

According to Timmons and Spinelli (2009:50), entrepreneurs are patient leaders, capable of installing tangible visions and managing for the long term. The vision of building a substantial business that will contribute something lasting and relevant to the world while realising capital gain requires patience to stick to the task for five to ten years or more. This patience should, however, not be confused with a lack of

urgency. Lambing and Kuehl (2007:20) state that entrepreneurs are aware that time is passing quickly and they therefore often appear to be impatient.

- **Ability to adapt to change**

Change is often viewed as frightening and something that should be avoided (Burns, 2008:179). In contrast, entrepreneurs view change as normal and necessary and according to Kirby (2003:179), are motivated by it. They search for it, respond to it and exploit it as an opportunity (Lambing & Kuehl, 2007:20).

- **High level of emotional stability**

Emotional stability is closely linked to emotional intelligence which is an individual's ability to understand and manage his or her own moods and emotions and the moods and emotions of other people (Venter *et al.*, 2008:50). People with a high emotional stability are therefore self-assured, balanced, think positively, are satisfied with their lives and are rarely disheartened. It also stands to reason that people who are easily upset, worries a lot, or is tormented by fear of failure would be in a very difficult position when starting a new venture. Having a high level of emotional stability would thus be an advantage for an entrepreneur (Raab *et al.*, 2005:76).

- **Self-awareness**

Successful entrepreneurs have a keen awareness of their own strengths and weaknesses and those of their partners and of the competitive and other environments surrounding and influencing them. They are realistic in recognising what they can and cannot do (Timmons & Spinelli, 2009:54).

- **Quick learner who does not make the same mistake twice**

By virtue of the fact that entrepreneurs objectively deal with their own mistakes and failure (internal locus of control) entrepreneurs learn quickly and do not make the same mistakes twice and this, in turn, is part of what makes them successful (Morris

et al., 2008:151). Seeking and using feedback is also central to the habit of learning from mistakes and setbacks and responding to the unexpected (Timmons & Spinelli, 2009:53).

- **Able to conceptualise and sweat the details**

Successful entrepreneurs have the ability to see and sweat the details and also to conceptualise (Timmons & Spinelli, 2009:53). Very often ordinary people see the same set of facts under the same conditions, yet do not link them in a way that leads to a new venture as entrepreneurs do. Furthermore, entrepreneurs often see things in a holistic sense and can see the big picture when others see only the parts (Lambing & Kuehl, 2007:21). In many cases this entails connecting the dots where the links are not obvious (Ko & Butler, 2007:369).

- **Willingness to undertake personal sacrifice**

The previously discussed high levels of determination and perseverance that entrepreneurs possess, usually require some form of personal sacrifice such as the willingness to put their own home on the line (Burns, 2008:27) and through other major sacrifices in lifestyle and family circumstances (Timmons & Spinelli, 2009:48).

- **Self starter (internal locus of control)**

Individuals with a greater internal control orientation represent their own interests more successfully and preside themselves over important occurrences in life (Raab *et al.*, 2005:74). They believe that their success or failure depends on their own actions (Lambing & Kuehl, 2007:19). According to Rauch and Frese (2007:359), internal locus of control is related to entrepreneurship, because entrepreneurs must believe that their own actions determine the rewards (business outcomes) they obtain. Similarly, Lambing and Kuehl (2007:19) argue that a person who believes that fate, the economy, or any other outside factor determines success (external locus of control) is not likely to succeed as entrepreneur. Overall, there seems to be support for the notion that entrepreneurs are more internally controlled, at least for successful

entrepreneurs (Raab *et al.*, 2005:74). This characteristic is also consistent with high achievement, the ability to take responsibility and self-confidence (Deakins & Freel, 2003:14).

- **Limited need for status and power**

Successful entrepreneurs are driven by the need for responsibility, achievement and results, rather than for power for its own sake (Kirby, 2003:112). They thrive on a sense of accomplishment rather than a need for power (Morris *et al.*, 2008:158). They may however be powerful and enjoy a certain status, but this is more a by-product of the entrepreneurial process and because of their accomplishments. It is not the driving force behind it (Timmons & Spinelli, 2009:60).

- **Restlessness with status quo**

Entrepreneurs are alert in noticing opportunities (ability to see opportunities in the market). One of the reasons is that they are dissatisfied with the status quo and are restless initiators (Timmons & Spinelli, 2009:53). They are likely to challenge conventional wisdom about the way in which things are done in the business (Ko & Butler, 2007:370).

- **Drive to achieve and grow**

The achievement motivation is an intrinsically motivated desire for preferably interesting and challenging tasks. It is thus primarily the task itself that the person desires and not necessarily the financial success that may be attached to it (Raab *et al.*, 2005:73). Financial rewards certainly count, but as a by-product and serves more as a scorecard telling the entrepreneur that he/she is making progress (Morris *et al.*, 2008:145). Recent research on achievement motivation provides two primary insights. Firstly, the founders of businesses are significantly more performance oriented than the average person. Secondly, among founders of businesses, those who possess an especially large degree of achievement motivation tend to be more successful (Raab *et al.*, 2005:74).

- **Tolerance for failure**

The hurdles, obstacles and trial-and-error nature of becoming a successful entrepreneur, make serious setbacks and disappointments an integral part of the process. The most effective entrepreneurs are realistic enough to expect such difficulties (Kuratko & Hodgetts, 2004:119). In fact, Lambing and Kuehl (2007:19) are of the opinion that successful entrepreneurs don't have failures. They have learning experiences. They better understand not only their roles but also the roles of others in causing the failure and thus are able to avoid similar problems in future (Timmons & Spinelli, 2009:53).

- **Open-mindedness (lateral thinker)**

Effective entrepreneurs are thought to continuously rethink current strategic actions, organisation structure, communications systems, business culture, in short every aspect of a business's operation and long-term health. According to Hisrich *et al.* (2008:33), these entrepreneurs attempt to make sense of opportunities in the context of changing goals, constantly questioning the dominant logic in the context of the changing environment and revisiting deceptively simple questions about the market and the business. Kirby (2003:114) is of the opinion that entrepreneurs prefer a more intuitive approach that requires more holism and synthesis, lateral rather than sequential reasoning when solving problems instead of a structured, analytical approach.

Two conclusions can be drawn from attempts to understand the traits and characteristics of the entrepreneur. Firstly, entrepreneurs are not only born, but also made. The list of characteristics presented above does not contain items that are clearly genetic, but are the result of family, educational, social and work experience developed over time. The second conclusion concerns the tendency to look for a single profile of the entrepreneur. In reality, entrepreneurs differ significantly in terms of their characteristics (Morris *et al.*, 2008:147).

Using character traits to define entrepreneurs should however be approached with caution. Linking the personal character traits of an individual to the success of a business can be problematic since the success or failure in business comes from a mix of many different things and the character of the entrepreneur is just one factor. There is also a number of methodological problems associated with attempting to measure personality characteristics such as, the traits are not stable and change over time, it requires subjective judgements, tends to ignore cultural and environmental influences, the role of education, learning and training is overlooked and issues such as age, sex, race, social class and education may also be ignored (Burns, 2008:23).

Notwithstanding the above issues, entrepreneurial characteristics have important implications for entrepreneurship within a business. Although entrepreneurs differ markedly on a given characteristic, recognising the key characteristics can help managers and employees to focus in developing a given individual's entrepreneurial potential. Furthermore, as managers make decisions about the business structure, controls, rewards, policies and other areas that define the work environment, the decisions must be made in a manner that is compatible with the types of characteristics associated with entrepreneurship (Morris *et al.*, 2008:147).

2.2.3 Outcomes of entrepreneurship

Heinonen and Poikkijoki (2006:82) state that attention have shifted away from defining entrepreneurship in terms of the personality traits of entrepreneurs. It is argued that entrepreneurship is a dynamic concept and therefore a definition should be based on what entrepreneurs do (Howorth, Tempest & Coupland, 2005:29), thus one of acting in an entrepreneurial way (Heinonen & Poikkijoki, 2006:82). This view of entrepreneurship does not only imply the creation of a new business (start-up business) but can also take place in existing businesses.

Focusing on what entrepreneurs do rather than who they are, allows for the articulation of the following (Venter *et al.*, 2008:6). Entrepreneurs:

- Identify new opportunities for products or services.

- Are creative and innovative.
- Start own business.
- Manage own business.
- Organise and control resources to ensure profit.
- Are able to market a concept, product or service.
- Obtain financial means.
- Are willing to take calculated risks.

Many perspectives have been presented in terms of the behaviours of entrepreneurs. Table 2.2 summarises the seven most prevalent themes.

Table 2.2: Perspectives on the nature of entrepreneurship

Theme	Explanation
Creation of wealth	Entrepreneurship involves assuming the risks associated with the facilitation of production in exchange for profit
Creation of business	The founding of a new business venture where none existed before
Creation of innovation	Is concerned with unique combinations of resources that make existing methods or products obsolete
Creation of change	Involves creating change by adjusting, adapting and modifying one's personal repertoire, approaches and skills to meet different opportunities available in the environment.
Creation of employment	Concerned with employing, managing and developing the factors of production, including the labour force
Creation of value	Is a process of creating value for customers by exploiting untapped opportunities
Creation of growth	Is defined as a strong and positive orientation towards growth in sales, income, assets and employment.

Source: Morris *et al.* (2008:9)

2.2.4 Entrepreneurship as a process

The most valuable contribution to the understanding of entrepreneurship is the general recognition that it involves a process. It occurs within a business setting, which also includes large established businesses. The process of entrepreneurship generally consists of the following stages namely, identifying an opportunity, developing a business plan, marshalling resources and implementing and managing

the concept (Hisrich *et al.*, 2008:9-12; Morris *et al.*, 2008:30-32; Venter *et al.*, 2008:17-18).

2.2.4.1 Identify an opportunity

At the core of the entrepreneurial process is the opportunity (Timmons & Spinelli, 2009:72). An opportunity is a chance to improve an existing situation or create new possibilities (Venter *et al.*, 2008:132), a positive external trend or change that provides unique and distinct possibilities for innovating and creating value (Coulter, 2003:15). Similarly, Shane *et al.* (2003:262) define opportunities as aspects of the environment and viewed as potentialities for profit-making.

Opportunities can arise from a number of sources such as changing needs, demographic changes, obsolescent products and services, consumers, business associates, members in the supply-chain, or technical people (Rwigema & Venter, 2004:29). In this regard, Conway and Steward (2009:290) remark that environmental scanning for a combination of market and technology signals are vital. Von Stamm (2008:322) also argues that opportunities may often arise unexpectedly and from unexpected sources.

Irrespective of where and how the opportunity was identified, Hisrich *et al.* (2008:12) are of the opinion that each opportunity must be carefully screened and evaluated against its real and perceived value, its risks and returns, its fit with the skills of the entrepreneur and its uniqueness or differential advantage in its competitive environment. The screening and evaluation of opportunities are also an important aspect in the corporate entrepreneurial context and a systematic idea capturing and handling process, as proposed by Cooper, Edgett and Kleinschmidt (2002:22) is advocated (see section 3.3.5.4. and figure 3.4).

2.2.4.2 Developing a business plan

Lambing and Kuehl (2007:143) define a business plan as a comprehensive document that helps an entrepreneur analyse the market and plan a business strategy. It is a document that describes the opportunity, product, context, strategy,

team, required resources, financial return and harvest of a business venture (Venter *et al.*, 2008:157). A good business plan must be developed in order to exploit the defined opportunity. Burns (2008:30) is also of the opinion that a business plan can be a useful management tool to address the issue of future uncertainty. It is a very time-consuming phase of the entrepreneurial process but is essential to determine the resources required and successfully managing the resulting venture (Hisrich *et al.*, 2008:13).

Although no standard business plan exists, Bessant and Tidd (2007:51) state that a typical business plan begins with an executive summary and must include sections on the product, markets, technology, production, marketing, human resources, financial estimates and a time table and funding requirements. The business plan serves as an alignment tool for a new business venture, where different components are brought together as a coherent plan (Venter *et al.*, 2008:157).

2.2.4.3 Marshalling resources

Resources comprise the capital required for investment in the business, people who need to be employed and physical assets such as equipment, machinery, buildings and vehicles (Nieuwenhuizen, 2009:336) known as tangible resources. According to Venter *et al.* (2008:413), resources may also comprise of intangible resources such as brand name, intellectual property, reputation, technological knowledge or service levels.

Hisrich *et al.* (2008:13) argue that the process of marshalling resources starts with an appraisal of the entrepreneur's present resources. Any resources that are critical need to be differentiated from those that are just helpful. Care must be taken not to underestimate the amount and variety of resources required.

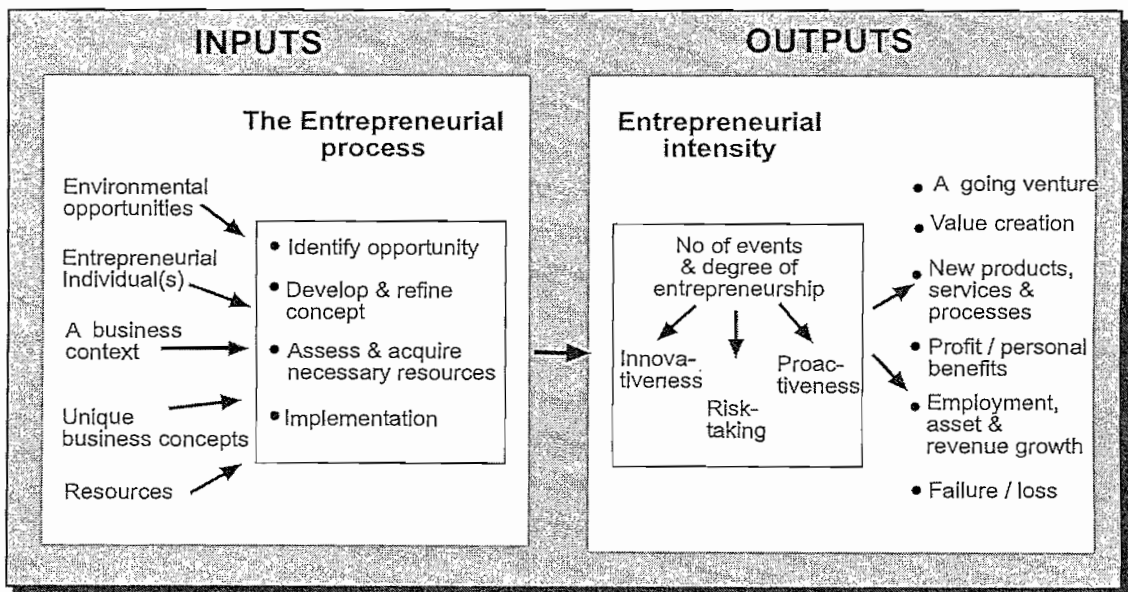
Morris *et al.* (2008:31) is of the opinion that entrepreneurs are great at leveraging resources meaning they know how to borrow or share resources, use other people's resources, stretch resources, apply resources in non-conventional ways and use resource to acquire other resources.

2.2.4.4 Managing the concept

After the resources are acquired, the entrepreneur must use them to implement the business plan. Morris *et al.* (2008:32) however warn that no matter how well planned, the implementation of a business concept is typically hectic, uncertain and ambiguous. It is thus important that the entrepreneur implement a management style, structure, as well as determining the key variables to success and establish a control system (Hisrich *et al.*, 2008:13).

Numerous methods and models have attempted to structure the entrepreneurial process and its various components. One of the most interesting approaches is the integrative model, originally presented by Morris, Lewis and Sexton (1994:29). Of interest here is that the model can be applied to both independent start-up businesses as well as large businesses.

Figure 2.1: An integrative model of entrepreneurial inputs and outputs



Source: Morris *et al.* (1994:29)

This model, as depicted in figure 2.1, is built around the concepts of inputs to the entrepreneurial process and outcomes from the entrepreneurial process. The input

component focuses on the entrepreneurial process itself and identifies five key elements that contribute to the process. The first is environmental opportunities, such as demographic change, the development of new technology, or modifications to current legislation. Next is the individual entrepreneur, the person who assumes responsibility for conceptualising and implementing the venture in order to capitalise on the opportunity (a creative way to solving a particular customer need). Implementing this business concept typically requires some type of business concept, which could range from a sole proprietorship to an autonomous business unit within a large business. Finally, a wide variety of financial and non-financial resources are required on an ongoing basis. These key elements are then combined throughout the stages of the entrepreneurial process (Morris *et al.*, 1994:29).

The output component first includes the level of entrepreneurship being achieved. Since entrepreneurship is a variable, the process can result in any number of entrepreneurial events and can vary in terms of how entrepreneurial they are. Based on this level of "entrepreneurial intensity" (see section 2.4) final outcomes can include one or more going ventures, value creation, new products and processes, new technologies, profit, jobs and economic growth (Duobiene, Gavenas, Anskaitis & Pundziene, 2007:32-33). Furthermore, the outcome can also be a failure with the associated economic, psychic and social costs (Shane *et al.*, 2003:264).

This model not only provides a fairly comprehensive picture regarding the nature of entrepreneurship, but can also be applied at different levels. For example, the model describes the phenomenon of entrepreneurship in both the independent start-up business and within a department, division, or strategic business unit of a large business.

Considering the various definitions presented on entrepreneurship, the perspective on the who (characteristics) of entrepreneurship and what they do and the fact that entrepreneurship is a process, the following definition of entrepreneurship is proposed:

Entrepreneurship is the process of creating something new of value that is opportunity obsessed, by bringing together a unique package of resources,

assuming the accompanying financial, psychological and social risk and receiving the resulting rewards of monetary and personal satisfaction and independence.

Having defined entrepreneurship and discussed the process of entrepreneurship, the focus can now shift towards the entrepreneurial process at the level of the established large business.

2.3 DEFINING CORPORATE ENTREPRENEURSHIP

The term entrepreneurship has been used to describe the entrepreneurial efforts of individuals operating outside the context of a corporate business, whilst a variety of terms are used for the entrepreneurial efforts within an existing business. A summary of some of the various definitions that have been presented in literature are indicated in table 2.3.

Table 2.3: Summary of some of the various definitions

Term used	Definition	Author
Corporate Entrepreneurship	Corporate entrepreneurship refers to the process whereby firms engage in diversification through internal development. Such diversification requires new resource combinations to extend the firm's activities in areas unrelated, or marginally related, to its current domain of competence and corresponding opportunity set.	Burgelman (1983)
	Corporate entrepreneurship involves employee initiatives from below in the organisation to undertake something new. An innovation which is created by subordinates without being asked, expected, or perhaps even given permission by higher management to do so.	Vesper (1984)
	Corporate entrepreneurship involves extending the firm's domain of competence and corresponding opportunity set through internally generated new resource combinations.	Covin and Slevin (1991)
	Corporate entrepreneurship encompasses two types of phenomena and the processes surrounding them: (1) the birth of new businesses within existing organisations, i.e., the internal innovation and venturing; and (2) the transformation of organisations through renewal of the key ideas on which they are built.	Guth and Ginsberg (1990)
	Corporate entrepreneurship is defined as the process whereby an individual or a group of individuals, in association with an existing organisation, create a new organisation, or instigate renewal or innovation within that organisation.	Sharma and Chrisman (1999)
Corporate venturing	A project is a corporate venture when it involves an activity new to the organisation, is initiated or conducted internally, involves significantly higher risk of failure or large losses than the organisation's base business, is characterised by greater uncertainty than the base business, will be managed separately at some time during its life and is undertaken for the purpose of increasing sales, profit, productivity, or quality.	Block and MacMillan (1995)
Internal ventures, Internal corporate venturing, new business venturing	Venture may be applied to the development of new business endeavours within the corporate framework.	Hornsby, Naffziger, Kuratko and Montago (1993)
	Venturing means that the firm will enter new businesses by expanding operations in existing or new markets.	Zahra (1996)
Intrapreneurship	Intrapreneurs are any of the "dreamers who do". Those who take hands-on responsibility for creating innovation of any kind within organisations. They may be the creators or inventors but are always the dreamers who figure out how to turn an idea into a profitable reality.	Pinchot III (1985)
Strategic or organisational renewal	Strategic renewal involves the creation of new wealth through new combinations of resources.	Guth and Ginsburg (1990)
	Renewal means revitalising a company's business through innovation and changing its competitive profile. It means revitalising the company's operations by changing the scope of its business, its competitive approaches or both. It also means building or acquiring new capabilities and then creatively leveraging them to add value for shareholders.	Zahra (1996)

Source: Sharma and Chrisman (1999:13)

Covin and Miles (1999:48) and later adopted by Burns (2008:13), present three of the most common phenomena that are often viewed as examples of entrepreneurship within an established large business, namely:

- The birth of new businesses within an existing business. This phenomenon has typically been referred to as “corporate venturing” (Ramachandran, Devarajan & Ray, 2006:85). Corporate venturing usually emanates from a core competency or process (Thornberry, 2003:330).
- The second phenomenon is where an individual or individuals champion new product ideas within a corporate context. This phenomenon was originally labelled by Pinchot (1985:vii) as “intrapreneurship”, which is short for intra-corporate entrepreneur. Within a business, intrapreneurs take new ideas and turn them into profitable new realities.
- The third phenomenon is where an entrepreneurial philosophy permeates an entire business’s outlook and operations. In this instance, the term “corporate entrepreneurship” is used and refers to where the entire business, rather than exclusive individuals, acts in ways that generally would be described as entrepreneurial (Amo & Kolvereid, 2005:7-8).

In order to derive at a definition for corporate entrepreneurship, these three phenomena will be discussed in more detail.

2.3.1 The phenomena of corporate venturing

Sharma and Chrisman (1999:19) and Covin and Miles (1999:48) refer to corporate venturing as the creation of new businesses in an organisation. A new venture can be created by setting up a new venture inside the business, or through accessing external competences, as in the case of a joint venture with another business (Verbeke, Chrisman & Yuan, 2007:587).

Corporate venturing is defined by O'Leary-Collins (2005:37) as any form of business development activity that leverages corporate mass to create competitive advantage in core business, or to grow related strategic markets.

Corporate venturing thus involves starting a business within a business, which usually emanates from an existing core competency or process (Hisrich *et al.*, 2008:69). In some businesses, functions like product development or research and development are responsible for new venture creation. These ventures usually involve the creation, nurturing and development of new business that comes from the old business, but represents a significantly new product or market opportunity (Burns, 2008:13). Ventures differ from simple line extensions in the sense that ventures require vast amounts of new learning on the part of the business. New, although not totally foreign, competencies are required, or current competencies are leveraged in a completely new way (Thornberry, 2001:527).

2.3.2 The phenomena of intrapreneurship

The term intrapreneurship was first coined by Pinchot (1985:vii) who defined intrapreneurs as "any of the dreamers who do". Those who take hands-on responsibility for creating innovation of any kind within organisations. This definition was later also adopted by Pinchot and Pellman (1999:ix).

In its broadest sense, intrapreneurship was defined by Antoncic and Hisrich (2001:498) as entrepreneurship within an existing business. Thornberry, (2001:528) therefore argues that intrapreneurship is an attempt to take the mindset and behaviours that external entrepreneurs have and inculcate these characteristics into the employees of an existing business. Antoncic and Hisrich (2001:498) further refers to intrapreneurship as a process that goes on inside an existing business, regardless of its size, and leads to not only new business ventures, but also to other innovative activities and orientations such as development of new products, services, technologies, administrative techniques, strategies and competitive postures.

From the above definitions it is clear that intrapreneurship is used to describe individuals, or a group of individuals, who are prepared to take calculated risks and

act to create business opportunities that serve the business's needs for growth and improvement (Eesley & Longenecker, 2006:19). Similarly, Burns (2008:13) is of the opinion that intrapreneurship is concerned with individual employees and according to Birkinshaw (2003:8) also considers the personalities and styles of individuals who make good intrapreneurs, and how they might be encouraged to act in an entrepreneurial way within a larger business. It looks at systems, structures and cultures that inhibit this activity and how they might be circumvented or even challenged (Burns, 2008:13).

2.3.3 The phenomena of corporate entrepreneurship

The third phenomena is where businesses are engaged in corporate entrepreneurship to increase competitiveness through efforts aimed at the rejuvenation, renewal and redefinition of businesses, their markets, or industries. It is where an entrepreneurial philosophy (see section 2.4) permeates an entire business's outlook and operations (Lassen, Gertsen & Riis, 2006:360). Of importance is to note that the phenomena of corporate entrepreneurship refers to where the entire business, rather than exclusively individuals, acts in ways that would generally be described as entrepreneurial.

Similarly, Kemelgor (2002:68) describes the phenomena of corporate entrepreneurship as a business-level phenomenon in which the business has a serious commitment to innovations as strategically important to the competitiveness of the business and tactically important to its operations and processes. In such businesses, entrepreneurship is a shared value and drives managerial behaviour in conscious and subconscious ways (Ramachandran *et al.*, 2006:89).

The phenomena of corporate entrepreneurship (where corporate entrepreneurship refers to where the entire business acts in ways that generally would be described as entrepreneurial) is also the view that would be followed in this study. The following reasons are presented:

- Firstly, the phenomena of corporate venturing concerns the notion of internal corporate venturing and deals more with how businesses engage in internal

ventures to take advantage of various opportunities (Thornhill & Amit, 2001:26);

- Secondly, from the definition (see section 2.3.2) of the phenomena of intrapreneurship this phenomenon refers more to the individuals or group of individuals that champion the new idea; and
- Finally, the phenomena of intrapreneurship and corporate venturing are part of the phenomena of corporate entrepreneurship. The term corporate entrepreneurship is therefore seen as the all-inclusive term.

2.3.4 Corporate entrepreneurship defined

Corporate entrepreneurship is a term used to describe entrepreneurial behaviour inside established mid-sized and large businesses (Morris *et al.*, 2008:11). Two definitions have been presented that capture the concept of corporate entrepreneurship (as described in section 2.3.3). Sharma and Chrisman (1999:19) defined corporate entrepreneurship as the process whereby an individual or group of individuals, in association with an established company, creates a new business or instigates renewal or innovation within the current business (Morris *et al.*, 2008:12; Kuratko *et al.*, 2005:701). Under this definition strategic renewal (business revitalisation involving strategic and structural changes), innovation and corporate venturing are all-important parts of the term corporate entrepreneurship.

Similarly, Covin and Miles (1999:50) define corporate entrepreneurship as the presence of innovation plus the objective of rejuvenating or purposefully redefining organisations, markets, or industries in order to create or sustain competitive superiority. Under this definition four forms of corporate entrepreneurship can be identified namely sustained regeneration, business rejuvenation, strategic renewal and domain redefinition and can often concurrently exist in an entrepreneurial business.

2.3.4.1 Sustained regeneration

Businesses that engage in sustained regeneration are those that regularly introduce new products and services or enter new markets (Covin & Miles, 1999:51). Sustained regeneration, as a form of corporate entrepreneurship, is most commonly employed as a basis for attaining or sustaining competitive advantage under conditions of short product-life cycles, changing technological standards, or segmenting product categories and market arenas (Kuratko & Audretsch, 2009:8). Businesses that are successful at sustained regeneration tend to have cultures, structures and systems to support and encourage a continuous stream of new product introductions in its current markets as well as entries with existing products into new markets (Dess, Ireland, Zahra, Floyd, Janney and Lane, 2003:355). They also tend to be learning businesses that embrace change and challenge competitors.

2.3.4.2 Business rejuvenation

Business rejuvenation, within the corporate entrepreneurship context, refers to businesses that seek to sustain or improve its competitive standing by altering its internal processes, structures and/or capabilities (Covin & Miles, 1999:52). Often business rejuvenation entails a fundamental redesign of the entire business which might result from, for example, major business process reengineering projects that reconfigure the business' internal value-chain. In other instances, business rejuvenation can also involve single innovations (major restructuring) or multiple smaller innovations that collectively contribute to significantly increased business efficiency or effectiveness at strategy implementation (transference of core competency) (Kuratko & Audretsch, 2009:9). According to Dess *et al.* (2003:355), business rejuvenation is framed around support activities (procurement, human resources) rather than primary activities (inbound logistics, operations). Nevertheless, Kuratko and Audretsch (2009:9) conclude that to constitute business rejuvenation, the innovation(s) in question cannot simply imitate initiatives that are common to the business' industry. Rather, the innovation (s) must, at least, distinguish the business from its industry rivals.

2.3.4.3 Strategic renewal

Strategic renewal is where businesses seek to redefine its relationship with its markets or industry competitors by fundamentally altering how it competes (Dess *et al.*, 2003:355). Originally defined by Guth and Ginsberg (1990:5) the label strategic renewal referred to the transformation of businesses through renewal of the key ideas on which they were built. However, strategic renewal has a more specific meaning and focus. With strategic renewal, the focus of the entrepreneurial initiative is the business's strategy, although this does not imply that all businesses that adopt new strategies are pursuing strategic renewal. Rather, new strategies constitute strategic renewal when they represent fundamental repositioning efforts by the business within its competitive space (Kuratko & Audretsch, 2009:8). Strategic renewal will result in significant changes in the business's business or corporate level strategy and in most cases will involve some sort of innovation (Ramachandran *et al.*, 2006:87).

2.3.4.4 Domain redefinition

Domain redefinition refers to the entrepreneurial phenomenon whereby a business proactively creates a new product-market arena that others have not recognised or actively sought to exploit (Covin & Miles, 1999:54). Domain redefinition therefore renders a business's current competition moot, at least temporarily, inasmuch as this entrepreneurial activity takes place in unoccupied competitive space and can give rise to completely new industries or redefine the boundaries of existing industries (Kuratko & Audretsch, 2009:9). The focus here is on exploring for what is possible rather than exploiting what is currently available (Dess *et al.*, 2003:355). It is hoped that the first-mover status will create a basis for sustainable competitive advantage when and if competitors follow (Kuratko & Audretsch, 2009:9).

Corporate entrepreneurship is thus defined as the process whereby an individual or group of individuals, in association with an established business, creates a new business or instigates renewal or innovation within the current business, in order to create or sustain competitive superiority.

To be successful, corporate entrepreneurship must be approached from a strategic management perspective (Chen, Zhu & Anquan, 2005:532). It is thus a way of thinking that animates all parts of a business where strategic managers and culture together generate a strong impetus to innovate, take risks and aggressively pursue new venture opportunities. These ideas are captured by the concept known as “entrepreneurial orientation” (Dess & Lumpkin, 2005:147).

2.4 ENTREPRENEURIAL ORIENTATION

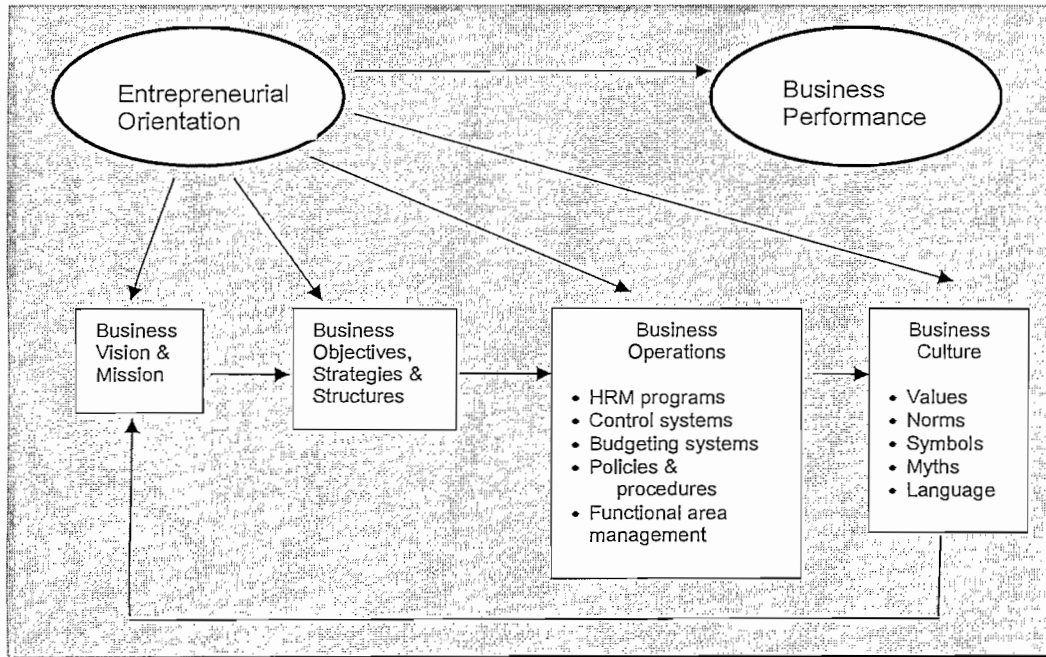
Lumpkin and Dess (1996:139) believe that there is a fundamental set of strategy-making process dimensions that underlies nearly all entrepreneurial processes in that it reflects the business processes, methods and styles that the business use to act entrepreneurially. With regard to the dimensions of entrepreneurial orientation Miller (1983:770) provided the starting point and suggested that an entrepreneurial business is one that engages in product market innovation, undertakes somewhat risky ventures and is first to come up with proactive innovations. These three dimensions innovativeness, risk taking and proactiveness were supported by Covin and Slevin (1989:76), Zahra, Jennings and Kuratko (1999:50) and Morris *et al.* (2008:54).

Lumpkin and Dess (1996:139-140) added two other dimensions, competitive aggressiveness and autonomy. According to Dess and Lumpkin (2005:147), these five dimensions permeate the strategy-making practices that businesses use to identify and launch business ventures. It therefore represents a frame of mind and a perspective about entrepreneurship that are reflected in a business’s ongoing processes and business culture.

In this regard, Morris *et al.* (2008:50) present a framework (figure 2.2) of corporate entrepreneurship that approach entrepreneurship as an overall orientation within a business. This framework indicates that entrepreneurial orientation has a direct and positive influence on business performance. This is because it is interwoven with the vision and mission of the business, the strategies and objectives, structures of the business, the business’s operations and the overall business culture. The overall

theme of this framework is a revitalisation of personal creativity, product and process innovation and ongoing managerial development within businesses.

Figure 2.2: Strategic integration of entrepreneurship throughout the business



Source: Morris *et al.* (2008:50)

The five dimensions of an entrepreneurial orientation, autonomy, innovativeness, risk-taking, proactiveness and competitive aggressiveness will be discussed in more detail.

2.4.1 Autonomy

Autonomy refers to the independent actions of an individual or a team in bringing forth an idea or a vision and carrying it through to completion (Lassen *et al.*, 2006:361; Lumpkin & Dess, 1996:140). In the context of entrepreneurial orientation, autonomy is essential to the process of leveraging a business's existing strengths, identifying opportunities and encouraging the development of new ventures and/or improved business practices.

To encourage autonomy, business uses both “top-down” and “bottom-up” approaches. The top-down approach includes aspects such as management support for programs, giving incentives that foster a climate of entrepreneurship and welcoming autonomous decision making. To encourage autonomy from the bottom up will require special incentives and structural arrangements designed to develop and build support for entrepreneurial initiatives (Lumpkin, Cogliser & Schneider, 2009:49).

Furthermore, many businesses have engaged in actions such as flattening hierarchies and delegating authority to operating units. Whilst these moves are intended to foster autonomy the process of business autonomy requires much more than a change in design. Businesses must actually grant autonomy and individuals must be encouraged to exercise it (Mumford, Scott, Gaddis & Stange, 2002:724).

Finally, Dess and Lumpkin (2005:150) are of the opinion that autonomy must be measured and monitored. This implies a delicate balance between having the patience and budget to tolerate the explorations of autonomous groups and having the strength to cut back efforts that are not bearing fruit. It must also be undertaken with a clear sense of purpose, namely to generate new sources of competitive advantage.

2.4.2 Innovativeness

Innovativeness reflects a business’s tendency to engage in and support new ideas, novelty, experimentation and creative processes that may result in new products, services, or processes (McFadzean *et al.*, 2005:353). The importance of innovation to entrepreneurship was first emphasised by Lumpkin and Dess (1996:141) proposing that innovation is the single dimension that has to be employed by all entrepreneurial businesses. It can therefore be argued that, even in the presence of the other dimensions, if innovation is not employed there is no business level entrepreneurship (Gürbüz & Aykol, 2009:323).

Evidence of business innovativeness may take several forms and according to Zhao (2005:27), a range or continuum of possibilities exists concerning product and service innovation (see figure 2.3) and process innovation (see table 2.4).

Figure 2.3: Innovativeness as applied to products and services



Source: Morris *et al.* (2008:55)

Figure 2.3 addresses the following questions:

- Does the concept address a need not previously addressed?
- Does it change the way one goes about addressing a need?
- Is it a dramatic improvement over conventional solutions?
- Does it represent a minor modification or improvement to an existing product?
- Is it just the geographic transfer of a proven product?

Product/service innovation presents any change in the product or service range that a business takes to market and is the most clearly understood form of innovation (Schilling, 2005:38).

Table 2.4: Innovativeness as applied to processes

Degree of innovation	Type of process
Major new process	Administrative system Service delivery system
Minor new process	Production methods Financing methods
Significant revision of existing process	Marketing or sales approaches Procurement techniques
Modest improvement to existing process	Compensation methods Supply chain management techniques Distribution methods Employee training programs Pricing approaches Information management systems Customer support programs Logistical approaches Hiring methods

Source: Morris *et al.* (2008:56)

With process innovation, as indicated in table 2.4, the emphasis shifts to achieving competencies in the latest technologies and production methods and the development of advanced manufacturing processes (Lumpkin & Dess, 1996:143). Process innovation therefore relates to finding new or better ways to accomplish a task or function. Many businesses develop highly innovative processes, which form a major source of competitive advantage (Bessant, 2003:5).

The dynamic environment of today where customer needs, product-service technologies and competitive weapons often change unpredictably, innovation has become a requirement to deal with the continuous change and uncertainty (Kropp, Lindsay & Shoham, 2008:104). The greater the environmental dynamism and hostility, the greater the requirement for innovation will be. Innovation is presented in detail in section 3.3.

2.4.3 Risk Taking

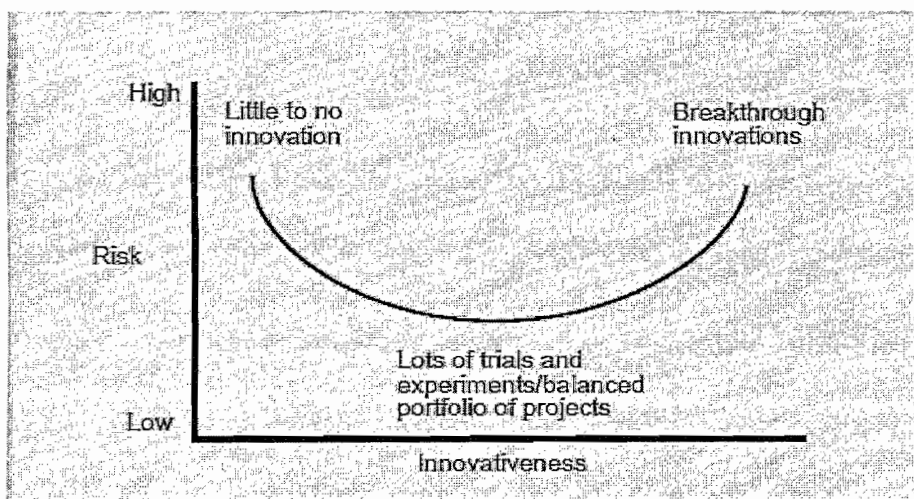
The term risk is defined by Dewett (2004:258) as the extent to which there is uncertainty about whether potentially significant and/or disappointing outcomes of a decision will be realised. In this regard, Mullins and Forlani (2005:51) characterise risk as either the potential to act too quickly on an unsubstantiated opportunity

(sinking the boat) or the potential to wait too long before acting (missing the boat). Risk is inherent in the operations of any business and almost every decision taken by managers involves risk (Von Stamm, 2008:387). Often, corporate entrepreneurial businesses that have an entrepreneurial orientation are typified by risk-taking behaviour, such as incurring heavy debt or making large resource commitments, in the interest of obtaining high returns by exploiting opportunities in the marketplace (Bhardwaj *et al.*, 2007:134). However, this risk does not refer to extreme or uncontrollable risk, but rather to moderate and calculated risk (Morris *et al.*, 2008:62).

Corporate entrepreneurs are therefore not high risk-takers (Lambing & Kuehl, 2007:19). Instead they try to define the risk they have to take, minimise it as much as possible and manage it (Timmons & Spinelli, 2009:52) and should rather be viewed as risk-aware and opportunity-focussed (McBeth & Rimac, 2004:18).

Another aspect concerning risk-taking is the assumption, which is often made, that innovativeness and risk-taking are directly correlated, that is, doing more innovative things means taking higher risks. According to Morris *et al.* (2008:62), the relationship is far more complex. This relationship is depicted in figure 2.4.

Figure 2.4: Correlation between innovativeness and risk



Source: Morris *et al.* (2008:63)

From figure 2.4 the relationship between risk and innovativeness is pictured as curvilinear. Risk is also high when business ignores new product/service opportunities and engages in little to no innovation. In this regard Burns (2008:291) notes that whilst not innovating presents a minimal risk in the short term, it does create a high risk in the long term. In essence, businesses that do not innovate are faced with a higher risk of not perceiving market and technology shifts that are capitalised on by competitors (see section 3.3.1).

The opposite is also true. Businesses that attempt to come up with a breakthrough innovation that create new markets and redefine industries also face high risk (Morris *et al.*, 2008:63).

Risk is lower and more manageable in between these two extreme points. Here many trials and experiments are pursued continuously, which in effect means managing a balanced portfolio of innovation projects (see section 3.3.6). The latter approach to innovation can be regarded to more closely resembling an entrepreneurial orientation.

In conclusion, risk or risk-taking has always been seen as essential to capture profits from creating new combinations of productive resources, because profit comes from an entrepreneur's perceiving of an opportunity and then investing to capitalise on it (Nieuwenhuizen, 2003:9). Furthermore, factors such as globalisation, deregulation, technological and social change and information technology are forcing businesses to cope with rapid and unexpected change, which has long been central to the theory of entrepreneurship (Shane *et al.*, 2003:264). To be successful in future, businesses will need to exploit an entrepreneurial orientation with the ability to rapidly sense, act and mobilise under highly risky conditions (McGrath & MacMillan, 2000:xiv).

2.4.4 Proactiveness

Proactiveness according to Madsen (2007:187), refer to a posture of anticipating and acting on future wants and needs in the marketplace thereby creating a first-mover advantage *vis-à-vis* competitors.

The advantages of being a first mover include securing access to rare resources, gaining new knowledge of key factors and issues, carving out market share and a position that is easy to defend and costly for rivals to overtake (David, 2007:200). First movers are however not always successful. The introduction of novel products or breakthrough technologies is not always accepted by the market. Therefore, careful analysis of the environment and extensive feasibility research are needed for a proactive strategy to lead to a competitive advantage (Dess & Lumpkin, 2005:151).

Lumpkin and Dess (1996:146) however argue that although the idea of acting in anticipation of future demand is an important component of entrepreneurship, the idea of being first to market is somewhat narrowly construed. A business can be novel, forward thinking and fast without always being first. Subsequently, Lumpkin and Dess (1996:146) suggest that proactiveness refers to processes aimed at anticipating and acting on future needs by seeking new opportunities which may or may not be related to the present line of operations and the introduction of new products and brands ahead of competition. Some of the activities that are thus associated with proactiveness include new opportunity identification and evaluation, identification and monitoring of market trends and new venture team formation (Kropp *et al.*, 2008:104).

A proactive business is thus a leader rather than a follower, since it has the will and the foresight to seize new opportunities, even if it is not always the first to do so (Gürbüz & Aykol, 2009:323).

2.4.5 Competitive aggressiveness

Competitive aggressiveness, as a dimension of an entrepreneurial orientation, refers to a business's propensity to directly and intensely challenge its competitors (Lumpkin & Dess, 1996:148) to improve its own marketplace position (Chang, Lin, Chang & Chen, 2007:1000). It is important to note that within the entrepreneurial orientation context, competitive aggressiveness is a reaction to competitive trends and demands that already exist in the marketplace. It therefore translates to a response to threats from competitors.

Businesses that are competitively aggressive are characterised by responsiveness, which may take the form of head-to-head confrontation, for example, when a business enters a market that another competitor has identified (Lee & Sukoco, 2007:550). Responsiveness may also take the form of a business being reactive, for example, when a business lowers prices in response to a competitive challenge. Furthermore, competitive aggressiveness also reflects a willingness to be unconventional rather than relying on traditional methods of competing. This includes, amongst others, adopting unconventional tactics to challenge industry leaders, analysing and targeting a competitor's weakness and focussing on high value-added products (Lumpkin & Dess, 2001:434).

Although closely related, Lumpkin and Dess (1996:147) feel that there is an important distinction between competitive aggressiveness and proactiveness that needs to be clarified. Proactiveness refers to how a business relates to market opportunities by seizing initiative and acting opportunistically in order to shape the environment, that is, to influence trends and perhaps even create demand. In contrast, competitive aggressiveness refers to how businesses relate to competitors, that is, how businesses respond to trends and demand that already exist in the marketplace.

In conclusion, these five dimensions collectively permeate the decision-making styles and practices of a business and often work together to enhance a business's entrepreneurial performance (Dess & Lumpkin, 2005:147).

2.5 SIMILARITIES AND DIFFERENCES BETWEEN START-UP ENTREPRENEURSHIP AND CORPORATE ENTREPRENEURSHIP

The term entrepreneurship has long been associated with bold individuals who persevere against all odds in creating a new venture. Unfortunately the vast majority of start-up efforts has been fairly opportunistic and has produced a fair number of failures (Morris *et al.*, 2008:33). Entrepreneurship has however now evolved beyond the classic start-up notion to include, amongst others, large businesses (Timmons & Spinelli, 2009:79) and the following problems can be raised when speaking of entrepreneurship within large businesses. For instance, do businesses really want

bold, aggressive, risk-taking individuals? Is opportunistic behaviour consistent with the planned, controlled, strategic direction of the business? Furthermore, there is certain scepticism about whether entrepreneurship is even possible within a large business (Morris *et al.*, 2008:33).

Given this scepticism, it is thus important to understand the differences and similarities between start-up entrepreneurship and corporate entrepreneurship. To furthermore emphasise the nature of corporate entrepreneurship the difference between a “traditional” business and an entrepreneurial business will also be presented.

2.5.1 Similarities between start-up and corporate entrepreneurship

There are three broad similarities between start-up entrepreneurship and corporate entrepreneurship as proposed by Morris *et al.* (2002:33-35).

- Firstly, when considering the definitions of entrepreneurship (see section 2.2.1) the context within which entrepreneurship occurs is not part of the definition. Rather, the focus is capitalising on an opportunity through a unique concept that creates value for a customer. This clearly can occur in start-up ventures, small and medium sized businesses and more specifically in large established businesses (Burns, 2008:9).
- Secondly, entrepreneurship involves a process (see section 2.2.1). Similarly this process may also be applied within the corporate context (Antoncic & Hisrich, 2003:8).
- Finally, it is argued that corporate entrepreneurship should be approached as an overall orientation within a business. The underlying dimensions of an entrepreneurial orientation (autonomy, innovativeness, risk-taking, proactiveness and competitive aggressiveness) (see section 2.4) also characterise entrepreneurial efforts no matter where these efforts occur (Dess & Lumpkin, 2005:147).

More specific similarities between start-up entrepreneurship and corporate entrepreneurship are presented in table 2.5.

Table 2.5: Similarities between start-up entrepreneurship and corporate entrepreneurship

◆ Both involve opportunity recognition and definition.
◆ Both require a unique business concept that takes the form of a product, service, or process.
◆ Both are driven by an individual champion who works with a team to bring the concept to fruition.
◆ Both require that the entrepreneur be able to balance vision with managerial skill, passion with pragmatism and proactiveness with patience.
◆ Both involve concepts that are most vulnerable in the formative stage and that require adaptation over time.
◆ Both entail a window of opportunity within which the concept can be successfully capitalised upon.
◆ Both are predicated on value creation and accountability to a customer.
◆ Both find the entrepreneur encountering resistance and obstacles, necessitating both perseverance and an ability to formulate innovative solutions.
◆ Both entail risk and require risk-management strategies.
◆ Both require the entrepreneur to develop creative strategies for leveraging resources.
◆ Both involve significant ambiguity.
◆ Both require harvesting strategies.

Source: Morris *et al.* (2002:34)

Understanding these similarities is important for at least three reasons namely:

- It reiterates the fact that entrepreneurship is a universal concept and therefore lies at the core of a business. Subsequently, it will help dispense the notion that corporate entrepreneurship is just another management fad that will fade once consultants and popular business writers move on to the next new tool, concept, or perspective (Harper *et al.*, 2008:13);
- Secondly, it is important that senior management who commit the business on an entrepreneurial path and those employees who are expected to carry out the entrepreneurial mission understand this phenomenon (Ireland, Cavin & Kuratko, 2009:26). Corporate entrepreneurship is real; it entails risk, failure

is likely; and the psychological, emotional and financial cost can be significant; and

- Finally, most of the research done on entrepreneurship has emphasised the start-up context. The similarities between start-up and corporate entrepreneurship suggest that large businesses can learn much from the start-up context (Morris *et al.*, 2008:34).

2.5.2 Differences between start-up and corporate entrepreneurship

A number of differences between start-up and corporate entrepreneurship are illustrated in table 2.6.

Table 2.6: Differences between start-up and corporate entrepreneurship

Start-up entrepreneurship	Corporate entrepreneurship
Entrepreneur takes the risk.	Business assumes the risk, other than career-related risk.
Entrepreneur "owns" the concept and business.	Business owns the concept and typically the intellectual rights surrounding the concept.
Entrepreneur own all or much of the business.	Entrepreneur may have no equity in the business, or a very small percentage.
Potential rewards for the entrepreneur are theoretically unlimited.	Clear limits are placed on the rewards entrepreneurs can receive.
One misstep can mean failure.	More room for errors, business can absorb failure.
Vulnerable to outside influence.	More insulated from outside influence.
Independence of the entrepreneur.	Interdependence of champion with many others; may also have to share credit with several people.
Flexibility in changing course, experimenting, or trying new directions.	Rules, procedure and bureaucracy hinder the entrepreneur's ability to manoeuvre.
High speed of decision making.	Longer approval cycles.
Little security.	Job security.
No safety net.	Dependable benefit package.
Few people with whom to talk.	Extensive network for bouncing around ideas.
Limited scale and scope, at least initially.	Potential for sizeable scale and scope fairly quickly.
Severe resource limitations.	Access to finance, R&D, production facilities for trial runs, established sales force, an existing brand, existing distribution channels, existing databases and market research resources and established customer base.

Source: Morris *et al.* (2008:36)

Of importance however are the implications of these differences. Sustainable corporate entrepreneurship is more likely where managers understand the implications of these differences which can be drawn for the motivation and attitudes, time horizons, accountability and the risk orientation of corporate entrepreneurs (Morris *et al.*, 2008:35). These implications are discussed in more detail.

2.5.2.1 Motivation and attitudes

The motivation of corporate entrepreneurs has to do with the desire to create something successful, to bring to fruition an idea and to make a mark on something that will make a substantive contribution to the business (Shane *et al.*, 2003:258). Kuratko and Hodgetts (2001:100) state that true corporate entrepreneurs are concerned with their performance and prefer to have clear feedback so that they know the extent to which what they are doing is having the desired effect.

2.5.2.2 Time horizons

Within the business context the corporate entrepreneur faces a number of conflicting pressures that needs to be balanced. One of these conflicting pressures is time. Corporate entrepreneurs are self-driven, with self-imposed timelines and performance benchmarks. The timeline for moving a project to completion, which can be anything from two to ten years or more (Morris *et al.*, 2008:37), is almost always in conflict with the normal monthly, quarterly and annual performance review cycles of a business (Thornberry, 2003:339). Furthermore, the fostering of new and innovative ideas requires that individuals have time to incubate these ideas. It is however the normal tendency within a business, to allocate the productive resources (time) to the existing business and to attend to the daily crisis (Bessant & Tidd, 2007:61). The corporate entrepreneur must balance these conflicting pressures and the challenge therefore lies in performing satisfactorily on the normal performance measures of the business whilst also meeting self-imposed objectives (Thornberry, 2003:339).

2.5.2.3 Accountability

Start-up entrepreneurs, besides possible stockholders and partners or financiers, are usually accountable to themselves. In contrast, the corporate entrepreneur is usually accountable to their direct line manager or any other manager whose department have lent support along the way (Morris *et al.*, 2008:37). Unfortunately, in most businesses the pressure on managers to obtain short-term results provides “would be” corporate entrepreneurs with precious little time to pursue opportunities (Thornberry, 2003:339). Furthermore, the pursuit of new ideas is often accompanied by a political process in order to develop and coordinate activities associated with an innovation until it achieves success. A manager that encourage risk taking and do not punish failure is a strong antecedent of corporate entrepreneurship (Kuratko *et al.*, 2005:703).

2.5.2.4 Risk orientation

Morris *et al.* (2008:41) is of the opinion that because corporate entrepreneurs are in a business, rather than on their own, it may be expected that they would be fairly risk adverse. They argue that this is not the case since the business is assuming much of the risk; the corporate entrepreneur may actually tend to take greater risks. This does not imply that corporate entrepreneurs have a propensity for risk-taking. In support, McBeth and Rimac (2004:18) and Morris *et al.* (2008:145) agree that corporate entrepreneurs are moderate risk takers. They tend to identify all the associated risk factors and then develop strategies for managing these risks (Timmons & Spinelli, 2009:52). Whilst it has been contended above that, within the corporate entrepreneurial context, the business assumes the greatest risk in terms of the capital investment they make (Thornberry, 2003:332), the corporate entrepreneur ultimately takes the greatest risk namely the risk of failure (Burns, 2008:28). This risk can be reduced in businesses that provide support for corporate entrepreneurs by allowing mistakes. In businesses that offer little or no support this risk may be so severe that potential corporate entrepreneurs either forget about their idea or pursue them on their own outside of their business (Govendo, 2001:36). It is important for management to create an environment that supports corporate entrepreneurship. This aspect will be discussed in detail in chapter 4 that deals specifically with creating

an environment that supports corporate entrepreneurship. To finally indicate the nature of corporate entrepreneurship a brief comparison is made between the traditional business and an entrepreneurial business.

2.6 THE TRADITIONAL VERSUS ENTREPRENEURIAL BUSINESS

A number of selected comparisons between the two types of businesses are depicted in table 2.7. It is important to note that table 2.7 displays the ends of a continuum and are not simple comparisons that lend themselves to precise definitions.

Table 2.7: Comparison between traditional and entrepreneurial businesses

Traditional business	Dimensions	Entrepreneurial business
<ul style="list-style-type: none"> ▪ Risk-averse and resource driven ▪ Adaptive ▪ Short-term oriented (1-5 years) 	Strategy	<ul style="list-style-type: none"> ▪ Risk-aware and opportunity focussed ▪ Proactive ▪ Long-term oriented (5-15 years)
<ul style="list-style-type: none"> ▪ Complete commitment of resources at outset ▪ Match opportunity to available resources 	Risk	<ul style="list-style-type: none"> ▪ Stepwise commitment to resources ▪ Minimal exposure at each stage ▪ Attract resources to potential opportunity
<ul style="list-style-type: none"> ▪ Predictability, resistance to change ▪ Extrinsic motivation ▪ Experience 	Culture	<ul style="list-style-type: none"> ▪ Acceptance of change ▪ Intrinsic motivation ▪ Experiences
<ul style="list-style-type: none"> ▪ Stability & centralized control ▪ Hierarchical, departmental, silos 	Structure	<ul style="list-style-type: none"> ▪ Flexibility & autonomy ▪ Flat, team-based, people centered
<ul style="list-style-type: none"> ▪ Bureaucratic, rigid ▪ Procedural focus ▪ Command & control 	Systems	<ul style="list-style-type: none"> ▪ Open, networked, flexible, interconnected ▪ Results focus, self-correction ▪ Communication & coordination
<ul style="list-style-type: none"> ▪ Based on responsibility & seniority ▪ "One-size-fits-all" rewards ▪ Promote safe, efficient behaviour 	Reward philosophy	<ul style="list-style-type: none"> ▪ Based on value creation, team-based ▪ Individualised rewards ▪ Promote creativity & innovation
<ul style="list-style-type: none"> ▪ Specialised ▪ Task and role-oriented 	Learning	<ul style="list-style-type: none"> ▪ Integrative, ongoing and experimental ▪ Focused on individual growth

Source: Hisrich *et al.* (2008:41) and McBeth and Rimac (2004:19)

According to Burns (2008:10), the focus of traditional businesses is on efficiency and effectiveness rather than creativity and innovation. This focus is usually portrayed in the strategy of traditional businesses and in general the strategy is to use the resources of the business efficiently. The type and amount of resources therefore

represent the key starting point for thinking strategically about the future of the business (Hisrich *et al.*, 2008:44). In contrast, entrepreneurial businesses are driven by opportunity seeking behaviour (Ireland, Hitt & Sirmon, 2003:963) and are less concerned about the resources required to exploit opportunities (Hisrich *et al.*, 2008:44).

Traditional businesses are typically risk adverse (Burns, 2008:11), concerned with stability and portray a cautious and hesitant mentality (Bessant & Tidd, 2007:65). Entrepreneurial businesses, in contrast, show a willingness to take calculated risks and permit failure (Venter *et al.*, 2008:509).

Culture is a dimension that really distinguishes between traditional and entrepreneurial businesses (Hisrich *et al.*, 2008:45; Venter *et al.*, 2008:508). According to Kirby (2003:301), the guiding principles in a traditional business are to follow instructions, do not make mistakes, do not fail, do not take initiative but wait for instructions and protect your back. These principles are clearly in contrast to an entrepreneurial culture where employees are encouraged to generate ideas, experiment and engage in activities that might produce creative output (Hisrich *et al.*, 2008:45).

The underlying logic of a traditional business structure is geared towards a hierarchical process that directs work activities (Burns, 2008:141). Furthermore, Kirby (2003:301) is also of the opinion that the many levels of approval in a traditional business have the potential to stifle innovations. Corporate entrepreneurial efforts on the other hand are about creating new things and moving in new directions and is therefore almost always in conflict with traditional structures (Morris *et al.*, 2008:248).

Systems in this instance refer to managerial systems which consist of reward systems, control systems and planning systems (Burns, 2008:183) and are discussed in the next section (section 2.7.1).

Finally, a learning business is defined by Kreitner and Kinicki (2008:638) as one that proactively creates, acquires and transfers knowledge throughout the business. According to Conway and Steward (2009:335), the learning process is highly

influenced by the business context in which individuals are employed and in particular by the degree of autonomy and empowerment present in the business. Entrepreneurial businesses therefore encourage learning to build new competencies and acquire new knowledge and skills pertaining to technologies, products or new markets (Morris *et al.*, 2008:84).

The dimensions that underlie the difference between traditional businesses and entrepreneurial businesses are only briefly discussed in this section. Chapter four presents a more detailed discussion on these dimensions.

2.7 OBSTACLES TO CORPORATE ENTREPRENEURSHIP

The pursuit of entrepreneurship within a business creates new and potentially complex sets of challenges. In reality, there are a large number of factors within a typical business that can constrain entrepreneurship. It is helpful to identify general categories into which these obstacles can be grouped. Morris *et al.* (2008:279-284) presents six such categories namely, managerial systems, structures, strategic direction, policies and procedures, people and business culture. This section will thus examine the obstacles within businesses that hinder the entrepreneurial process according to the categories mentioned above.

2.7.1 Managerial systems

Most businesses are typically dependent on a number of managerial systems that have evolved over the years. According to Burns (2008:183), these systems are designed to provide stability, order and co-ordination to a complex internal corporate environment. The initial initiative and excitement has given way to structure and systems and this “well-managed” business is usually accompanied by a decreasing ability to identify and pursue opportunities (Ramachandran *et al.*, 2006:87). This is a strong disincentive for entrepreneurship. Three managerial systems, namely rewards systems, control systems and planning systems will be used to illustrate how systems can be obstacles to corporate entrepreneurship.

2.7.1.1 Reward systems

Most traditional reward systems in large businesses are often quite structured and systematic and as such are easy to administer, but equally difficult to change (Zhang, Wan & Jia, 2008:129). They are geared towards equity and fairness (Thornberry, 2003:339). Where such reward systems are in place, Hisrich *et al.* (2008:45) are of the opinion that these systems encourage safe, conservative behaviours and actions that produce short-term payoffs and are obviously not conducive to the creation of corporate entrepreneurial behaviour (Thornberry, 2003:339). Management may expect innovative behaviour but actually measure and reward non-innovative behaviour. Reward systems are discussed in section 4.5.4.

2.7.1.2 Control systems

In most traditional businesses (mechanistic businesses) the purpose of control is to reduce risk, eliminate uncertainty, create highly efficient operations, establish goal conformance and give specific role definitions, which are clearly inconsistent with the notion of corporate entrepreneurship (Morris *et al.*, 2008:369). The lack of formal control is however not being advocated since control ultimately creates a sense of accountability and helps ensure that business assets are employed efficiently. Rather it is when control mechanisms become too excessive that they inhibit corporate entrepreneurial behaviour (Antoncic & Hisrich, 2004:527). Control mechanisms that foster entrepreneurial behaviour is presented in section 4.6.

2.7.1.3 Planning systems

Planning, although critical for successful entrepreneurship, often serves as an obstacle. Barringer and Bluedorn (1999:424) note that planning has a natural tendency to engender inflexibility and the more detailed and widespread the plans, the greater the inflexibility. The result is an overly rigid process that is incapable of quickly responding to new opportunities. The current evolving competitive environment has fortunately shifted strategic planning processes to more dynamic models of change and flexibility (David, 2007:8). In this regard Li, Tse and Gu (2006:74) state that a flexible planning system allows a business's strategic plan to

remain current, whilst it also permits a business's entrepreneurial initiatives to be planned rather than to take place in an ad hoc manner.

It is important to note that the notion of corporate entrepreneurship does not imply the abandonment of the rational-deliberate, scan-formulate-implement-evaluate (strategic planning process) approach to planning. Rather, an integration (see section 4.2) between strategic planning and corporate entrepreneurship is proposed, a term referred to as strategic entrepreneurship (see section 4.2.1).

2.7.2 Business structure

Although traditional business structures, such as the functional or divisional structure, all have particular strengths, their underlying logic is geared towards a hierarchical process that directs work activities and is most suited for businesses that require security and stability (Burns, 2007:141). Because corporate entrepreneurial efforts are about creating new things and moving in new directions, it is almost always in conflict with traditional structures (Morris *et al.*, 2008:281). To successfully pursue corporate entrepreneurial activities, a structure needs to be created that supports lateral communication and coordination efforts, while allowing employees the freedom necessary to initiate and test a greater number of creative ideas that could result in a larger number of innovations without the direct intervention of upper management (Dessler, 2002:178).

2.7.3 Strategic direction

Even though the desire of a business may be to achieve corporate entrepreneurship throughout the business, Rutherford and Holt (2007:432) are of the opinion that little will be accomplished without meaningful direction from top management. Most businesses have sophisticated planning systems that produce comprehensive strategies for marketing, production and finance but ignore the subject of innovation. In the absence of specific goals and strategies for innovation, corporate entrepreneurship will only occur haphazardly or by chance (Kuratko & Audretsch, 2009:3). More specifically, is the lack of strategic vision (see section 4.4.2.1) from senior executives to the principle of institutionalised corporate entrepreneurship and

it is thus important that corporate entrepreneurship be conceptualised as a corporate level phenomenon (Ireland & Webb, 2007:59). Corporate entrepreneurship must therefore be approached as a strategic mindset of top management (see section 4.2.1.1) to maintain an ongoing business-wide innovation initiative (Kemelgor, 2002: 70).

2.7.4 Policies and procedures

Policies are general guidelines to follow in making decisions and taking action and procedures are a customary method for handling an activity (Schermerhorn, 2008:189). According to Morris *et al.* (2008:282), these operating guidelines are established to bring order and consistency, with a premium placed on conservatism. The corporate entrepreneur thus often views these policies and procedures as burdensome, red tape and often success can only be attained unless these rules are bent or broken.

2.7.5 People

Corporate entrepreneurship, amongst others, has to do with change (see section 2.3.3). Since employees are generally uncomfortable about change (Kinicky & Williams, 2003:318) it is not surprisingly that Morris *et al.* (2008:282-283) note that people provide the greatest obstacle to corporate entrepreneurship. For example, employees tend to be preoccupied with the demands of the present and not the future. It is thus unrealistic to expect them to adopt a long-term perspective or to recognise the need for continual adaptation.

Furthermore, the entrepreneurial spirit is often stifled by a pervading fear of failure that is prevalent in most businesses. Another obstacle, concerning people, is the lack of skill and entrepreneurial talent. Although there is ample creative potential in every employee in the business (Von Stamm, 2008:2) many have not learned to develop or channel their creative ideas (Morris *et al.*, 2008:283).

2.7.6 Business culture

Business culture plays a critical role in any business process since it is the culture which defines “how we do things around here” (Bessant & Tidd, 2007:54). It reflects the norms and deep rooted values and beliefs that are shared by the employees in a business. More specifically, business culture can affect levels of corporate entrepreneurship and innovation through socialisation processes that influence workplace behaviour, through structures, policies and procedures that are shaped by the basic values and beliefs of a business (Zhao, 2005:29). Clearly a business culture that is risk adverse or very process driven is almost by definition, discouraging employees from acting in an entrepreneurial manner (Morris *et al.*, 2008:250). Creating a culture to support entrepreneurial behaviour is presented in section 4.4.2. The obstacles presented above are not exhaustive rather they indicate some of the more pervasive problem areas. The key for management is to identify those obstacles that represent the greatest threat to new concepts and ideas.

2.8 SUMMARY

This chapter introduces the nature of corporate entrepreneurship. Prior to defining corporate entrepreneurship the concept of entrepreneurship is discussed since corporate entrepreneurship is often viewed as entrepreneurship within a corporate setting. Various definitions of the term entrepreneurship are presented. In an effort to distinguish entrepreneurs from non-entrepreneurs, two perspectives are discussed. The first perspective focuses on the “who” of entrepreneurship, namely the characteristics of entrepreneurs. The second perspective focuses on the “what” of entrepreneurship, namely the outcomes of entrepreneurship. Entrepreneurship is also presented as a process and in this regard an integrative model is presented depicting the entrepreneurial process and its components. Finally, a definition of entrepreneurship is proposed.

Three phenomena are discussed that are often viewed as examples of corporate entrepreneurship namely corporate venturing, intrapreneurship and corporate entrepreneurship. Corporate venturing is mostly referred to where an established business enters a new business. Consequently, corporate venturing is mostly

concerned with the planning, organising and control of the new venture. Intrapreneurship, on the other hand, is more concerned with the individual or groups of individuals in a business that acts in an entrepreneurial manner. The third phenomena, corporate entrepreneurship, refer to where the entire business acts in ways that generally would be described as entrepreneurial. The term corporate entrepreneurship is therefore viewed as an all-inclusive term since it entails both corporate venturing and intrapreneurship.

Businesses acting in a way that could generally be described as entrepreneurial are often referred to as the entrepreneurial orientation of a business. In this regard five dimensions namely autonomy, innovativeness, risk-taking, proactiveness and competitive aggressiveness that characterise the entrepreneurial orientation of a business is discussed briefly. It is also important to note that the entrepreneurial orientation of a business cannot be expressed in either-or terms. It is a variable, since even within the most conservative businesses, elements of entrepreneurial behaviour can be found.

Entrepreneurship has evolved from the classic start-up notion to include large businesses and the associated risk and possible failure also applies within the corporate context. Since most of the research on entrepreneurship has emphasised the start-up context, large businesses can learn much from start-up entrepreneurship by viewing the similarities and differences between start-up entrepreneurship and corporate entrepreneurship. A comparison is also presented between a traditional business and an entrepreneurial business to further emphasise the nature of corporate entrepreneurship.

Finally, businesses must take note of the various obstacles to corporate entrepreneurship. Understanding these obstacles is critical in fostering corporate entrepreneurship. To gain support and foster entrepreneurial behaviour, managers must remove these obstacles and seek alternative management actions.

Corporate entrepreneurship is responsible for stimulating innovation through the examination of potential new opportunities, resource acquisition, implementation, exploitation and commercialisation of new products or services (McFadzean *et al.*,

2005:351). Innovation is thus viewed as the specific tool of corporate entrepreneurs, the means by which they exploit opportunities (Zhao, 2005:28). Fundamental to the innovation process is the creation of new and novel ideas that initiates and supports the innovation process. Creativity and innovation is presented in the next chapter.

CHAPTER 3

CREATIVITY AND INNOVATION AS KEY DIMENSIONS OF CORPORATE ENTREPRENEURSHIP

3.1 INTRODUCTION

To be successful, corporate entrepreneurs must generate novel and useful ideas for new goods or services that will appeal to some identifiable market and having identified these potential opportunities, they must bring these ideas to fruition (Ward, 2004:174). Corporate entrepreneurship, in essence, means that businesses must foster creativity and innovation by encouraging all employees to think like entrepreneurs and then giving these employees the freedom (autonomy – see section 2.4.1) and flexibility to pursue these ideas and innovative projects without being caught up in bureaucratic inertia (Baran & Velickaité, 2008:22). Therefore, businesses with an entrepreneurial orientation (see section 2.4) are more innovative to the extent that Burns (2008:288) is of the opinion that the success of corporate entrepreneurship can be defined in terms of the innovative capacity of a business. Innovation is thus closely tied to corporate entrepreneurship since without the presence of some form of entrepreneurial activity to exploit opportunities as they arise, innovation will remain nothing more than an aspiration, rather than a tangible result (McFadzean *et al.*, 2005:353).

The terms creativity and innovation are sometimes used interchangeably. However, Von Stamm (2008:1) is of the opinion that there are fundamental differences. Creativity deals with the generation of novel and appropriate ideas whilst innovation deals with the implementation of these ideas turning them into business and market place realities (Mauzy & Harriman, 2003:6). Creativity therefore leads to innovation and entrepreneurship drives the process. In essence, creativity is the soul of corporate entrepreneurship (Morris *et al.*, 2008:138) whilst innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service (Zhao, 2005:28).

This chapter will concentrate on creativity within the business context and innovation as key concept of corporate entrepreneurship

3.2 CREATIVITY WITHIN THE CORPORATE ENTREPRENEURIAL CONTEXT

Creativity and its support for innovation, is vital for the long-term success of a business. Businesses that simply maintain existing products and services, procedures and strategies will not survive, especially in the growing global economy, which emphasises creativity (Uittenbogaard, Broens & Groen, 2005:259). In contrast businesses that implement new ideas compatible with the changing world have a greater probability of continuing success (Gautschi, 2001:135). Many businesses therefore recognise creativity's importance to innovation as well as the need for highly creative employees. Yet many businesses still stifle their capabilities to be creative by only looking to a relative small group of specialists such as, research and development, engineering, market research and systems design to provide this (Bessant, 2003:7). Many opportunities and rewards are subsequently lost because of this "limitation" on creativity within businesses (Ario, 2002:16).

The need for a business is to be creative at all times, in all areas and in all activities. In order to achieve this, creativity must become the responsibility of everyone in the business; that is every leader and senior manager as well as every employee (Mauzy & Harriman, 2003:x), since there are a wealth of ideas about new products or production methods at all these levels in the business (Asbury, 2003:19).

There is no one "right" way to foster creativity within a business. There are, however, basic principles and practical techniques that are generally accepted and will be presented in this section.

3.2.1 Creativity defined

Many perspectives of creativity exist. Within the corporate entrepreneurial context, Morris *et al.* (2008:137) define creativity as the application of a person's mental ability and curiosity to discover something new. Creativity thus relates to the ability to bring into being new (novel) and often ingenious ideas, concepts and solutions to problems

or opportunities faced by customers in the market (Burns, 2008:334) and are the basis of everything that is new including innovations. The test of whether an idea is creative rests on two criteria namely novel and practical (useful) (Amabile, Barsade, Mueller & Staw, 2005:368).

3.2.1.1 Novel

Novelty is seen as something that is unusual, uncommon and unique and represents the necessary first step towards the production of a creative idea (Dewett, 2004:258). There is however a lack of consensus on the degree of novelty. For some it should be novel to the person producing it and to others it should be novel to the individual's social group (King & Anderson, 2002:14). Furthermore, concerning uniqueness as requirement it could be argued that if two people working entirely independent make the same discovery, only the one who discovered it first could be called creative. Novelty to the creator is thus the favoured criterion by most researchers in the field (Schilling, 2005:17).

3.2.1.2 Practical/useful

Practical and useful refer to something that is usable, functional, pragmatic or feasible; it solves an existing problem or satisfies an existing need (Morris *et al.*, 2008:139). According to Levitt (2002:9), an idea is useless unless it is used. Failure is deemed to have occurred where the idea is superfluous to requirements, falls short of either an anticipated aspiration or an unanticipated but useful outcome and leads to an innovation that is dysfunctional (Shaw, O'Loughlin & Mcfadzean, 2005:401).

In summary, creativity is subsequently defined as the application of a person's mental ability and curiosity to discover something new and useful in the context of the business and its competitive situation. Creativity thus brings about change through an interactive process and can therefore also be considered an activity, a coherent set off activities which, in sum, become a process.

3.2.2 The creative process

It is generally accepted that creativity involves a process. There are however different opinions regarding the nature of the process. Table 3.1 summarise three views regarding the nature of the creativity process.

Table 3.1: Views of the creative process

Mauzy & Harriman (2003:145-174)	Burns (2008:318-320)	Morris et al. (2008:141)
Groundwork & immersion	Generating knowledge & awareness	Preparation
↓	↓	↓
Divergent exploration	Incubation process	Frustration
↓	↓	↓
Selection	Generating ideas	Incubation
↓	↓	↓
Focussed exploration	Evaluation & implementation	Illumination
↓		↓
Articulation of potential solution		Elaboration
↓		
Development & transformation		
↓		
Implementation		

The creativity process presented by Mauzy and Harriman (2003:145-174) in the table above only the first two steps can be regarded as part of the creative process. The third stage, namely selection, is the first gate in the innovation process (see section 3.3.5.4) and is thus regarded as part of the innovation process rather than the creative process. Similarly, with regard to the process presented by Burns (2008:318-320), only the first four stages can be regarded as part of the creative process whilst the last stage has an obvious focus on the application. The creative process will thus consist of the following stages namely; awareness and interest, incubation and illumination. These stages are briefly discussed.

3.2.2.1 Awareness and interest

Creativity is initially stimulated by the recognition (awareness) of a problem, question, or challenge, which provokes interest in doing something about it. Attempts are made to define the problem, gather information and seek a solution. For purposeful creativity the problem or question must be properly assessed and understood. The more information that is gathered about the problem and its context, the greater the chance of an effective solution (Mauzy & Harriman, 2003:146).

3.2.2.2 Incubation

The incubation stage is reached when one consciously steps away from the problem by turning one's attention to something else or simply relaxing. Conscious work on the problem thus ceases and it is during this period that some degree of unconscious and involuntary work on the problem occurs (Von Stamm, 2008:14). Whilst this non-intentionally working on the problem occurs, Morris *et al.* (2008:141) are of the opinion that it may also, either consciously or unconsciously, remove some of the creative blocks. There may also be more data gathering in this stage, although it may also be unintentional.

3.2.2.3 Illumination

Usually creativity is hard work, but quite frequently a spontaneous breakthrough can occur. This stage is often called the "eureka" or "ah-ha" stage and involves coming up with the outline or core of a solution. The solution often needs to be refined, adapted, expanded, tested, or even further revised (Morris *et al.*, 2008:141).

Often a final stage in the creativity process is added namely the elaboration stage where the idea is presented for initial screening. The elaboration stage however is also the first gate in the innovation process (see section 3.3.5.4) and is thus regarded as part of the innovative process.

The creativity process is usually not as linear as the above discussion may suggest. There may be incubation points throughout, with some lasting quite some time while

others may be very short. There may also be little “aha’s” during the process that could combine to form an overall solution.

3.2.3 Managing creativity

Managers often unintentionally undermine creativity while trying to maximise business imperatives such as co-ordination, productivity and control. Although these imperatives cannot be ignored, working towards these imperatives managers may inadvertently design businesses that systematically crush creativity. Building a business where these imperatives are attended to and creativity flourishes, requires that managers understand which managerial practices foster creativity and which undermine it. Firstly, a number of myths surrounding creativity will be presented since these myths may cast doubt on the ability of managers to create environments in which creative behaviour can flourish. Secondly, many managers hold a narrow view of creativity. To them creativity refers to the way people think. Thinking imaginatively is however only one part of creativity. Two other components (from which creative behaviour emerge) expertise and motivation are also essential (Morris *et al.*, 2008:139). These three components were initially presented by Amabile (1998:77). Finally, managers can influence these three components through workplace practices and conditions. Subsequently a number of managerial practices that affect creativity will be briefly discussed.

3.2.3.1 Myths about creativity

- **Myth: The more intelligent you are, the more creative you are**

Reality: Although research suggests that highly creative people will generally have an above average intelligence, it correlates with creativity only to a point. Above a fairly modest threshold there is no correlation between intelligence and creativity (Harvard Business Essentials, 2003:80).

- **Myth: The young are more creative than the old**

Reality: Age is not a clear predictor of creative potential within the business environment. Considering that it takes a number of years to build up the necessary expertise that would enable an employee to perceive patterns of order or meaning in a specific task it is clear that creativity can be found in an adult of any age (Harvard Business Essentials, 2003:81).

- **Myth: Creativity is reserved for the few risk takers**

Reality: Although a willingness to take calculated risks and the ability to think in untraditional ways are attributes of creative people this does not mean that these attributes cause creativity (Von Stamm, 2008:12). It is also generally accepted that all people are inherently creative and that some act on it, some stifle it and some are in between (Morris *et al.*, 2008:138). Furthermore, the use of personality traits to indicate whether or not an employee is creative has been inconclusive. In fact, Walton (2003:148) argues that there is very little evidence that personality attributes correlate with anything, other than a very narrow definition of creativity and thus may not be useful for assessing creativity in any general sense. This would apply to the myth of age as well as intelligence.

- **Myth: Creativity is a solitary act**

Reality: Creativity is often viewed as a solitary undertaking implied by the stereotype of the lone heroic inventor (Stern, 2001:14). However, a high percentage of the world's most important innovations are products of collaboration among teams of people with complementary skills (Harvard Business Essentials, 2003:81). In this regard, Von Stamm (2008:2) is however of the opinion that the act of coming up with an idea is inherently an individual act. It is the development and implementation of an idea where a team effort is needed.

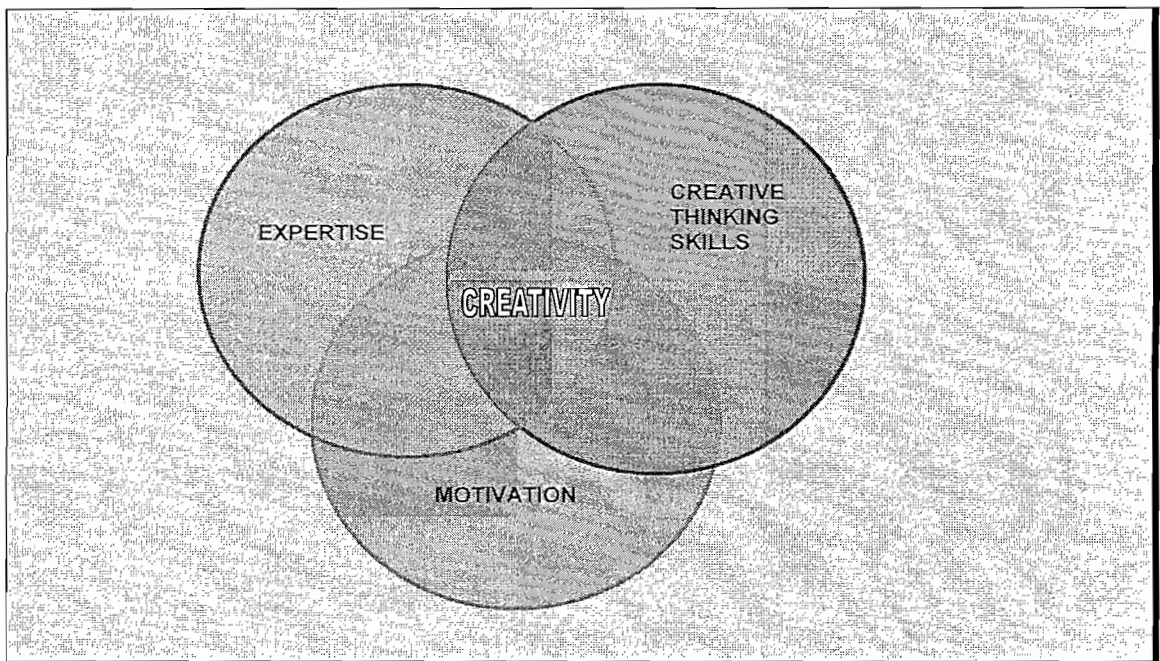
- **Myth: Creativity cannot be managed**

Reality: It is true that management will not know in advance who will be involved in a creative act, what the act will be, or when it will occur. Nevertheless, a manager can create the conditions that will enhance creativity and thus its likelihood to occur. Various managerial practices are presented in section 3.2.3.3 that aims to enhance creativity within a business.

3.2.3.2 The components of creativity within a business

Within every individual, creativity is a function of three components namely expertise, creative-thinking skills and motivation. These three functions are depicted in figure 3.1.

Figure 3.1: The three components of creativity



Source: Amabile (1998:78)

- **Expertise**

Because creativity involves the production of new and useful ideas to solve some significant problem, it is thus not surprising that knowledge or expertise is a function of creativity. Expertise encompasses everything that a person knows and can do. It thus constitutes the intellectual space people use to explore and solve problems (Amabile, 1998:77). Employees must actively acquire knowledge and expertise if creative problem solutions are to be generated.

- **Creative thinking**

Creative thinking occurs when an employee invents a novel solution to a problem (Thompson, 2003:96). More specifically, it refers to how people approach problems and solutions namely their capacity to put existing ideas in new combinations. It thus has to do with looking at a problem differently, challenging assumptions and seeking insights from other fields (Perry-Smith & Shalley, 2003:91).

Creative thinking is a cognitive approach to creativity (Ward, 2004:173) and involves divergent and convergent thinking. Cognition in this instance refers to the ways people obtain, organise, store, process and use information. In addition, thinking is a process through which symbols are constructed, revised, linked up with other symbols, reorganised and applied to abstract or concrete situations. It involves processes such as exploring, recognising, organising, coding and structures (internal representation of external environment) such as patterns, categories, networks and systems, that result from the processes (Von Stamm. 2008:10).

Divergent thinking is breaking away from familiar, established ways of doing and seeing things by producing new and possibly multiple options and novel ideas from the available information, regardless of their practicality (Morris *et al.*, 2008:142).

In contrast, convergent thinking, which was quickly equated with conventional intelligence, is oriented towards deriving a single best (or correct) solution to a given problem (Morris *et al.*, 2008:142). Although divergence is often seen as virtually

synonymous with creativity (many creativity tests are largely or wholly tests of the ability to think divergently), this is a mistake considering the definition of creativity (see section 3.2.1) which stresses the criteria of usefulness of an idea (King & Anderson, 2002:64). Both thinking styles (divergent and convergent) are thus required to produce novel ideas.

Expertise and creative thinking skills are an individual's "natural resources", however the third factor, motivation, determines what people will do. For example, an individual may have good academic credentials and good creative thinking skills, however if motivation to do a particular task lacks, the expertise and creative thinking skills will go untapped.

- **Motivation**

It is generally accepted that motivation is an essential precondition for creativity, although the origin of the motivating force may differ from one creative act to another (Walton, 2003:152). In essence, there are two types of motivation that can be broadly categorised into extrinsic and intrinsic motivation. Extrinsic motivation refers to motivation that comes from outside a person and as such the most common extrinsic motivator used by managers is money. While useful in stimulating various kinds of actions, extrinsic motivation tends to diminish the quality of creativity, unless it occurs in a specific and right relationship to intrinsic motivation. Intrinsic motivation has to do with a person's internal desire to do something. It is associated with passion, sometimes fun and also with high creative quality (Mauzy & Harriman, 2003:15). It is thus not surprisingly that Amabile (1998:79) note that people will be most creative when they feel motivated primarily by the interest, satisfaction and challenge of the work itself. When employees are intrinsically motivated, they engage in their work for the challenge and enjoyment of it.

The task of management is thus to design work environments with the proper set of incentives, resource pools, control systems, culture and structures that would foster creativity and entrepreneurial behaviour (Ireland *et al.*, 2006:14). These aspects are presented in chapter four. Whilst an inappropriate work environment will surely destroy the creative spirit within a business, a well-conceptualised environment will

not necessarily guarantee creative behaviour (Morris *et al.*, 2008:136). Employees will also be required to make the personal commitment and recognise their own creative potential (Ireland *et al.*, 2006:14).

3.2.3.3 Enhancing creativity within businesses

One of the greatest challenges facing business today is encouraging creativity amongst employees while maintaining the orderly functions of the business. This challenge is exaggerated by the fact that employees develop patterns and routines within their day-to-day activities and then adopt attitudes that are consistent with maintaining the status quo. It is thus these guidelines and rules that often become the blocks to their own creativity. Furthermore, many businesses do not tolerate failure, penalise rule bending, or may assign employees jobs with very narrow job descriptions (Burns, 2008:332-333). Malan and Douglas (2003:12) argue that the hierarchical norms in most South African businesses have led to entrenched fear, which inhibits initiative taking. They state that “people are insecure in this culture; you get blamed if you make a mistake, so people don’t venture out and risk new ideas”. Various managerial practices that managers can do to enhance creativity have been identified. These practices are categorised into six categories namely challenge, freedom, resources, work-group features, supervisory encouragement and business support (Amabile, 1998:80-84).

- **Challenge**

Perhaps the most effective way to stimulate creativity is the simple task of matching people with the right assignment. Managers should therefore match people with jobs that play to their expertise and their skills in creative thinking, thereby igniting intrinsic motivation (Amabile, 1998:81). Making good matches however requires that managers obtain rich and detailed information about their employees and the available assignments. Because such information is often difficult and time consuming to obtain, good matches are rarely made. Consequently, this becomes one of the most common ways in which managers stifle creativity and more often than not, the most eligible employee is assigned to the most eligible (that is the most urgent and open) assignment (Walton, 2003:146).

- **Freedom (autonomy)**

One of the keys to creativity is granting employees autonomy. Freedom or autonomy contributes to creativity both by motivating creative work and allowing employees to pursue their unique insights (Mumford *et al.*, 2002:724). A major concern by managers, according to Simpson (2001:54), is that allowing employees to “run off” is the first step toward corporate anarchy. In contrast, Ario (2002:17) states that creativity can not be equivalent to anarchy and that these two concepts differ in an essential way. He argues that creativity is an instinct to produce whilst anarchy is an absence of structure. Creativity will however require managers to give up a bit of control. In this regard Amabile (1998:81) perhaps presents the best solution. She reasons that when granting employees autonomy, this autonomy should be granted concerning the process and not necessarily the ends. For example, employees will be more creative if granted the freedom to decide on how to climb a mountain. Management however needn’t let employees choose which mountain to climb. Autonomy around the process fosters creativity for two reasons. Firstly, it gives employees freedom in how they approach their work and therefore heightens their intrinsic motivation. Secondly, it allows employees to approach problems in ways that make the most of their expertise and their creative thinking skills. Concerning the ends, this relates to goals and objectives which should be defined in broad terms and framed in such a way to allow employees to pursue a number of different approaches (see section 4.5.1) (Mumford, 2000:322).

Managers often mismanage this freedom granted to employees in two common ways. First, managers tend to change goals frequently or place an undue reliance on predefined goals and objectives (Mumford, 2000:322). Secondly, many managers grant freedom in name only. They claim their employees are empowered to search for solutions but, in reality, the process is prescribed (Amabile, 1998:82).

- **Resources**

The two resources that affect creativity are time and money. Decisions regarding how much time and money to allocate to an individual, team, or project can either support or stifle creativity.

- **Time**

Under certain circumstances, time pressure can heighten creativity. In instances where, for example, a competitor is about to launch a great product at a lower price, both the time crunch and importance of the work make employees feel that they must rush. Such cases tend to increase intrinsic motivation by increasing the sense of challenge. Businesses tend to stifle creativity with fake deadlines or impossible tight ones. This is possibly due to the fact that, according to Amabile, Hadley and Kramer (2002:52), most managers believe that by using pressure it will spur employees on to great leaps of insight. Furthermore, Amabile (1998:82) stresses that fake deadlines create mistrust whilst impossibly tight deadlines create burnout. In both instances, employees feel overcontrolled and unfulfilled which invariably damages motivation.

Moreover, creativity often takes time. Exploring new concepts and putting together unique solutions can be a slow process (Pinchot and Pellman, 1999:110). Employees must be given the opportunity and freedom to generate new ideas (Jones & George, 2008:276). The company 3M, for example, allow employees 15% of their time to work on self-defined innovations, a process called bootlegging (Harper *et al.*, 2008:15). Managers who do not allow time for exploration or do not schedule in incubation periods are unwittingly standing in the way of the creativity process (Mumford, 2000:318).

Time pressure affects creativity in different ways depending on whether the environment allows employees to focus on their work, conveys a sense of meaningful urgency about the task at hand, or stimulates or undermines creative thinking in other ways (Amabile *et al.*, 2002:56).

- **Money**

Concerning money as resource, managers need to determine how many funds the business can afford to allocate to an assignment. Adding more funds above a “threshold of sufficiency”, according to Amabile (1998:82), does not boost creativity. Below this threshold, however, a restriction in funds can dampen creativity (Sathe, 2003:84). Most businesses tend to keep funds tight, which causes employees to channel their creativity into finding additional funds, rather than actually developing new products or services. A possible solution is setting up a seed money fund (Antoncic & Hisrich, 2004:526). This fund is outside the normal chain of command of a business and can give employees with creative ideas a small fund to begin testing them out. This method has been used with great success by many businesses for example 3M (Harper *et al.*, 2008:15).

- **Work-group features**

Although creativity is mostly an individual act, many innovations are products of creative teams (Garfield, Taylor, Dennis & Satzinger, 2001:323). Teams can often achieve greater creative output than individuals working alone because they bring a greater sum of competencies, insights and energy into the effort (Harvard Business Essentials, 2003:84). Building teams that come up with creative ideas requires that these groups are mutually supportive with a diversity of perspectives and backgrounds. In general, diversity in teams yield creative results, since blending various intellectual foundations and approaches to work result in different expertise and creative thinking styles (Adler, 2003:19). Teams are discussed in more detail in section 4.3.3.1.

- **Supervisory encouragement**

Because managers are usually busy and are under pressure for results it is therefore, not surprisingly, that they stifle creativity by either failing to acknowledge creative efforts or by greeting them with scepticism. In many businesses new ideas are not met with open minds but with time-consuming layers of evaluation. In such

cases management look for reasons not to use a new idea rather than to explore the idea further. Admittedly, managers have many ongoing problems and submitting a new idea may seem like adding to the problems (Amabile, 1998:83). One solution to the above problem would be to implement the “stage-gate process” to innovation where all ideas are submitted for screening (see figure 3.4).

In contrast, managers in successful corporate entrepreneurial businesses freely and generously recognise creative work by individuals and teams (see section 4.5.4) often before the commercial impact of those efforts are known (Mumford *et al.*, 2002:723). Furthermore, in instances where the idea is a failure some “failure value” is attached and the view is held that knowing what doesn’t work is just as useful as knowing what works (Mauzy & Harriman, 2003:130).

The connection to intrinsic motivation in both situations (acknowledgement or not of creative efforts) is clear. People may find their tasks interesting and exciting however, to sustain such passion most people need to feel as if their work matters to the business. The lack of recognition for creative efforts will therefore ultimately undermine intrinsic motivation and people will become less likely to experiment, explore and connect with their work on a personal level (Amabile, 1998:83).

- **Business support**

Encouragement from supervisors certainly fosters creativity, but creativity is truly enhanced when it is supported by the entire business. This can be done through corporate entrepreneurship where the entire business supports entrepreneurial behaviour (Ireland *et al.*, 2006:10). The development of an environment supportive of corporate entrepreneurship (and as such creativity and innovation) is presented in detail in chapter 4.

3.2.4 Creativity techniques

There are a variety of techniques and methods available for the use at different stages in the creative process. Techniques exist for generating new concepts and ideas (brainstorming and mind mapping), techniques for overcoming negativity (new

ideas must be phrased in ways that find the positive in them) and techniques for reaching convergence (future scenarios). The list is virtually endless (Hockey, 2004:20).

The purpose of these types of techniques is to improve the quantity and quality of new ideas. The principal intention is not to make employees generally more creative, but rather to provide them with a tool to be used in specific situations. The effectiveness of these techniques is however the subject of considerable debate, with some claiming considerable success, whilst others maintain that these techniques do not lead to any substantial increase in creative performance (King & Anderson, 2002:23-25).

Many new ideas can emerge. The challenge though, for large businesses is to create an atmosphere and structure where employees can take initiative and make investment of their own time to conceptually shape the new idea before presenting it as a proposal (Levitt, 2002:6). There are many things that businesses can do to enhance creativity; however the ultimate issue is one of freedom. The creative employee seeks freedom in the way his work is done, freedom to ask novel or disturbing questions and freedom to develop unusual solutions to problems and opportunities confronting the business (Morris *et al.*, 2008:286).

Creativity is however not enough. What is often lacking in businesses is innovation i.e. putting these ideas into practise. Innovation is discussed in the next section.

3.3 INNOVATION AS KEY DIMENSION OF CORPORATE ENTREPRENEURSHIP

There is a growing recognition that innovation is the only sustainable source of growth, competitive advantage and new wealth (Drejer, 2006:143). Fostering intrapreneurial behaviours and practices has consequently assumed prime importance in the corporate strategies of many businesses. The practice of corporate entrepreneurship has therefore become the focus of increasing attention from managers as the ability to create innovation (McFadzean *et al.*, 2005:350), which has

assumed critical importance for businesses in today's competitive and ever-changing markets (Seshadri & Tripathy, 2006:17).

3.3.1 The innovation imperative

There seems to be general agreement that an entirely new competitive situation, termed "hyper-competition", has arisen. Within this situation, the key competitive success factor is the ability of a business to continuously develop new products, processes or services, providing consumers with increased functionality and performance (Drejer, 2006:143). Consequently, businesses that are not continually innovative may be making the unintentional strategic decision to be out of business within a few years (Ramachandran *et al.*, 2006:86). Most of these pressures stem from external forces for example, uncertainty, competing in a global market, unpredictability in political and social stability (Kirby, 2003:131) and technological progress in many fields that result in current offerings to consumers becoming obsolete (Ramachandran *et al.*, 2006:86).

The majority of businesses however still limit their innovative capabilities by only looking to a relative small group of specialists to provide this. In these businesses individuals and groups are "*licensed*" by virtue of their specialist knowledge or position such as research and development, engineering, market research and systems design (Loewe & Dominiquini, 2006:27). Although, according to Bessant (2003:7), the extreme forms of hierarchical management have begun falling away, there remains an assumption in many businesses that innovation must come from these special zones in the business. The latter is clearly in contrast to the concept of corporate entrepreneurship and Zhao (2005:25) argues that if businesses do not adopt a proactive attitude towards corporate entrepreneurship and innovation it is unlikely they will survive. Therefore, innovation needs to go beyond being a project and, instead, become part of a business's mainstream. Developing and fostering an innovative mindset is the only way that innovation will continuously bring success and maximise its risk/return posture (Garvin & Levesque, 2006:102).

Given these pressures the National Research Foundation (2009) states that South Africa will need to increase its international competitiveness. This implies, among

other things, developing and maintaining assets such as knowledge and skills that can lead to innovation and commercialisation of a wide variety of products and services that meet the demands of international markets has become imperative. South Africa seems to be still largely dependent on natural resources, primary processing and manufacturing and for the most part, on imported technologies. South Africa has not yet been able to translate its capacity for science and technology into innovative businesses. According to Malan and Douglas (2003:2), one of the problems appears to be the fact that most South African organisations still struggle with ingrained hierarchy and bureaucracy.

3.3.2 Defining innovation

In essence, innovation is about the change in the product/service that a business offers and/or changes in the ways in which these products and services are created or delivered (Zhao, 2005:27).

Subsequently, McFadzean *et al.* (2005:535) defines innovation as a process that provides added value and a degree of novelty to the organisation and its suppliers and customers through the development of new procedures, solutions, products and services as well as new methods of commercialisation.

Bessant and Tidd (2007:11) define innovation as the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service. It is capable of being presented as a discipline, capable of being learned and capable of being practiced.

Burgelman, Christensen and Wheelwright (2009:2) state that innovations are the outcomes of the innovation process which involves the combined activities leading to new, marketable product and services and/or new production and delivery systems.

From the above three definitions a number of characteristics that capture the essence of innovation, can be deduced namely:

- Innovation is a tangible product/service, process, procedure or technology within a firm. A new idea may be the starting point for an innovation but cannot be called an innovation in itself.
- An innovation must be new to the social setting within which it is introduced (within the firm or marketplace).
- An innovation must be purposeful and not accidental.
- An innovation must be aimed at producing benefit or value to employees, shareholders and customers (Bessant & Tidd, 2007:11).

Innovation is defined as the application of creativity through a purposeful and organised process resulting in the introduction within a business or marketplace new value creating methods, processes, technologies, products or services.

3.3.3 Types of innovation

One of the problems in managing innovation is that assumptions are made about the nature of innovation. Often the focus is on the “breakthrough nature” disregarding the value of small increments of change whose impact only appears in cumulative form. Rather, Bessant (2003:3) states that innovation should be viewed as a spectrum of activities. On the one end of the continuum are radical and even breakthrough innovations and on the other are those tiny incremental improvements, which in cumulative form can be significant. These differences are important as far as managing the innovation process is concerned. Clearly the way in which incremental change is approached will differ from those used to deal with a radical change in product or process.

In this regard Bessant and Tidd (2007:13-14) presents two dimensions of innovation namely, the basic forms of innovation (4ps of innovation) and the degree of novelty of innovations.

3.3.3.1 Dimension 1: The 4Ps of innovation

The first dimension of innovation consist of four basic forms, referred to as the 4Ps of innovation, namely changes in the product/service the business offers (product innovation), changes in the way in which these products and services are created and delivered (process innovation), changes in the context in which the product/service is introduces (position innovation) and changes in the underlying mental models which frame what the business does (paradigm innovation) (Bessant & Tidd, 2007:13).

- **Product/service innovation**

Product/service innovation presents any change in the product or service range that a business takes to market and have shown to be potentially significant sources of strategic advantage (Cooper, 1998:499). This is the most clearly understood form of innovation and consists of disruptive (or radical) innovation and incremental innovation. Many definitions have been proposed for radical innovation and incremental innovation, but most of the definitions hinge on the degree to which an innovation represents a departure from existing practices (Schilling, 2008:43).

- **Process innovation**

Process innovation is any change in the way a product/service is created or delivered (Johnson, 2001:139). These innovations are usually not visible to the user except for changes in the cost or quality of the product. Whilst making a product better or cheaper, it may not necessarily disrupt upstream or downstream linkages (Anderson & Tushman, 2004:38). Similar to product innovation, process innovation can either be disruptive or incremental. Most process innovations are incremental improvements that result in incremental improvements in key performance parameters, for example,

cost reduction, quality enhancement and time reduction. Disruptive process innovations are radical shifts to new process routes for the business and perhaps, for the industry as well (Bessant, 2003:5).

- **Position innovation**

Innovation can also take place by repositioning the perception of an established product or process in a particular user context. This sort of innovation opens new market opportunities through existing technology (Von Stamm, 2008:8). For example, Lucozade was originally developed as a glucose base drink to help children in convalescence. It was relaunched as a health drink aimed at the growing fitness market as a performance-enhancing aid (Bessant & Tidd, 2007:13).

- **Paradigm innovation**

Paradigm innovations refer to changes in the underlying mental models which frame what businesses do and can be triggered by many different things such as new technologies, new environmental conditions and the emergence of new markets with different value expectations. A good example of a paradigm innovation is the emergence of internet technologies which made possible a complete reframing of how many businesses are carried out (Bessant & Tidd, 2007:13-14).

Many other forms of innovation have also been added to the traditional forms of product and process innovation. Burgelman *et al.* (2009:3), for example, add architectural and technological innovation (architectural innovation refers to reconfigurations of the system of components that constitute the product, whilst technological innovation involves the adoption of an idea that directly influences the basic output process).

Innovations are not so much an either/or, but a given innovation may possess the characteristics of various innovation forms at the same time and Cooper (2001:15) argues that it is more appropriate to view innovation as a phenomenon that consists of multiple dimensions at the same time.

3.3.3.2 Dimension 2: Degree of novelty

- **Disruptive/radical innovation**

Disruptive innovation represents a radical innovation and involves a new product concept for the business and for the industry as well (Bessant, 2003:5). Cellular telephones and microwave ovens represent examples of disruptive innovation when they were first introduced. Radical innovations result in the creation of entirely new markets and a new way of competing and most businesses understand that significant, new and sustainable growth can be realised. It therefore stands to reason that the motivation to pursue such innovations should be urgent (Christensen, Johnson & Rigby, 2002:22). However, very few businesses have introduced disruptive innovations. Two reasons are cited.

Firstly, radical innovations represent advances so significant that revolutionary alterations of the business and its support networks must occur to accommodate and implement the new innovation (Schilling, 2008:44). Furthermore, disruptive innovations reduce the value of existing competencies (competence destroying), displacing it with the need for developing new competencies in this new field (Bessant & Tidd, 2007:235). Clearly, as innovations become more radical or competence destroying, they entail greater departures from existing practices and as such increase the risk of failure (Morris *et al.*, 2008:64).

Secondly, in good times when core businesses are growing, starting new growth ventures seems unnecessary. Also, when times are bad and mature businesses are under attack, funds for investing in new growth businesses are usually lacking (Christensen *et al.*, 2002:22).

The above two reasons highlight the importance of strategic entrepreneurship (see section 4.2.1.1), in particular the management of resources.

- **Incremental innovation**

Incremental innovation is an innovation that makes a relative minor change (or adjustment to) from existing practices (Schilling, 2008:44). With this type of innovation the performance of an existing product is enhanced, new features are added and/or new applications are developed (Conway and Steward, 2009:15). As such, incremental innovation enhances and extends the underlying technology (competence enhancing) and thus reinforces the established technical order (Bessant & Tidd, 2007:235). Although much emphasis is usually placed on radical innovation it is important not to neglect the potential of sustained incremental innovation and Tidd, Bessant and Pavitt (2001:13) suggest that the cumulative gains in efficiency are often much greater over time than those that come from occasional radical changes. Incremental innovation also forms part of the total quality management (TQM) movement. One of the core dimensions of TQM is continuous improvement that refers to incremental improvements (innovations) in all of a business's products, services, functional areas and work processes (Jacobs, Chase & Aquilano, 2009:309).

Businesses tend to devote most of their resources toward incremental innovation and it therefore seem to be the preferred strategy. The reason is obvious since incremental innovation essentially operates within a relative stable framework (Bessant & Tidd, 2007:235). Table 3.2 contrasts the innovation management challenges posed between these two degrees of innovation.

Table 3.2: Different archetypes for incremental and radical innovation

Incremental innovation business	Radical innovation business
Operates within mental framework based on clear and accepted set of rules of the game	No clear rules – these emerge over time High tolerance for ambiguity
Strategies path-dependent	Path-independent, emergent, probe and learn
Clear selection environment	Fuzzy, emergent selection environment
Selection and resource allocation linked to clear trajectories and criteria for fit	Risk-taking, tolerance of (fast) failure
Operating routines refined and stable	Operating patterns emergent and fuzzy
Strong ties and knowledge flows along clear channels	Weak ties and peripheral vision important

Source: Bessant and Tidd (2007:236)

The challenge for businesses in today's competitive environment is not only to innovate in existing markets to survive and remain profitable (incremental innovation) but also to innovate in new markets (radical innovation) in order to stay in front of competitors. An integrated strategy of radical and incremental innovation is thus proposed and Terziovski (2002:11) is of the opinion that such a strategy (integrated) provides greater performance synergy in customer satisfaction, productivity and relative technological competitiveness than if these strategies were implemented individually.

3.3.4 Barriers to effective innovation

Kuczarski, Middlebrooks and Swaddling (2001:21-32) present five of the most common barriers to innovation, namely a lack of priority, a risk-adverse culture, difficulty in measuring innovation, overemphasis on short-term results and a lack of discipline.

3.3.4.1 Lack of priority

The key difference with innovation, relative to past business trends (such as downsizing, reengineering), is that innovation cannot be treated as "the flavour of the day" but must become a priority in the business and that its approach must be comprehensive. Innovation needs to go beyond being a project and developing and fostering an entrepreneurial mindset is the only way in which the power of innovation will continuously bring success to a business and maximises its risk/return posture (Morris *et al.*, 2008:8). Three key areas in a business will reflect whether or not innovation is regarded as a top priority.

- The first is who is responsible for innovation. In businesses where innovation is a priority, innovation is the responsibility and way of operating for every business unit, functional department and employee (Tucker, 2002:6).

- The second area concerns the extent to which training on innovation and entrepreneurship is provided to employees (see section 4.5.5) (Bessant, 2003:101).
- The commitment of top management is another area that reveals the priority a business places on innovation. How resources such as capital and personnel are allocated together with a long-term perspective and mindset that tolerates failure are all aspects indicative of top management commitment (Burns, 2008:89).

3.3.4.2 A risk-adverse culture

This barrier is cited as the most frequent barrier to innovation. Most businesses tell their employees in all kinds of implicit ways that they simply will not tolerate failure and unsuccessful risk takers are stigmatised (Loewe & Dominiquini, 2006:28). A number of areas can be investigated to determine whether a business really promotes risk-taking or just simply paying it lip service.

- Are employees promoted for attempting new things or for avoiding failure? Traditionally, most businesses promote employees for maintaining the status quo and not failing. Such businesses have over the years created a culture of competitiveness, not collaborating and stifled risk-taking behaviour.
- To what extent are salary increases and bonuses linked to innovation? Very few businesses make an attempt in linking innovation to compensation since, according to Gamonal (2003), it will challenge the way in which the business measures and compensates employees. Furthermore, because of the difficulty in measuring innovation (see next barrier) compensation is also problematic. Irrespective of the aforementioned factors it remains important to reward innovators and their collaborators for their contributions as employees will realise that they are working in a business that recognises and rewards innovative efforts, which presents a powerful motivator for overall innovation (see section 4.5.4) (Weiss, 2004:12).

- A final area is the tolerance for mistakes which is easy to say and difficult to do since most employees are justifiably cynical when management states that it is acceptable to make mistakes (Tushman & O'Reilly, 2002:115). Failure is however an intrinsic part of innovation and businesses must be prepared to experience more failure, since failures on individual projects in an environment of continuous innovation, adaptation and learning will lead to greater overall success (Burns, 2008:124).

3.3.4.3 Difficulty in measuring innovation

A third barrier to innovation is the inherent difficulty of measuring innovation results. A number of factors contribute to the difficulty of measuring innovation results.

- Innovation activities tend to be dispersed across a business making it difficult to identify who is doing what and how much time is spent. Furthermore, many innovation activities, especially in the early stages of the process, cannot be allocated to a specific product or project (Conway & Steward, 2009:23).
- Today's complicated accounting systems are not designed to deal with innovation activities. Most accounting systems deal much more effectively with existing products and are not set up to track revenues, profits and costs associated with innovation (Kuczmarski *et al.*, 2001:22).
- Where businesses do measure innovation it is usually "after the fact" outcomes of their efforts such as total revenues and success rate. Measurements however also need to be in place for measuring innovation at any given time, for example the balance of potential innovations within the innovation portfolio and the returns that can be expected (MacMillan & McGrath, 2004:354).

The measurement of innovation initiatives is presented in section 3.3.5.5.

3.3.4.4 Overemphasis on short-term results

The fourth barrier to innovation is in essence a lack of patience. Many corporate activities can have a positive short-term impact such as acquisitions, closing down of a plant, layoffs and sales promotions (Kuczmarski *et al.*, 2001:23). Innovation is not a short-term solution to business growth and Christiansen (2000:63) is of the opinion that businesses have trouble innovating when they make short-term profits their most important goal. Unlike quality and reengineering teams, which often uncover quick fix opportunities, very few innovation efforts fall into this category.

Another result of impatience is the search for the “big idea syndrome”. Businesses that strive for the big idea syndrome argue that all they need are a few big “hits” and their growth goals will be achieved (Kuczmarski *et al.*, 2001:23). Unfortunately, innovation cannot be performed successfully in such a haphazard way since a business needs to develop the necessary skills and characteristics that precede innovation. Innovation is thus not a one time event and Cooper (1998:493) argues that it is precisely the concurrent nature of innovation that is the key driver to success. In reality businesses need a portfolio of innovations (see 3.3.6) that support different objectives. Some innovations will represent radical innovations whilst others will have less impact but still serve an important role (MacMillan & McGrath, 2004:354).

3.3.4.5 Lack of discipline

Innovation takes ongoing commitment of resources and management and as such requires discipline. Businesses often terminate their innovation efforts in bad times (Christensen *et al.*, 2002:22), the consequences of which can be devastating. In such instances promising initiatives are cut off and probably worst of all is that it creates a scepticism about and resistance to any future innovation initiatives (Wolpert, 2002:78). Furthermore, to be disciplined about innovation it requires that innovation have a strong alignment with the business’s strategy. More specifically innovation must be at the heart of the strategic management process (Kuratko & Audretsch, 2009:3), an aspect which is captured in a process referred to as strategic entrepreneurship (see section 4.2.1).

The discussion on innovation to this point has addressed the importance of innovation, the various types of innovation and some major barriers to innovation. The question now arises, how do successful businesses innovate? In this regard, an innovation system will be presented that provides a framework for breaking down the concept of innovation into specific areas that can be focussed on and executed to generate results (Kuczmariski *et al.*, 2001:39-55).

3.3.5 The innovation system

An innovation system views innovation as a system, not as random projects, process steps, or creativity exercises (Conway & Steward, 2009:412). A system, in this instance, is referred to as a group of interacting, interrelated, or interdependent elements forming a complex whole (Kuczmariski, 2001:40). The components of the innovation system are presented in table 3.3 and will be discussed briefly.

Table 3.3: The components of an innovation system

Components	Description
Priority	Establishment of management who believe in, reward and consistently commit resources to innovation and a system to support it.
Policy	Strategy to guide innovation efforts
Teams	Dedicated, cross-functional teams
Process	Formal yet flexible staged innovation process
Measuring innovation effectiveness	Measures to gauge innovation success and monitor the innovation system

Source: Kuczmariski *et al.* (2001:40)

3.3.5.1 Priority

Priority in this instance refers to a deliberate decision to put innovation ahead of other resource-needy growth strategies, programs and investments (Kuratko & Audretsch, 2009:5). For corporate entrepreneurial businesses that have an entrepreneurial orientation (see section 2.4) and entrepreneurial mindset (see section 4.2.1.1), making innovation the priority growth strategy should be a logical step (Meyer & Heppard, 2000:2).

Of importance though is the commitment by top management which is viewed as a crucial element impacting innovation (Bhardwaj *et al.*, 2007:134). The challenge is to translate the concept into reality by finding mechanisms which demonstrate and reinforce the sense of management involvement, commitment, enthusiasm and support for innovation. By putting innovation first and conveying this commitment, it also makes it possible to create a culture that tells employees that risk-taking is a good thing and failures are just a natural part of innovation. This culture will offer a new sense of freedom to try new things, make more decisions autonomously and create new solutions without fear (Shaw *et al.*, 2005:401).

It thus encourages all employees to be innovative on an ongoing basis. Enabling employees to participate in innovation activities will require a significant investment in basic training around the concept of innovation (Bessant, 2003:101).

3.3.5.2 Policy

Innovation policy shapes the innovation system by providing strategies for the scope and direction of innovation initiatives. It serves as the game plan to guide development projects and determines the future requirements for success and the goals to be achieved through innovation (Burns, 2008:304). More specifically, an innovation policy contains the following components namely innovation vision, innovation strategic roles, innovation screening criteria and innovation resource strategy (Kuczarski *et al.*, 2001:97).

- **Innovation vision**

An innovation vision is a concise, future-oriented statement that defines the markets in which a business will compete and where it will focus innovations within those markets (Christiansen, 2000:42). With the dominating mindset of strategic thinking on “out-performing” competition Voepel, Leibold and Eckhoff (2006:49) warn that often businesses will achieve no more than imitation and incremental innovation and argue that businesses will need to escape from the conventional competitive-goods mindset and adopt a collaborative value-innovation mindset.

More specifically, an innovation vision consists of three components namely (Kuczmarski *et al.*, 2001:98):

- **A definition of the market where the business competes or wants to compete** - this relates to the scope and boundaries that define which markets or market segments should be targeted for innovation (Schilling, 2008:120).
- **The business's desired position in its target markets** – how does the business define its position in the market i.e. market leader or follower (Ireland *et al.*, 2006:12)?
- **A definition of the range of benefits to be provided to customers** – will the business focus on reducing delivery time, customer waiting time, improved personalised service, improved ease of use for customers, or wider customer access (Kuczmarski *et al.*, 2001:98)?

In the absence of an innovation vision a business may drift from opportunity to opportunity, not knowing which to invest in and which to ignore. In such instances, innovation investment, if they occur at all, will tend to be haphazard and opportunistic and thus less likely to be successful (Christiansen, 2000:42).

- **Strategic roles**

Innovation strategic roles provide a framework for linking new innovations with the business's strategy and goals. Often a business's strategic plan do not provide enough guidance on the types of innovations to be developed and innovation strategic roles provide answers to strategic questions such as:

- What objectives is the business trying to support with innovation?
- What types of innovations would fit the business's strategy and what types would be out of its scope?
- To what degree should the innovation portfolio help the business explore totally new areas as opposed to concentrating on core competencies?

- What level of risk is the business willing to accept with its innovation portfolio?
- How expansive should the innovation portfolio be (Kuczmarski *et al.*, 2001:109)?

Innovation strategic roles can be classified as either requisite or expansive (Kuczmarski *et al.*, 2001:109). Requisite roles direct a business to develop new products that defend and strengthen its existing line of products. These are usually line extensions, revisions and new-to-the business products. Expansive roles direct the business to develop products that will truly expand the business in which it competes. Expansive roles, most often, direct a business to look at new markets, new benefits and new technologies. Obviously, the returns are greater when developing expansive products, but so is the level of risk (Burns, 2008:291) and the idea is to find the right level of mix of new products to maximise the risk/return payback (Terziowski, 2002:11).

- **Innovation screening criteria**

Screening criteria are objective measures for evaluating the relative attractiveness of innovation initiatives (Cooper, 2001:131). Defining and managing risk in the face of limited resources is the basis of all innovation and screening criteria provide a common basis by which to evaluate innovation initiatives (Schilling, 2008:242).

- **Innovation resource strategy**

After completing the strategic elements of the innovation policy, people and financial resources need to be aligned to carry out the plan. Projects are prioritised in terms of their potential payoff and comparing them with the business's key internal strengths (Burgelman *et al.*, 2009:995). Resources are then allocated to innovation initiatives with the highest priority (Kuczmarski *et al.*, 2001:113). Having an innovation portfolio (see section 3.3.6) will greatly assist in this regard.

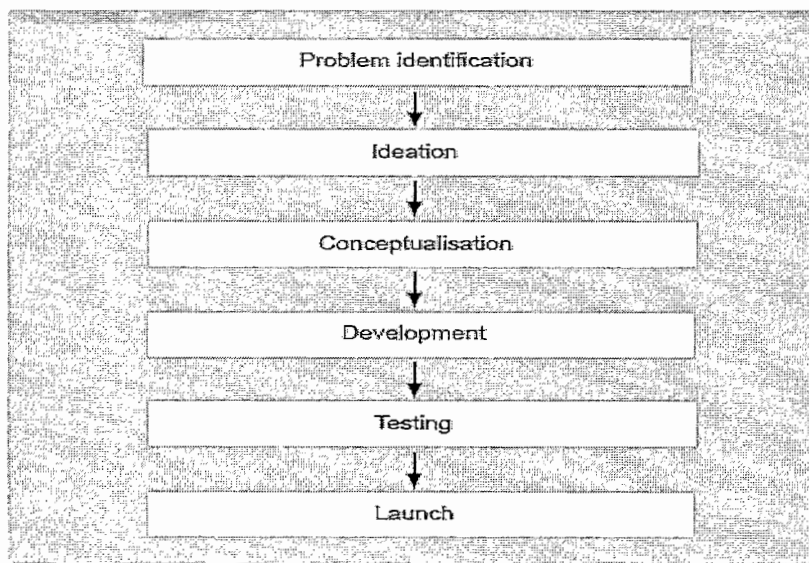
3.3.5.3 Teams

Innovation teams, according to Dorf and Byers (2005:267), are special teams (innovation teams or new product development teams) that manage the innovation processes. Teams, as structural form, have become increasingly popular over the last few years (Williams, 2007:306; Burgelman *et al.*, 2009:998) as businesses respond to the challenges of new forms of business and volatile environments. Teams have also been associated with high levels of innovation and adaptability that businesses of the future require (Curral, Forrester, Dawson & West, 2001:188). Teams are discussed in section 4.3.3.

3.3.5.4 Process

Successfully managing innovation requires designing a well defined, disciplined innovation process (also called new products process) for moving innovation projects from needs and ideas to concepts and launches (Von Stamm, 2008:49). Traditionally this process has been viewed as a linear process (Schilling, 2008:235) as indicated in figure 3.2.

Figure 3.2: Innovation as a linear process

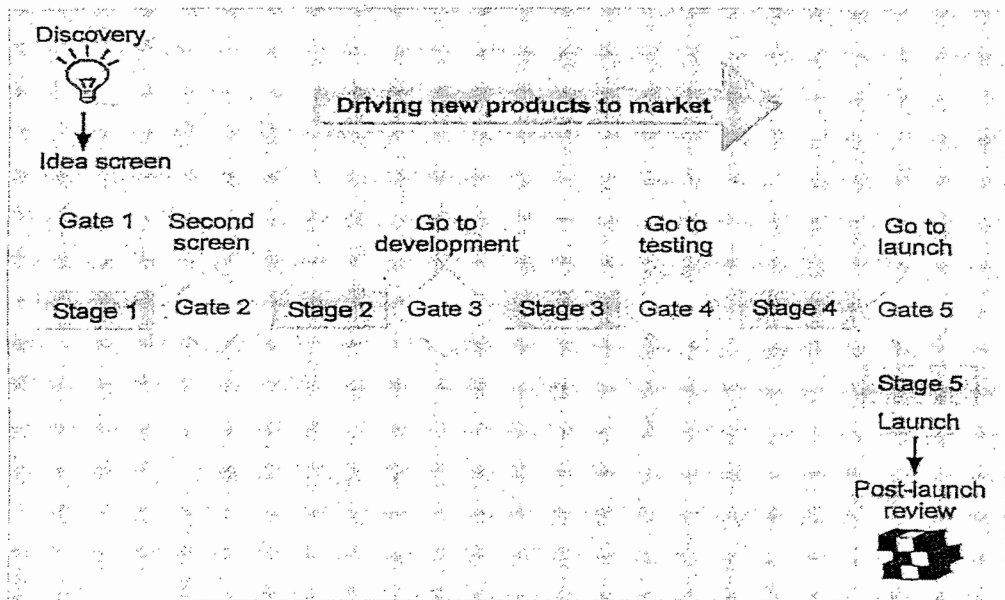


Source: Crawford and Di Benedetto (2008:23)

Facing increased pressure to reduce cycle time yet improve their new product success rate, businesses are increasingly looking to the stage-gate process as a means to manage, direct and control their product innovation efforts (Schilling, 2008:236). The stage-gate process, initially developed by Cooper (1996:465-482) is arguably been deemed the most popular innovation process utilised by business today (Morris *et al.*, 2008:339). The term “stage-gate process” is used to describe an innovation process with a predetermined set of stages, each with well defined, cross-functional and concurrent activities. Each of the stages in the system is then followed by an approval point, or gate, which serves as a go/no-go point.

Decisions are made about the opportunities being explored using predefined screening criteria. The screening criteria are used to evaluate the information collected, prioritise opportunities and help determine which innovations will continue to be explored and which will be put on hold or eliminated (Kuczmarski *et al.*, 2001:146). This process is depicted in figure 3.3.

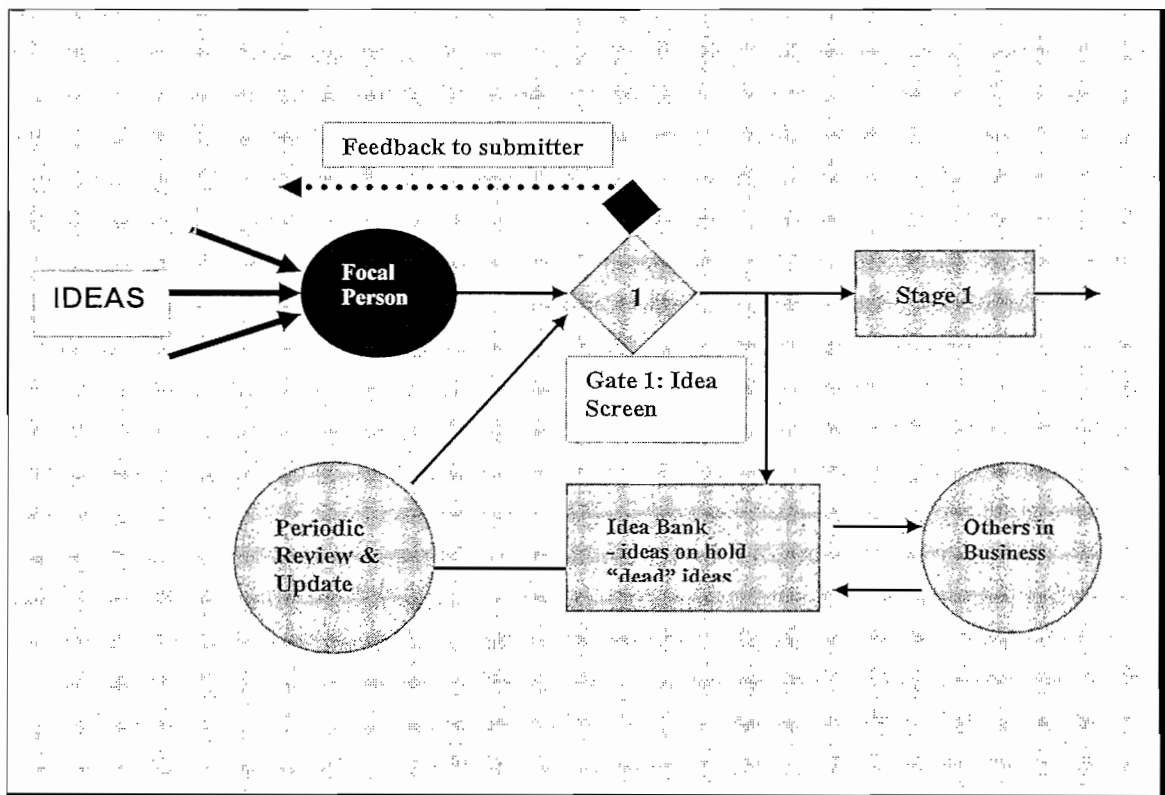
Figure 3.3: Stage-Gate innovation process



Source: Cooper *et al.* (2002:22)

A prominent feature of the stage-gate process is its systematic idea capturing and handling process (Cooper & Kleinschmidt, 2007:63). This is especially important for businesses promoting corporate entrepreneurship since corporate entrepreneurship specifically promotes the involvement of every employee and as such many new product ideas can emerge (see section 2.3.3). Very few businesses however have someone specifically charged with the responsibility of idea capturing and handling. The idea is to assign one person the responsibility of receiving new product ideas and to move these ideas to gate 1 or the initial screening process (Cooper *et al.*, 2002:22). This process is illustrated in figure 3.4.

Figure 3.4: Systematic idea capture and handling process



Source: Cooper *et al.* (2002:23)

Ideas are fed to a focal person who takes the ideas to gate 1 (see figure 3.3) for an initial screening. The screening consists of a “gentle screen” and amounts to subjecting the idea to a handful of key must meet and should meet criteria (financial

criteria are typically not part of the first screen) to eliminate those that do not meet the required criteria (Cooper *et al.*, 2002:22).

If an idea is a go, a small cross-functional team is nominated to move the idea into the first stage. If an idea is rejected, the idea submitter receives written feedback on how the idea fared and why it has been rejected. The ideas are then stored in an idea bank. Other employees have access to the idea bank which may trigger other ideas or suggestions for improving the idea and can be presented for a second hearing (Cooper *et al.*, 2002:22).

The use of a systematic idea capturing and handling process could clearly increase the effectiveness in the front end of the new product development process (Cooper *et al.*, 2002:22-23). This is especially encouraging and supportive for the corporate entrepreneur as it ensures that all ideas receive a hearing, all ideas are evaluated consistently and objectively, poor ideas are eliminated and good ideas receive resources and action, feedback is presented to idea submitters and inactive ideas are not lost (Govendo, 2001:36).

3.3.5.5 Measuring innovation effectiveness

As more and more businesses see innovation at the heart of their growth strategy, it is not surprising that more businesses seek to identify ways to measure the impact of their innovation activity (Von Stamm, 2008:393). Measuring the effectiveness of a business's innovation effort is of paramount importance, not only in terms of performance improvement but it is also useful for analysis of the past that may serve as input to decision-making in the future (Kuczarski *et al.*, 2001:224-227).

An innovative approach, when introduced, to measuring business performance has been the balanced scorecard by Kaplan and Norton (1992: 71-85). The balanced scorecard approach was designed to systematically measure a business in four areas namely, financial perspective, customer perspective, internal business processes and learning and growth. Voelpel, Leibold and Eckhoff (2006:49) are however of the opinion that when applied in the innovative economy, the balanced scorecard displays significant limitations in dealing with the new, rapidly changing

environment and proposes a systematic scorecard. The contrast in focus between the balanced scorecard and the proposed systematic scorecard is presented in table 3.4

Table 3.4: Contrasting the dimensions of the balanced scorecard (BSC) with the systematic scorecard (SSC)

Dimension	BSC	SSC
Financial	Improve organisational stakeholder value	Improve network stakeholder value
Customer	Improve customer satisfaction and relations	Improve customer success and customer partnerships
Business process	Optimise particular internal business processes	Robustness and resilience of business-network processes, both competitive and collaborative
Learning and growth	Continuous organisational learning and growth	Systematic knowledge management and innovation through all four dimensions

Source: Voelpel *et al.* (2006:55)

Conway and Steward (2009:24) also present a number of dimensions that can be used to measure the effectiveness of innovation namely:

- Financial criteria – the level of profit or turnover generated by the innovation, or the speed of the return on investment.
- Market criteria – rate of adoption of the innovation, or market penetration.
- Technical criteria – “elegance” of the engineering design or improvement in the performance or functionality.
- Strategic criteria – building or sustaining of competitive advantage through the development of a superior product or service offering, or the building of technical competence or capabilities.
- Process criteria – compression of the time taken from idea generation to market launch.

According to Von Stamm (2008:394), two categories of metrics namely performance metrics and programme metrics provide the most useful insights into measuring innovation. These two metrics were initially developed by Kuczumski (2000:24) and is presented in table 3.5.

Table 3.5: Performance metrics

Metric	Component	Potential implication
Performance metrics		
Return on innovation investment	Cumulative net profits from new products/ total investment costs	Standard measure for comparing performance
Cumulative profits	Cumulative (3-5 years) profits from new products	Impact on income statement
Cumulative revenues	Cumulative (3-5 years) revenues from new products	Impact on income statement
Growth impact	Revenue growth – 3years	Contribution to firm growth
Success rate	Total number of new products commercialised in last 3 years	Quality of planning
New product survival rate	Number of new products remaining in market (X time)	Demand versus new product efforts
Programme metrics		
Speed to market	Time from idea generation to launch	R & D process efficiency?
R & D innovation emphasis	Cumulative expenditure (3-5 years) allocated to new products	Focus on innovation
New product portfolio mix	Number of new products of type X	Balanced?
Process pipeline flow	Number of new product concepts in each stage of development	How full is pipeline – future revenues and expenses
Innovation revenues/employee	Number of employees solely devoted to innovation initiatives	Effectiveness of additional resource allocations

Source: Kuczmarski (2000:24) and Von Stamm (2008:395-396)

Measuring the success of innovation is however complex and problematic (Conway & Steward, 2009:23). In this regard Von Stamm (2008:393-394) presents five problems with innovation measures as indicated in table 3.6, initially developed by Kuczmarski (2000:28) and suggests if these problems are addressed, measuring innovation should become both easier and more successful.

The components of an innovation system are each important elements of a successful innovation program in large businesses. Although such an innovation system may sound complex and challenging to implement, Kuczmarski *et al.* (2001:55) suggest that businesses should view the innovation system as a series of smaller stages starting with priority and policy and moving towards teams, process

and ending with measuring innovative effectiveness. This should facilitate implementation within some modest time, personnel and financial resources.

Table 3.6: Flaws of innovation measurement systems

Flaws	Explanation
Too many measures	Businesses tend to measure too many facets of innovation. Start with a few critical measures and build from there.
Focused only on results	Most innovation measuring systems are skewed towards measuring the outcomes of innovation and paying little attention to the areas that drive future outcomes. Establish a set of measurements that focuses on interim items as well as outcomes.
Too infrequent	Most innovation evaluations seem to be the business's annual planning cycle or quarterly update cycle. Update innovation measurements frequently enough so the overall portfolio can be redirected in time for maximum results.
Too focused on financial indicators	Businesses tend to focus exclusively on the financial aspects of innovation. Whilst important, financial measures are but one category of measures. Develop a balanced approach that measure financial and non-financial items.
Not linked to business objectives	Many measurements can be classified as "nice to have" but not required. Use business objectives and strategies as a filter to be applied against innovation measurements.
Not integrated with management system	Unless integrated with other management systems, innovation measurements will have limited value. In particular, innovation measurements require special integration with reward and recognition systems.
Too cumbersome to operate	The innovation measurement system should not require employees to put in a lot of effort. Rather, the measurements should somehow become part of the course of doing things rather than a set of special activities.
Useful for only a few people	The most common mistake made in this area is focusing measurements on only one level, that of the team or the overall business, division, or business unit level. This is especially important within the corporate entrepreneurial context and measurements should be established that will be relevant to a broad spectrum of employees.
Used for punishment, not improvement	Innovation measurements can easily become a means of punishing employees when deadlines are missed, launches fail, or costs are overrun. How managers use innovation measures can go a long way toward supporting or breaking down the desired employee behaviours.

Source: Von Stamm (2008:393-394)

3.3.6 The innovation portfolio

As an effective risk management strategy, Burns (2008:198) suggests that businesses create and manage a portfolio of innovations. Managing a portfolio of innovations requires a dynamic decision process, whereby a business's list of active new products projects is constantly updated and revised (Morris *et al.*, 2008:199).

New projects are evaluated, selected and prioritised; existing projects may be accelerated, killed, or reprioritised; and resources are allocated and reallocated to the active projects. The portfolio decision process is unfortunately characterised by uncertain and changing information, dynamic opportunities, multiple goals and strategic considerations. Consequently, this necessitates review of the total portfolio of all projects, making go/no go decisions on individual projects on an ongoing basis and developing a new product strategy for the business, complete with strategic resource allocation decisions (Cooper, Edgett & Kleinschmidt, 2001a:362).

Cooper, Edgett and Kleinschmidt (2001b) present four macro or high level goals that capture the essence of new product portfolio management namely value maximisation, balance, strategic direction and right number of projects.

- **Maximising the value of the portfolio**

The goal is to allocate resources so as to maximise the value of the portfolio. Different projects will require different financing, both in terms of volume and nature and according to Burns (2008:304), a balanced portfolio can greatly assist in a balanced cash flow. Projects are also selected so as to maximise the sum of the values or commercial worth of all active projects in terms of some business objective such as long-term profitability, economic value added, return-on-investment, likelihood of success or some strategic objective (Cooper *et al.*, 2001b).

- **A balanced portfolio**

The principal concern is to balance the portfolio in terms of a number of parameters (Bessant & Tidd, 2007:420) for example; the right balance in terms of long-term versus short-term projects, or high risk versus lower risk projects (Burns, 2008:304), dynamic versus continuous innovation, product/services intended for markets the business currently serves against ones for markets that are new to the business and across various markets, technologies, product categories and project types (Morris *et al.*, 2008:199-201).

- **Building strategy into the portfolio**

Regardless of all other considerations, the goal here is to ensure that the final portfolio of projects truly reflect the business's strategy. More specifically, the breakdown of spending across projects, areas and markets should be directly tied to the business strategy (Cooper *et al.*, 2001b). Failure to link innovation projects to the business's strategy could result in high failure rates or success of unimportant projects (Bessant & Tidd, 2007:419).

- **The right number of projects**

The right number of projects relates directly to resource constraints (Cooper *et al.*, 2001b). Although businesses must always try to achieve the previous three goals, they will be wary of the fact that if too many projects are approved, resources will be spread too thinly and the new product pipeline becomes gridlocked (Bessant & Tidd, 2007:419).

3.4 SUMMARY

Creativity is the foundation upon which corporate entrepreneurship is built. To foster an entrepreneurial orientation within a business, managers thus need to understand what is meant by creativity, that it involves a process and how to manage creativity in order to exploit the creative potential of all employees within the business.

Consensus regarding a definition for creativity has over the years been problematic. To be creative an idea needs to be novel or unique, have practical value in the sense that it solves a problem or satisfies an existing need and be understandable.

Businesses often view creativity as a random and unscientific event. It is generally accepted that a process is involved. Many different views exist on precisely which steps are involved in the creative process. Most of these views include steps that are actually part of the innovation process. The creative process is thus seen as having three steps namely awareness and interest, incubation and illumination.

Although the definition and process of creativity is important, managers need to create a work environment in which creativity can flourish. Many myths surround creativity and a number of myths are presented that may impede the creation of such an environment. Furthermore, for creativity to emerge, three components namely creative thinking, expertise and motivation need to be present. Managers can influence these components through workplace conditions and managerial practices.

The second part of this chapter deals with innovation. Defining innovation has been problematic since in the literature various views are held as to what constitutes innovation. The view held for the purpose of this paper is that innovation is a non-chance event that is influenced by strategic intent, managerial action and business policy. Innovation must be comprehensive and permeate the entire business.

Often, the focus of innovation is on the breakthrough nature (radical or disruptive) of innovation. The importance of small incremental changes should however not be underestimated. In this regard an integrated strategy of radical and incremental innovation is proposed. Although many forms of innovation such as administrative, technological and positioning innovation have been added to the traditional forms of innovation namely product/service and process innovation, innovation should rather be viewed as a phenomenon that consists of multiple dimensions at the same time. Various barriers to effective innovation were presented. Whilst it is important to pay attention to these barriers, they are merely symptoms of a deeper innovation problem that needs to be addressed.

For innovation to be comprehensive and permeate the entire business, it must be viewed as a system (not random projects). This entails a deliberate decision to make innovation the number one priority in terms of growth strategy. Subsequently, innovation should be encompassed in an innovation policy with a clearly stated innovation vision, the strategic role that innovation is expected to play and an innovation resource strategy. Dedicated cross-functional teams should be created to manage the innovation process. Traditionally, the innovation process was viewed as a linear process. In view of the highly competitive environment, many businesses are

increasingly looking towards the stage-gate innovation process to reduce cycle time and improve their new product success rate. Measuring innovation effectiveness is the last component of an innovation system. This is important in terms of diagnosing reasons for success or failure and performance improvement.

Finally, as an effective risk management strategy, it is suggested that businesses create and manage a portfolio of innovations.

Innovation is increasingly recognised as the only source of obtaining a sustainable competitive advantage through the continuous development of new product/services and processes. Corporate entrepreneurship has consequently become the focus of attention as the ability to create innovation. Creating an environment in which corporate entrepreneurship can flourish is of prime importance and is discussed in the next chapter.

CHAPTER 4

DEVELOPING AN ENVIRONMENT TO SUPPORT CORPORATE ENTREPRENEURSHIP

4.1 INTRODUCTION

The important elements needed for an environment supportive to corporate entrepreneurship (where the entire business acts in ways that generally would be described as entrepreneurial – see section 2.3.3) has been identified as the strategic management process, design of the structure, the business culture, human resource management practices and controls (Jiménez-Jiménez & Sanz-Valle, 2005:364; Ireland *et al.*, 2006:14).

Essentially businesses will first need to provide a sense of overall direction for corporate entrepreneurship through continued emphasis on entrepreneurship in their strategic management process (Ramachandran *et al.*, 2006:92). The process of strategic management will not be discussed but rather the integration between strategic management and corporate entrepreneurship, a term which is referred to as strategic entrepreneurship.

Since structure follows strategy (Hough, Thomson, Strickland, Gamble, Human, Makin & Braxton, 2008:277) the business structure would have to be designed around an entrepreneurial strategy that would allow employees the freedom necessary to pursue entrepreneurial initiatives and also support lateral communication and coordination.

Strategic entrepreneurship and structure alone may however not be sufficient to create an environment supportive of entrepreneurial behaviour. It is also imperative to focus on the philosophy and values underpinning them. Building a business culture that embraces entrepreneurial behaviour poses significant challenges to traditional management practices (Harrison, 2004:779) but may be the single biggest factor overall (Leavy, 2005:39).

It is widely held that human resource practices can make a significant difference in the encouragement of corporate entrepreneurship, since the heart of corporate entrepreneurship lies precisely in the ability of businesses to foster, develop and utilise the creative talents of all their employees (Searle & Ball, 2003:51). The challenge for human resource management is therefore how to select, develop and motivate employees to exhibit entrepreneurial behaviour and to provide a supportive environment in which these employees can productively and swiftly implement these ideas. Studies concerning human resource management and corporate entrepreneurship have however been few and are often contradictory (Hayton, 2005:25). The focus of this study is thus on the internal environment of a business.

4.2 STRATEGIC MANAGEMENT AND CORPORATE ENTREPRENEURSHIP

Many businesses are convinced that business success in today's competitive environment depends on flexibility, innovation and speed. The creation of new ventures/product/services by corporate entrepreneurs is often cited as the key challenge facing businesses today. Subsequently many businesses are striving to create strategies that are entrepreneurial and are recognising the importance of continued emphasis on entrepreneurship in their long-term strategic management process (Morris *et al.*, 2008:8).

Strategic management is defined by Hitt, Ireland and Hoskisson (2007:7) as a full set of commitments, decisions and actions required for a firm to achieve strategic competitiveness and earn above-average returns. More specifically, strategic management is the managerial process of forming a strategic vision, setting objectives, crafting a strategy, implementing and executing the strategy and then over time initiating whatever corrective adjustments in the vision, objectives, strategy and execution are deemed appropriate (Thompson, Strickland & Gamble, 2007:6).

According to Meyer, Neck and Meeks (2002:26), the recent focus of strategic management has been on business performance and growth and the systems and strategies used to achieve such growth. The new competitive environment that has evolved today, present businesses with substantial change and significant complexity and uncertainty (Hitt *et al.*, 2003:416) that has long been central to the theory of

entrepreneurship (Morris *et al.*, 2008:8). The focus of strategic management has thus shifted to more dynamic models of change and flexibility (David, 2007:8). Consequently, Meyer *et al.* (2002:30) are of the opinion that the boundaries between corporate entrepreneurship and strategic management are becoming blurred where the ability to manage continuous change and maintain flexibility are necessary for survival. Indeed, McGrath and MacMillan (2000:xiv) argue that the time is now right for an integration of corporate entrepreneurship and strategic management.

Corporate entrepreneurship is ultimately about the creation of goods and services whilst strategic management focuses on the process to achieve above-average performance via a competitive advantage (Hitt, Ireland, Camp & Sexton, 2002:3). These terms are thus complimentary and can achieve the greatest wealth when integrated (Hitt *et al.*, 2002:3). The integration of which is referred to as strategic entrepreneurship.

It should be noted that the extreme view of integrating (i.e. form or blend into a whole) the fields are not being advocated. Corporate entrepreneurship and strategic management are therefore not viewed as a single discipline that has been subdivided (Ireland *et al.*, 2003:963). Rather an interface (place at which independent systems meet and act with each other) between corporate entrepreneurship and strategic management is proposed (Meyer *et al.*, 2002:33).

4.2.1 Strategic entrepreneurship

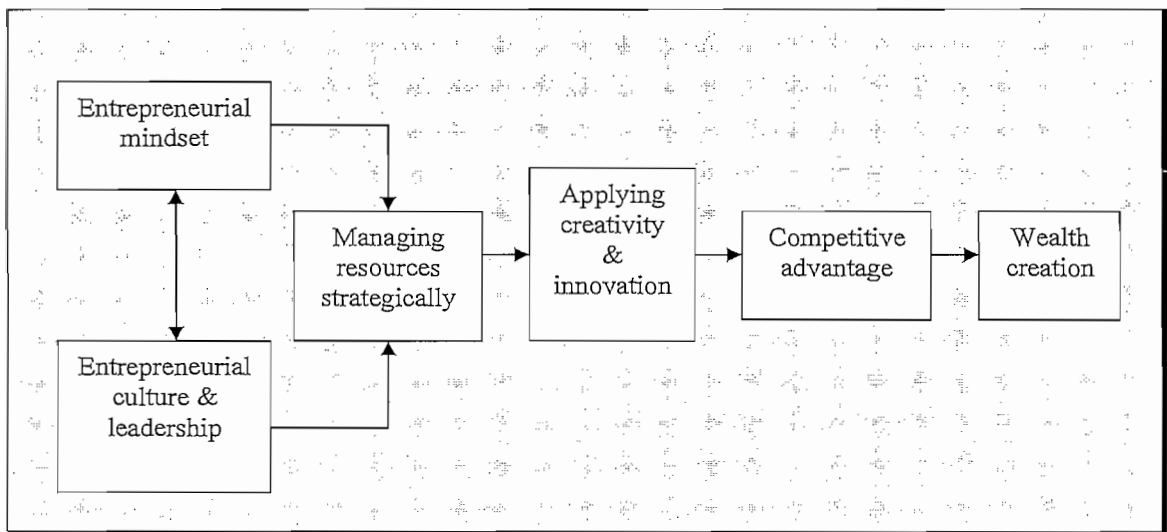
Strategic entrepreneurship is defined a vision-directed, business wide reliance on entrepreneurial behaviour that purposefully and continuously rejuvenates the business and shapes the scope of its operations through the recognition and exploitation of entrepreneurial opportunity (Ireland, Covin & Kuratko, 2009: 21). It in essence involves taking entrepreneurial actions using a strategic perspective. Businesses able to identify opportunities, but that are incapable of exploiting them, do not realise their full wealth creating potential. Similarly, businesses with current competitive advantages but without any new opportunities identified are exposed to increased risk in as market changes may diminish the rate of wealth creation. Wealth is created only when businesses simultaneously combine effective opportunity

seeking behaviour (entrepreneurship) with effective advantage seeking behaviour (strategic management) (Ireland *et al.*, 2003:966) to design and implement entrepreneurial strategies (Hitt *et al.*, 2003:416).

4.2.1.1 Dimensions of strategic entrepreneurship

Ireland *et al.* (2003:967-983) present four distinctive dimensions of strategic entrepreneurship namely, entrepreneurial mindset, entrepreneurial culture and leadership, managing resources strategically and applying creativity and innovation. These dimensions are depicted in figure 4.1 and will be briefly discussed.

Figure 4.1: The dimensions of strategic entrepreneurship



Source: Ireland *et al.* (2003:967)

- **Entrepreneurial mindset**

Morris *et al.* (2008:191) define strategic thinking (also known as “dominant logic”) as a notion that refers to the way in which managers conceptualise the business and make critical resource allocations. It attempts to capture the prevailing mindset of a business, filters and interprets information from the environment, attenuates complexity and drives the overall strategies, systems and behaviour, routines,

structures, cultures and systems, i.e. virtually everything the business does (Burns, 2008:65).

Today's environment with its fierce competition, rapid changes in markets and technologies, uncertainties about the future and ever increasing complexity are likely to present many crises and act as catalyst for change. The challenge is therefore to build into the dominant logic of the business the concept of constant change so that it becomes a dynamic dominant logic (Burns, 2008:65). Entrepreneurship can be the basis for this dominant logic (Ireland *et al.*, 2003:967). Entrepreneurship as strategic way of thinking promotes strategic agility, flexibility, creativity and continuous innovation throughout the business. The focus of the business thus becomes opportunity identification, discovery of new sources of value and product and process innovation that could lead to greater profitability (Morris *et al.*, 2008:192). An entrepreneurial mindset can therefore contribute to a competitive advantage.

An entrepreneurial mindset is subsequently defined as a growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation and renewal (Ireland *et al.*, 2003:968).

- **Entrepreneurial culture and leadership**

- **Culture**

An effective entrepreneurial culture, committed to simultaneous importance of opportunity-seeking and advantage-seeking behaviours (Ireland and Webb, 2009:471), is one in which new ideas and creativity are expected, risk taking is encouraged, failure is tolerated, learning is promoted, product, process and administrative innovations are championed and continuous change is viewed as opportunities (Ireland *et al.*, 2003:970).

Furthermore, an entrepreneurial culture develops in a business where the leaders employ an entrepreneurial mindset. Leaders with an entrepreneurial mindset search for opportunities and then determine the capabilities needed to successfully exploit them (Hisrich *et al.*, 2008:45-46). Culture is discussed in more detail in section 4.4.

- **Leadership**

Entrepreneurial leadership is the ability to influence others to manage resources strategically in order to emphasize both opportunity-seeking and advantage-seeking behaviours (Ireland *et al.*, 2003:971). More specifically, entrepreneurial leaders reward innovative efforts, allocate the necessary resources to commercialise innovations, share a strategic vision with respect to entrepreneurial behavior and have an open attitude and long-term view with respect to new ideas and new ventures Zhao (2005:35).

In this regard Covin & Slevin (2002:311-319) present five imperatives that characterise entrepreneurial leadership namely:

- o **Nourish an entrepreneurial capability**

Human capital is the source of strategic entrepreneurial behaviours. Alvarez and Barney (2002:96) argue that a vision emphasizing the importance of strategic entrepreneurship as well as a commitment to develop human capital will facilitate individuals' efforts to develop entrepreneurial capabilities such as agility, creativity and skills to manage resources strategically. These capabilities are important, not only to bring knowledge to bear on problems and opportunities, but also to develop capabilities to continually replenish it (Lemon & Sahota, 2004:483).

- o **Protect innovations threatening the current business model**

Disruptive innovations hold the promise of strategic renewal by having a strong impact on the market in terms of wholly new benefits and the business, in terms of generating new business (Lassen *et al.*, 2006:360). Employees sometimes see disruptive innovation (see section 3.3.3.2) as threatening to both themselves personally as well as to their businesses (Covin & Slevin, 2002:311). Effective entrepreneurial leaders should thus openly communicate the potential benefits of disruptive innovation.

- o **Question the dominant logic**

Key assumptions about industries and markets that influence a business's opportunity – and advantage-seeking behaviours should be periodically questioned to ascertain their validity (i.e. challenging the dominant logic) (Morris *et al.*, 2008:192). Entrepreneurial leaders evaluate assumptions underlying the dominant logic to make certain that the business is correctly positioned to identify value-creating entrepreneurial opportunities (Covin & Slevin, 2002:312). Furthermore, the concept of constant change should also be build into the dominant logic so that the dominant logic becomes a dynamic dominant logic (Burns, 2008:65).

- o **Revisit the “deceptively simple questions”**

Entrepreneurial leaders examine questions about the viability of the markets in which the business competes, the business's purpose, how success is defined and the business's relationships with different stakeholders (Covin & Slevin, 2002:312).

- o **Link entrepreneurship and strategic management**

Effective entrepreneurial leaders believe that to create the most value, businesses must be strategically entrepreneurial (Covin & Slevin, 2003: 99). This is achieved when leaders' entrepreneurial mindsets help develop a culture in which resources are managed strategically through advantage-seeking behaviour, yet also entrepreneurially through opportunity-seeking behaviour (Ireland, Hitt, Camp & Sexton, 2001:53).

- **Managing resources strategically**

Resources have become the basis of the difference in business performance in terms of wealth creation (Adner & Helfat, 2003:1011). Resources, in this instance, refer to the inputs into a business's production process such as capital equipment, skills of employees, patents, finances and talented managers (Hitt *et al.*, 2003:24).

Over the last decade the resource-based view (RBV) of a business has become the dominant perspective (Sirmon & Hitt, 2003:340). This perspective suggests that the difference in business performance is largely attributed to their resources. Alvarez and Barney (2002:90) are however of the opinion that it is unlikely that these resources alone will lead to a sustainable competitive advantage. Indeed, Ireland *et al.* (2003:973) argue that a business's heterogeneous resources are likely to produce a sustainable competitive advantage only when they are managed strategically. Within a strategic entrepreneurship context, resources are managed strategically when their deployment facilitates the simultaneous and integrated use of opportunity- and advantage seeking behaviours. Put differently, when businesses structure a resource portfolio, bundle resources to form capabilities and leverage those capabilities flowing from their resources to simultaneously enact opportunity- and advantage seeking behaviours and create wealth, they are managing their resources strategically (Sirmon & Hitt, 2003:340).

- **Applying creativity and developing innovation**

Creativity and innovation are of critical importance in the turbulent environment that characterise the new competitive landscape. Renewing what businesses offer and the way it creates and delivers that offering is becoming an essential and core process necessary to the survival of businesses (Ireland & Webb, 2009:469). Put differently, the challenge today is one of innovation, continuous rather than occasional and linked to a clear strategic focus (Bessant & Tidd, 2007:4-5).

The interrelationship between creativity, innovation and corporate entrepreneurship have been established and discussed in section 2.3 and chapter 3. Implementing effective strategic entrepreneurship will lead to a comprehensive and an integrated commitment to both creativity and innovation (Ireland *et al.*, 2003:980).

Strategic entrepreneurship is especially important in today's competitive landscape. Because of the complexity and uncertainty in this environment businesses cannot easily predict the future and as a result require strategic flexibility (Hitt *et al.*, 2003:416). Furthermore it is in this environment that corporate entrepreneurs have the potential to capture more of existing markets from less aggressive and innovative

competitors while also creating new markets since entrepreneurial opportunities arise from uncertainty (Hitt *et al.*, 2002:2). Entrepreneurial actions using a strategic perspective are helpful to identify the most appropriate opportunities to exploit and then to facilitate the exploitation to establish a competitive advantage (Kuratko & Audretsch, 2009:5).

4.3 STRUCTURING THE BUSINESS FOR CORPORATE ENTREPRENEURSHIP

Businesses, through their strategic planning efforts, select and interpret the environment, respond to those elements it considers fixed and adapts its strategy to the requirements of the environment (Hough *et al.*, 2008:52). Corporate entrepreneurship is increasingly recognised as a strategic option business chooses to pursue (see section 4.2.1.1 – entrepreneurial mindset), once triggers from the external environment denote the need for change and strategic adaptation (Ireland, Kuratko & Covin, 2003). Of importance however, is that the structure of a business be designed to facilitate the strategic pursuit of a business since it is generally accepted that structure follows strategy (David, 2007:270). Within this context it would imply a structural design that facilitates and promotes entrepreneurial activities (opportunity detection from the environment, facilitation and motivation to pursue opportunities).

Although traditional structures, such as the functional or divisional structure, all have particular strengths, their underlying logic is geared towards a hierarchical process that directs work activities (Burns, 2008:141). Corporate entrepreneurial efforts on the other hand are about creating new things and moving in new directions and is therefore almost always in conflict with traditional structures (Morris *et al.*, 2008:248). Therefore, to successfully pursue corporate entrepreneurial activities, a structure needs to be created that supports lateral communication and coordination efforts while allowing employees the freedom necessary to pursue entrepreneurial ideas without the direct intervention of upper management (Kirby, 2003:220).

When developing a business structure that would promote corporate entrepreneurship, it is important to understand the components that influence the

design of a structure. This section starts with a discussion on the components of structure and how it relates to corporate entrepreneurship. This leads to presenting three main types of structures with a conclusion of the form of structure that is most likely to promote corporate entrepreneurship. An issue of contention has always been the connection of an entrepreneurial project with the routine operations within a business as well as the structural form of such a project. In this regard two important variables are presented that could lead to tentative conclusions about the use of a variety of structural design alternatives. Finally, three innovative business designs are presented which entrepreneurial businesses have been experimenting in their search for the optimum corporate entrepreneurial business design.

4.3.1 Components of structure

Business structure describes the formal way in which the overall tasks of a business is divided, grouped and coordinated for task completion (Cummings & Worley, 2008:315). At the most basic level, businesses attempting to design a structure are dealing with four major structural aspects namely hierarchy, formalisation, centralisation and specialisation.

4.3.1.1 Hierarchy

Hierarchy refers to the number of levels in authority chains of businesses and shows the relationships amongst these levels (Hellriegel, Jackson & Slocum, 2005:301). Increased hierarchy tends to be associated with higher levels of red tape. Employees need to go through the administrative procedures (including more required approvals) that each level creates. This may discourage employees from conducting new programs and ideas and may eventually lead to risk-averse behaviour (Cummings & Worley, 2008:315). Minimal hierarchy is therefore regarded as an attribute of corporate entrepreneurship (Von Stamm, 2008:472). Many businesses have subsequently reduced the number of hierarchical levels to create more efficient businesses and to react faster to the changing environment (Hellriegel *et al.*, 2005:301).

4.3.1.2 Formalisation

Formalisation refers to the degree to which tasks within the business are standardised. Where tasks are highly formalised, the incumbent has a minimum amount of discretion over what is to be done, when it is to be done and how it should be done (Robbins, Judge, Odendaal & Roodt, 2009:405). This usually translates into written documents regarding procedures, job descriptions, regulations and policy manuals (Conway & Steward, 2009:246). High levels of formalisation contribute to the perceived level of red tape in the business and may reduce the propensity for risk-taking behaviour. Indeed, Schilling (2008:212) argues that a high degree of formalisation may stifle employee creativity as employees may not feel empowered or motivated to implement new solutions.

4.3.1.3 Specialisation

Specialisation reflects the degree of professionalism and the expertise shared in a business and high levels of specialisation is believed to contribute to the level of entrepreneurial activities within a business (Cummings & Worley, 2008:315). Specialisation encourages risk-taking propensity because the overall level of uncertainty in the business is reduced due to the high level of professionalism and technical expertise caused by specialisation. Red tape is also often reduced by high specialisation by enhancing more flexible and open communication among employees. Furthermore, highly specialised environments tend to produce more disruptive/radical innovations rather than incremental or imitative innovations (Morris *et al.*, 2008:223).

4.3.1.4 Centralisation

Centralisation refers to the degree to which formal decision-making is concentrated at top management level (Schilling, 2008:212). Typically, it is said that if top management makes the business's key decisions with little or no input from lower level employees, then the business is centralised (Robbins *et al.*, 2009:404). High levels of centralisation contribute to the lack of upward (bottom-up) voluntary communication, which may cause poor information exchange among sub-units and

between top management and lower level units. A centralised business may also develop higher levels of red tape because top management wants to ensure control over detailed decisions and actions of lower-level units. According to Conway and Steward (2008:246), high levels of bureaucracy (red tape) mitigate against spontaneity, creativity and informal boundary-spanning communication. Top managers enjoy a great deal of discretionary power in centralised businesses, which may support some of their risk-taking decisions. In contrast, centralisation discourages risk-taking activities of ordinary employees because they are not equipped with the necessary resources, knowledge, or discretionary authority to deal with potential risks of their actions (Burns, 2008:142).

To encourage entrepreneurial activities a business structure requires low levels of hierarchy, since flatter structures tend to promote entrepreneurial activities (Burns, 2008:138) and is more conducive to unstructured problem solving. Low levels of formalisation are required, as employees need to have a sense of empowerment and room in which to manoeuvre (Morris *et al.*, 2008:229). Businesses are also more likely to develop a higher level of entrepreneurial activities when the business exhibits a higher level of specialisation (Burns, 2008:143). Finally, the essence of corporate entrepreneurship is to encourage the whole business to act entrepreneurially and is thus more consistent with a decentralised structure.

4.3.2 Types of structures: Link to an entrepreneurial strategy

Many structural attributes have been linked to entrepreneurial behaviour in businesses and according to Ireland *et al.* (2009:31), the single aspect of structure that best defines entrepreneurial businesses is structural organicity. This refers to the extent that a business's overall form can be characterised as organic or mechanistic. The characteristics of mechanistic and organic businesses are depicted in table 4.1.

Table 4.1: Characteristics of mechanistic and organic businesses

Characteristic	Mechanistic business	Organic business
Task definition & knowledge required	Narrow, technical	Broad, general
Linkage between individual's contribution and business purpose	Vague or indirect	Clear or direct
Task flexibility	Rigid, routine	Flexible, varied
Specification of techniques, obligations and rights	Specific	General
Degree of hierarchical control	High	Low (self-control)
Primary communication pattern	Top-down	Lateral (between peers)
Primary decision-making style	Authoritarian	Democratic, participative
Emphasis on obedience and loyalty	High	Low

Source: Kreitner and Kinicki (2008:518)

Von Stamm (2008:494) is of the opinion that in today's fast moving environment, either/or is no longer enough and businesses should simultaneously pursue stability and innovation. Businesses that are capable of mastering this balance is generally known as ambidextrous businesses (Conway & Steward, 2009:256). Ambidextrous businesses will thus also be presented as a structure option linked to an entrepreneurial strategy.

4.3.2.1 Mechanistic business structure

Mechanistic structures are rigid bureaucracies with narrowly defined tasks, strict rules (Kreitner & Kinicki, 2008:517), hierarchical structure of control and authority in which power is concentrated at top management level with little dissemination to middle- or lower-level management (Robbins *et al.*, 2009:414). Operating procedures and processes are often codified or formalised and adherence to formal job descriptions is the norm (Green, Covin & Slevin, 2008:361). Although information systems are well developed, they focus on internal reporting and output tracking rather than on market developments (Morris *et al.*, 2008:226).

4.3.2.2 Organic business structure

Organic business structures are characterised as having fluid and broad task descriptions (Conway & Steward, 2008:248). It is flat and uses cross-hierarchical and cross-functional teams performing a variety of tasks (Kreitner & Kinicki, 2008:517). Power is decentralised and authority is linked to expertise (Green *et al.*, 2008:361). As such, few bureaucratic rules or standard procedures exist and formalisation is low (Morris *et al.*, 2008:226). Communication is lateral, upward and downward (Robbins *et al.*, 2009:429) with the emphasis on personal interaction and face-to-face communication. Comprehensive information systems are in place for anticipating and monitoring the external environment (Morris *et al.*, 2008:226).

Although both structural forms are effective from their point of view, the appropriate form will depend on accomplishing particular outcomes under particular circumstances. For instance, mechanistic structures work well in stable, predictable environments and are good for producing high volumes of products and achieving efficiencies in production and distribution (Conway & Steward, 2008:247). In contrast, fast changing, turbulent and complex environments tend to favour organic structures (Burns, 2008:144). In practice though, most businesses show features of both structural forms, but approximate wholly or in part more closely to one or the other (Conway & Steward, 2008:248).

Corporate entrepreneurship is often viewed as a logical response to environmental triggers such as intense competition, rapid technological change, short product life cycles and evolving product-market domains (Ireland, Kuratko & Covin, 2003). Furthermore, corporate entrepreneurship requires creative thinking and collaboration and therefore empowerment is important. It further necessitates a level of flexibility and quick decision-making (Morris *et al.*, 2009:429). Teams must be able to span boundaries within the business. Extensive lateral and vertical communication is important, much of which is informal and unplanned. It is thus not surprisingly that corporate entrepreneurship is most likely to foster under structures that resemble an organic structure (Morris *et al.*, 2008:229).

4.3.2.3 Ambidextrous businesses

To compete successfully in the long-term, businesses need to maintain a variety of innovation efforts. They must constantly pursue incremental innovations (small improvements in existing products) and need to come up with radical innovations (Burgelman *et al.*, 2009:983; Birkinshaw & Gibson, 2004:47). Incremental innovations are usually associated with stability and thus mechanistic structures whilst radical innovations are associated with uncertainty and thus organic type structures (Mirow, Hoelzle & Gemuenden, 2008). Ambidextrous businesses are those that effectively balance the appropriation from current business activity and the search for new value as realised through innovation (Morris *et al.*, 2008:308).

The standard practice in ambidextrous businesses is to create a separate structure (structural ambidexterity) where breakthrough efforts are organised as structurally independent units, each having its own processes, structures and culture but integrated into the existing senior management hierarchy (O'Reilly & Tushman, 2004:76). Senior management thus assumes direct responsibility for both mainstream operations and new initiatives by creating direct, unmediated reporting relationships between themselves and those individuals or groups engaged in the business's innovation-producing initiatives. In this way they can also more effectively balance resource commitments needed to achieve both current and future competitiveness (Morris *et al.*, 2008:309). Building an ambidextrous business is not easy, however O'Reilly and Tushman (2004:81) argue that given the executive will to make it happen, any business can become ambidextrous.

4.3.3 Structuring entrepreneurial projects: Structures within structures

The challenge of connecting entrepreneurial projects (more commonly referred to as new product development) with routine operations has long been an issue. Most structures in mature businesses reinforce existing practices and are usually hostile to innovations (Bessant & Tidd, 2007:159). Structuring a new product development project can therefore be a difficult task, since it requires a structure that not only gets the right inputs into the process at the right time, but also one that facilitates both creative abrasion and cross-functional collaboration (Morris *et al.*, 2008:238-239).

4.3.3.1 Business design alternatives

Two important variables are proposed that can be used to assess a new product development project, which could lead to tentative conclusions about the use of a variety of business design alternatives. These variables are the expected strategic importance for business development and the degree to which the project is related to the core capabilities of the business (Burgelman *et al.*, 2009:712).

- **Strategic importance**

Assessing the strategic importance of a new product development project involves considering its implications for the business's product-market position. Critical issues according to Burgelman *et al.* (2009: 713), to be addressed are:

- How does the project maintain the business's capacity to move in areas where major current or potential competitors might move?
- How does this help the business determine where not to go?
- How does it help the business create new defensible niches?
- How does it help mobilise the business?
- To what extent could it put the business at risk?
- What is missing in the analysis?

The assessment of strategic importance furthermore has implications for the degree of control management must maintain over the new product development. The premise is that businesses want to exert control over the factors likely to affect their strategic position (Morris *et al.*, 2008:244). This, in turn, has implications for the administrative linkages to be established. For example, where strategic importance is high, strong administrative linkages will be required and management will want a say in the strategic management of the new project through direct reporting relationships as well as involvement in planning and budgeting processes. In situations where strategic importance is judged to be somewhat unclear, management should relax the structural context and allow the new project some leeway in its strategic management (Burgelman *et al.*, 2009:713).

- **Relatedness**

Businesses (new project and existing business) are said to be related when their value chains possess competitively valuable cross-business fits (Davis, 2007:180). Relatedness therefore occurs when the new project and existing business share production facilities and exploit knowledge and skills of the existing business to make and sell different product lines (Sorrentino & Williams, 1995:60). Those features that are highly related present an opportunity to capitalise on existing know-how and resources. In such instances, strong coupling between the operations of the new and existing businesses are suggested. Top management should therefore ensure that both new and existing capabilities and skills are used well through integration of work flows, adequate mutual adjustment between resource users through lateral relations at the operational level and free flows of information and know-how through regular contacts between employees in the new and existing businesses (Morris *et al.*, 2008:241). The premise is thus that businesses try to organise their operations in such a way that synergies are maximised (Burgelman *et al.*, 2009:714). Finally, it is generally accepted that high relatedness is positively associated with the performance and success of the entrepreneurial project which is mainly due to the concept of economies of scope (Sorrentino & Williams, 1995:61) which states that a business gains greater returns from using the same factors of production to produce two or more products.

On the other hand, innovations are often radical in nature (see section 3.3.3.2) presenting features that are highly unrelated to those of the parent business. Although less common, but arguably of greater strategic significance, these entrepreneurial projects pose major opportunities for business growth (Burgelman *et al.*, 2009:705).

Taking cognisance of the strategic importance and relatedness of an entrepreneurial project a number of structural options is available. A synopsis of eight different structural approaches are presented in table 4.2

Table 4.2: Structural approaches of entrepreneurial projects

Business structure	Description
New product division	Large and self-sufficient division. Provides internal environment for projects with the potential to create major new business thrusts, but the strategic importance remains uncertain. Long-term time horizon.
New product department	Department within a division. Project has high strategic importance and partial operational relatedness.
New product manager	One manager responsible for a new product. Usually involves line extensions or minor modifications of existing products.
Special business unit	Projects of high strategic importance but low operational relatedness may require the creation of a dedicated/special business unit.
Direct integration	New project is integrated directly into the mainstream business operations. This is necessary where the new project draws heavily on existing competencies, or where radical changes in product or process could have significant impact on mainstream operations.
Task force or ad-hoc committee	Temporary matrix approach.
Cross-functional teams	New product team set up for the duration of the project.
Multiple organisation forms	Use of hybrid forms depending on the nature of the project.

Source: Burgelman *et al.* (2009:714); Morris *et al.* (2008:239-240)

Businesses constantly attempt to devise new structures and processes to increase the effectiveness of new product development and to accomplish it at a much faster pace than in previous years. A recent structural approach to new product development projects is the cross-functional team approach which is growing in popularity (Von Stamm, 2008:155).

Cross-functional teams are composed of members representing different functions with relevant input into a new product design (Von Stamm, 2008:156). Cross-functional teams are thought to facilitate the product development and marketing process because they solve an information-processing problem (Lovelace, Shapiro & Weingart, 2001:779). They are responsible for understanding customer needs and for obtaining information about markets, technologies, competitors and resources, with the aim of converting this information into effectively manufactured product concepts that are profitable for the business and valuable for customers (Valle & Avella, 2003:32). The multifunctional nature of innovation coupled with the desire for

parallel processing (stage-gate process) most likely account for the growing popularity of cross-functional teams (Cooper, 2001:118).

Business structures by itself cannot provide an environment conducive for corporate entrepreneurship. At best, structure can provide a friendly business context in which entrepreneurship can proceed. It cannot effectively motivate or direct entrepreneurial behaviour. That can only be accomplished through the values and beliefs (culture) of employees which is presented in the next section.

4.4 DEVELOPING AN ENTREPRENEURIAL CULTURE

From the previous discussion on business structures (see section 4.3.2) it is clear that the mechanistic bureaucracy of yesteryear, in which behaviour and decision-making was driven by rules and policies, is virtually obsolete in the rapidly changing business environment (Sathe & Davidson, 2000:279) where survival depends on creativity and innovation (Martins & Terblanche, 2003:64). In such an environment it is important that all employees have a good instinct for the business's beliefs and values and about what constitutes appropriate behaviour. In this regard business culture provides a sense of understanding of a business's beliefs and values (Sathe & Davidson, 2000:279). More specifically, an entrepreneurial culture is required in which creativity and innovation is accepted as a basic cultural norm (Martins & Terblanche, 2003:64). Furthermore, an entrepreneurial business culture can be an important source of sustainable competitive advantage since it is extremely difficult to imitate due to its inherent tacitness and complexity (Chan, Schaffer & Snape, 2004:17).

The development of an entrepreneurial culture starts with an understanding of the nature of culture. The discussion presents a definition of culture and briefly the various layers found in an business culture. Subsequently, the different elements of an entrepreneurial culture is discussed.

4.4.1 The nature of culture

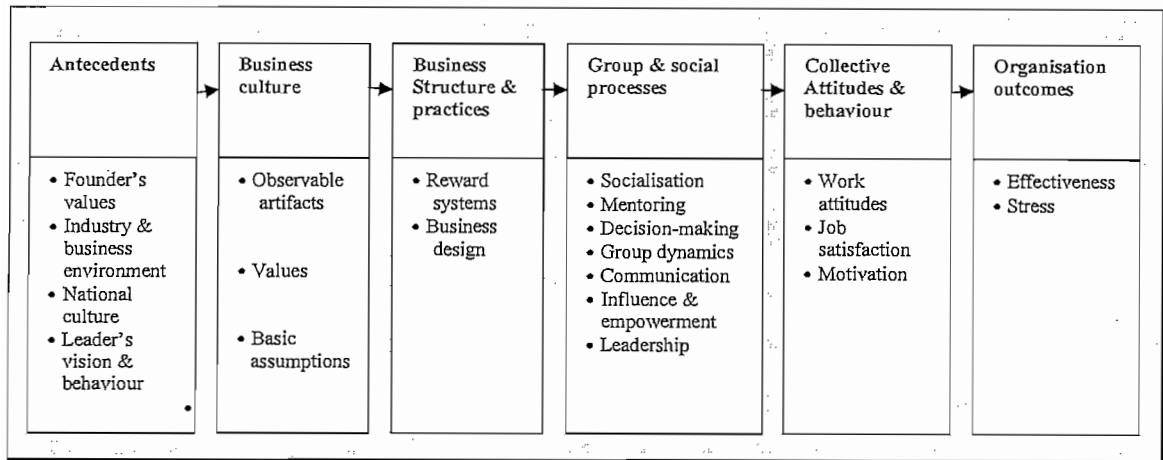
Most managers agree that entrepreneurial behaviour within a business is inextricably intertwined with the business culture (Daft, 2008:92) to the extent that business culture is a major contributing factor to the degree that entrepreneurial behaviour is found in businesses (Martins & Martins, 2002:58). It is furthermore argued that entrepreneurial behaviour within a business can only be effectively created and controlled through an appropriate business culture, however Burns (2008:112) is of the opinion that although this is necessary it is not sufficient. Prior to determining a business culture that is supportive of entrepreneurial behaviour it is important to clarify what is meant by business culture.

4.4.1.1 Defining business culture

Business culture is defined as the set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about and reacts to its various environments (Kreitner & Kinicky, 2008:66). The definition highlights three important characteristics of business culture. Firstly, business culture is taught to new employees through a process of socialisation. Secondly, business culture has an influence on the behaviour of employees and finally, it operates at different levels (Kreitner & Kinicky, 2008:67). A conceptual framework for understanding business culture is presented in figure 4.2.

Figure 4.2 shows that business culture is shaped by four components namely the founder's values, the industry and business environment, the national culture and the leaders' vision and behaviour. In turn, business culture influences the type of business structure and a host of practices, policies and procedures of the business. These business characteristics subsequently affect a variety of group and social processes. This sequence then ultimately affects employees' attitudes and behaviour and a variety of business outcomes. To gain a better understanding of how business culture is formed and used by employees, the various layers or levels of business culture is briefly discussed.

Figure 4.2: A conceptual framework for understanding business culture



Source: Kreitner and Kinicky (2008:67)

4.4.1.2 The layers of culture

Figure 4.2 shows three fundamental layers of business culture namely observable artefacts, values and basic assumptions.

- **Observable artefacts**

Artefacts consists of the physical manifestation of a business's culture and includes aspects such as acronyms, manner of dress, myths and stories told about the business, special parking space, decorations, symbols, language, mottoes and observable rituals and ceremonies (Williams, 2007:91). The ultimate meaning of an artefact is derived over time, depending on how it is managed, the messages that is reinforced and how it interacts with other components of the culture (Morris *et al.*, 2008:254).

- **Values**

Values are concepts or beliefs and pertain to desirable end-states or behaviours. It transcend situations, guides the selection or evaluation of behaviour and events and are ordered by relative importance (Kreitner & Kinicky, 2008:67).

Values are thus things that employees think are worth having or doing or are intrinsically desirable. Having entrepreneurship at the core of values is fundamental and essential for the success of the entrepreneurial business (Burns, 2008:112). Entrepreneurial values might include aspects such as creativity, integrity, perseverance, individualism, achievement, accountability, ownership and change, among others (Morris *et al.*, 2008:252).

- **Basic assumptions**

At the deepest level of culture are the basic, underlying assumptions. According to Jones and George (2008:415), these underlying assumptions constitute business values, which have sunk below the conscious level of culture, that become so taken for granted that employees use them to guide their behaviours and attitudes. These assumptions become so taken for granted that employees are not even aware of their own culture until they encounter a different one (Tidd *et al.*, 2001:336) and are as such highly resistant to change (Kreitner & Kinicky, 2008:68-69).

4.4.2 Elements of an entrepreneurial culture

An entrepreneurial culture, whilst committed to the simultaneous importance of opportunity-seeking and advantage-seeking behaviours, is one in which new ideas and creativity are expected, risk-taking is encouraged, failure is tolerated, learning is promoted, product, process and administrative innovations are championed and continuous change is viewed as an opportunity (Ireland *et al.*, 2003:970). The elements of culture that support entrepreneurial behaviour are strategic vision (purposefulness), structure and practices, support mechanisms and behaviour that encourages entrepreneurship within the corporate context (Martins & Terblanche, 2003:70).

4.4.2.1 Strategic vision

Businesses that want to engage in successful corporate entrepreneurship need to have an entrepreneurial orientation which refers to the strategy-making practices that businesses use to identify and launch innovative projects (refer to chapter 2, section

2.4) (Dess & Lumpkin, 2005:147). To set the stage for entrepreneurial strategies, top management must develop and institute a strategic vision for the business that is conducive to an entrepreneurial culture (Miles, Heppard, Miles & Snow, 2000:103). Creating such a vision, Morris *et al.* (2008:254) are of the opinion that a good vision starts with a core ideology which includes the business's values and purpose. This implies that entrepreneurial values (see section 4.4.1.2) must be incorporated into the vision and employees can thus be informed about these values through the vision (Martins & Martins, 2002:61). Complementing these values is the purpose, which is a source of guidance and inspiration to the business. Entrepreneurship, should also here, be implicit in the business's purpose and go beyond merely suggesting that entrepreneurship is important (Morris *et al.*, 2008:255). The vision statement should actually mention creativity and innovation (Martins & Martins, 2002:61).

Furthermore, such a vision would typically include both the scope of the business's efforts as well as the processes (focus on entrepreneurial activity and the broad guidelines for promoting such action) necessary to achieve this. The vision should however be broad rather than specific, since too much structure may serve to inhibit the very actions the vision is trying to promote. Top management should therefore set at least broad parameters regarding the nature (product or process innovation) of the innovation that will be encouraged as well as broad guidelines for promoting such actions (Miles *et al.*, 2000:103).

Entrepreneurial action, by its nature, is a creative process that must be relatively unconstrained if it is to operate effectively. At the same time, however, the business needs to move in the same basic direction. The strategic vision thus serves to balance these needs, provide general guidance, direction and encouragement, yet also providing the latitude necessary to promote entrepreneurial activity (Miles *et al.*, 2000:103).

4.4.2.2 Structure and practices

The business culture of a business has an influence on the structure and operational systems in a business (Jones & George, 2008:412). The structure tends to emphasize certain values which may have an influence on either promoting or

restricting entrepreneurial behaviour (Martins & Terblanche, 2003:69). Organic structures that support values such as flexibility, autonomy and team work will promote entrepreneurial behaviour. In contrast, hierarchical structures tend to support values such as rigidity, control, predictability and order and as such will hinder entrepreneurial behaviour. These aspects have been discussed in section 4.3.

4.4.2.3 Support mechanisms

Support mechanisms should be present in the culture of a business to create an environment that will promote entrepreneurial behaviour. Aspects such as rewards and recognition and the availability of resources such as time, money and creative people are mechanisms that fulfil this function (Martins & Terblanche, 2003:71).

- **Rewards and recognition**

Businesses that wish to create an entrepreneurial culture must also be willing to reward such behaviour. The problem is that most large businesses' reward structures are often quite structured and systematic and geared to equity and fairness, not the creation of corporate entrepreneurs (Thornberry, 2003:339). Furthermore, employees are usually rewarded for well-proven, trusted methods and fault-free work. Employees should however also be rewarded for risk-taking, experimenting and generating ideas (Ireland *et al.*, 2009:32). How employees should be rewarded will be presented in section 4.5.4.

- **Availability of resources**

An effective entrepreneurial culture facilitates a business' efforts to manage resources strategically (see section 4.2.1.1). Being committed to the simultaneous importance of opportunity-seeking and advantage-seeking behaviours, an entrepreneurial culture is thus one in which, amongst others, new ideas and creativity are expected and risk taking is encouraged (Ireland *et al.*, 2003:970).

- **Time and money**

The amount of time and money invested, or that is available to support entrepreneurial behaviour, is an indication of the emphasis placed on such behaviour (Sathe, 2003:29). A business culture that promotes entrepreneurial behaviour should thus allow employees the time to think and act creatively and to experiment (Martins & Terblanche, 2003:71). As far as money as a resource is concerned, providing too little funds or too much funds can both hamper entrepreneurial behaviour (Amabile, 1998:82). A new initiative obviously starves without sufficient funds, but excess funds can lead to a proliferation of activities of questionable significance, dissipating energy and focus (Sathe, 2003:84). Time and money resources, as support mechanisms for enhancing an entrepreneurial culture, were discussed in chapter 3 (see section 3.2.3.3).

- **Creative people**

Employee characteristics such as creative and innovative behaviour, risk-taking, focus on results, flexibility to change, independent behaviour, tolerance of ambiguity and a preference for assuming responsibility are all associated with successful entrepreneurial efforts (Timmons & Spinelli, 2009:46-54). Furthermore, an entrepreneurial culture is built around emotional commitment, autonomy and empowerment (Burns, 2008:123). Using the above desired employee and culture characteristics it becomes possible to identify a human resource management system that can be conducive to fostering entrepreneurial behaviour (Morris *et al.*, 2008:169). Since human capital is the source of entrepreneurial behaviour (Alvarez & Barney, 2002:96) and may also result in a sustained competitive advantage (because of its inimitability) the importance of a commitment to develop a human resource management system that facilitates entrepreneurial behaviour is emphasised (Ireland *et al.*, 2003:971). Key elements such as job planning and design, recruitment and selection, compensation and rewards, training and development and performance appraisals need to be addressed (Morris *et al.*, 2008:166). These elements will be discussed in section 4.5.

4.4.2.4 Behaviour that encourages entrepreneurial behaviour

The values and norms within a business usually manifest themselves in specific behavioural forms that either encourage or inhibit entrepreneurial behaviour. These behavioural forms encompass handling failure, idea generating, continuous learning culture, risk taking, competitiveness, support for change and conflict handling (Martins & Terblanche, 2003:72).

- **Handling failure**

The way in which a business handles failure will determine whether employees feel free to act entrepreneurially. Businesses with experience in innovation have learnt to expect a modest success rate, for example, businesses like 3M have learned that only forty percent of new initiatives introduced to the market eventually succeeded (Sathe, 2003:85). Failure is thus normal, in fact Morris *et al.* (2008:267) argue that if employees do not fail now and again, they are probably not trying anything new. What is important is what is learnt from failure (Sathe, 2003:85). Experiencing failures can enhance the likelihood of success and Burgelman *et al.* (2009:1030) is of the opinion that spectacular new products successes have often emerged as an outgrowth of what businesses have learned from major failures. Thus, businesses fostering an entrepreneurial culture accept failure as part of the process while arguing that the generation of knowledge from disappointing outcomes is essential to the success of future entrepreneurial initiatives (Covin, Green & Slevin, 2006:63). Amabile (1998:83) furthermore stresses the importance of not only rewarding innovative successes, but more importantly, failures too.

- **Idea generation**

The focus here is to create an entrepreneurial culture that would foster the generation of new ideas. An entrepreneurial culture is one in which businesses have created an atmosphere and structure to encourage employees to generate creative and innovative ideas (Levitt, 2002:6). In such businesses, employees are acknowledged for their roles in bringing new ideas to the business, for example, many businesses (Motorola, Intel) employ a practice of granting the status of "fellow"

to innovators who continually make important contributions to the business (Davenport, Prusak & Wilson, 2003:63). Whilst many ideas may emerge, which may not all be worthy of consideration, it is however important how these ideas are managed (Amabile, 1998:83) to encourage employees to continuously submit new ideas. The formal idea capture and handling process, presented in chapter three (see figure 3.4) is a useful approach in handling all ideas that are submitted. Not only are ideas fairly evaluated but feedback is also given to the submitter and reasons given where the idea was not accepted. Furthermore, the idea is placed in an "idea bank" which is usually displayed on the business' intranet. The hope here is that some creative employee will add on to an existing idea, or figure out a solution to a barrier, or perhaps even arrive at original ideas as a result of reading the idea list (Cooper, 2001:172)..

- **Continuous learning**

To remain competitive businesses must efficiently and effectively create, capture, harvest, share and apply their knowledge and expertise. They must also have the dynamic capability to bring that knowledge to bear on problems and opportunities as well as to continually replenish it. Within the rapid changing environment it means that knowledge becomes obsolete quicker which therefore entails constant internal adaptation in strategies, structures, processes, tools and most importantly a need for employees and businesses to learn quickly (Lemon & Sahota, 2004:484). The question is how culture can promote continuous learning? Burns (2008:125) states that if the right types of norms and values, which are depicted in table 4.3, are held and widely shared, then culture can activate continuous learning. Furthermore, commitment to a learning culture is a strategic choice, because learning is a capability and requires skills and processes that must be activated for knowledge to be developed and shared (Hagen, Tootoonchi & Hassan, 2005:50).

Table 4.3: Critical norms and values for learning

Culture that enhances learning	Culture that inhibits learning
Balances interests of all stakeholders	Believes tasks are more important than people
Focuses on people rather than systems	Focuses on systems rather than people
Empowers people and makes them believe they can change things	Allows change only when absolutely necessary
Makes time for learning	Is preoccupied with short-term coping and adapting
Takes a holistic approach to problems	Compartmentalises problem solving
Encourages open communication	Restricts the flow of information
Believes in teamwork	Believes in competition between individuals
Has approachable leaders	Has controlling leaders

Source: Burns (2008:125)

Continuous learning is however complex, involving a mix of rational, intuitive, emotional and social processes which are all embedded in the activities of a business (Fenwick, 2003:124). This however falls beyond the scope of this study.

- **Risk-taking**

An entrepreneurial culture is one in which risk-taking is encouraged (Dess & Lumpkin, 2005:152). A culture where too many management controls are applied will inhibit taking risks and consequently stifle creativity and innovation (Martins & Terblanche, 2003:72). In fact a risk-adverse culture has been cited as one of the most common barriers to entrepreneurial behaviour (Kuczarski *et al*, 2001:22) (see section 3.3.4.2).

It is important to note that this risk does not refer to extreme or uncontrollable risk, but rather to risk that is moderate and calculated (see section 2.4.3). A balance should thus be reached in the degree to which risk-taking is allowed. This can be achieved by spelling out the expected results (Martins & Terblanche, 2003:72) through the development of an innovation policy (see section 3.3.5.2). In addition, the implementation of a stage-gate process proposed in chapter three (see figure 3.4) with its various stages and screening criteria together with a balanced portfolio of innovative projects (see section 3.3.6) should also contribute to minimising the risk.

- **Competitiveness**

Competitiveness is regarded as an important aspect of a business's culture within creative and innovative businesses (Martins & Terblanche, 2003:72). A business's competitiveness originates from the possession of special resources (Guan, Yam, Mok & Ma, 2006:974) and since knowledge is regarded as the primary resource for the new economy (Politis, 2005:197), creating a learning culture therefore becomes important. According to Hagen *et al.* (2005:50), business learning is linked to a business's ability to innovate continuously and generate competitive advantage. Also, the development of new knowledge from the learning process reduces the likelihood that a business's competencies will become obsolete. Instead, the competencies on which the advantage are based remain dynamic and they change in accordance with environmental contingencies.

- **Support for change**

Corporate entrepreneurship represents a framework for the facilitation of continuous change and innovation in established businesses. In fact, corporate entrepreneurship, by its very definition (refer section 2.3.4), implies change that transcends the strategy, structure, culture, control systems, rewards and human resource management of the business (Morris *et al.*, 2008:20). Clearly, a culture supportive of change is imperative.

- **Tolerance of conflict and handling conflict**

Entrepreneurial businesses consider the keys to success to be creativity, responsiveness and adaptability (Shaw *et al.*, 2005:401). Such businesses view conflict as a productive force that can stimulate employees to increase their contributions to innovation and productivity (Bacal, 2004:21). According to Berstene (2004:6), constructive conflict opens up issues of importance, identifies alternative solutions resulting in problem solving. Furthermore, conflict provides people with feedback about how things are going and even personality conflicts carry information about what is not working in a business, affording the opportunity to improve. Thus, rather than trying to avoid or suppress conflict, the task becomes one of managing

conflict (Bacal, 2004:21), creating a culture that values and accommodates constructive conflict (Leavy, 2005:42).

Business culture can either stifle or encourage corporate entrepreneurship. The discussion on the elements of an entrepreneurial culture serves to present some guidelines on how to create an business culture that would encourage entrepreneurial behaviour. Business culture is however not something that is easily changed. Consequently, Morris *et al.* (2008:251) suggest changing to an entrepreneurial culture (from the current culture) would require management to make changes to the culture through systematic sets of initiatives and forms of reinforcement that are implemented over an extended period of time.

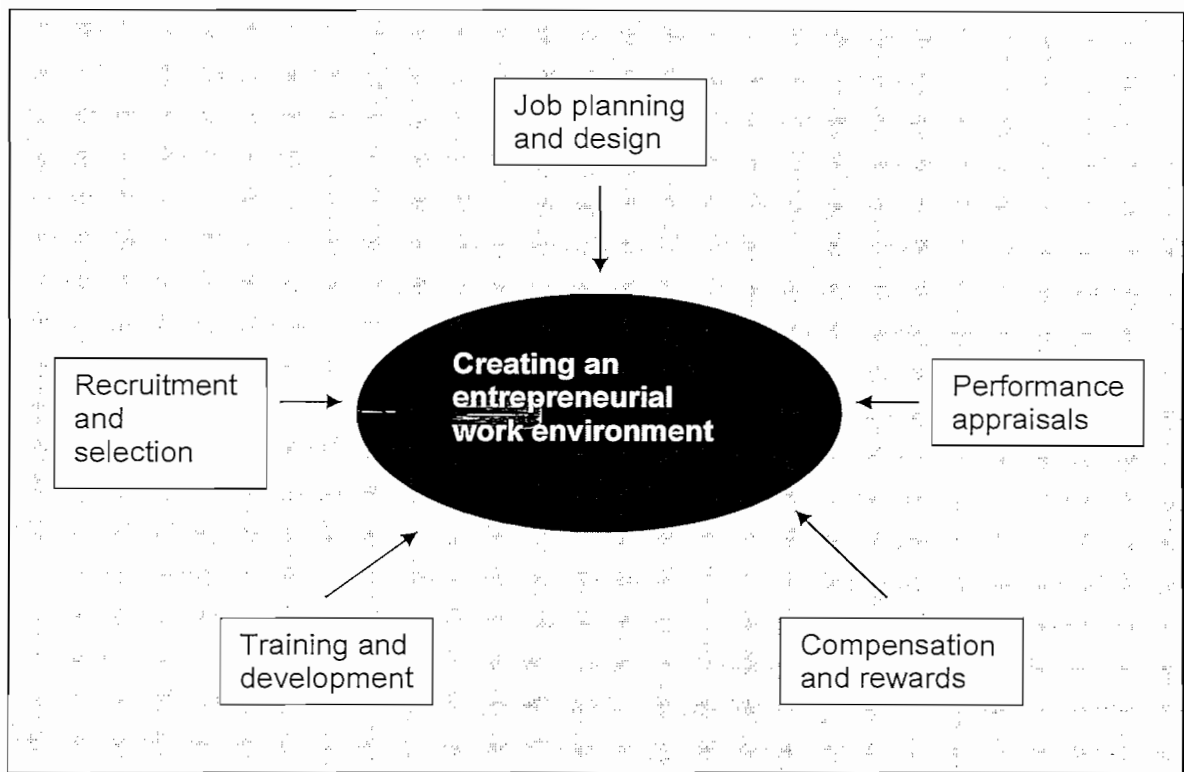
4.5 HUMAN RESOURCE MANAGEMENT AND CORPORATE ENTREPRENEURSHIP

Amongst others, human resource management is regarded as a determining factor, even imperative (Hayton, 2005:22), in developing an environment supportive of corporate entrepreneurship (Jiménez-Jiménez & Sanz-Valle, 2005:365). According to Rutherford and Holt (2007:432), it is probably the most effective. Unfortunately most businesses, even though attaching great importance on entrepreneurial behaviour, fail to consistently translate and support their entrepreneurial orientation into their human resource policies (Searle & Ball, 2003:50).

To encourage corporate entrepreneurship within businesses, human resources management must be practiced with entrepreneurial-enhancing human resource policies (Lau & Ngo, 2004:686). Not only will this make a significant difference in the encouragement of corporate entrepreneurship (Hayton, 2005:24) but to be effective, human resource practices must be consistent with other aspects of the business, specifically its strategy (Jiménez-Jiménez & Sanz-Valle, 2005:365). Thus, through the attraction, selection and retention of high quality employees, providing appropriate skills, behaviours and attitudes, a business's corporate entrepreneurial strategy can be effectively executed (Mavondo, Chimhanzi & Stewart, 2005:1246). More specifically, a number of key human resource practices such as job design, recruitment and selection, performance appraisals, compensation and rewards and

training and development, have emerged as being important to the promotion of corporate entrepreneurship (Morris *et al.*, 2008:167; Ireland *et al.*, 2006:15; Hayton, 2005:30; Jiménez-Jiménez & Sanz-Valle, 2005:366). These elements are depicted in figure 4.3 and will be discussed in more detail.

Figure 4.3: Key elements in the human resource management system to create an entrepreneurial environment



Source: Morris *et al.* (2008:166)

It must be pointed out that although there is agreement on the positive link between human resource management and corporate entrepreneurship (Wang & Zang, 2005:544), there is very little consensus regarding which human resource management practices support corporate entrepreneurship (Jiménez-Jiménez & Sanz-Valle, 2005:366).

4.5.1 Job design

Job design is the process of defining how work will be performed and the tasks that will be required in a given job (Noe, Hollenbeck, Gerhart & Wright, 2006:158). A consistent theme throughout the corporate entrepreneurship literature is the need to promote individual autonomy (see sections 2.4.1 & 3.2.3.3) and accordingly job design must be broadly defined with more discretionary decision-making given to employees since this will help avoid constraining employee creative contributions (Hayton, 2005:33). Tasks are therefore likely to be less structured or constrained from business policies. Given the need to monitor performance and give rewards, some prior definition of expectations is required. The challenge for human resource management is thus to be able to specify expected behaviours or inputs without unduly constraining employees to predetermined routines (McGrath, 2001:121).

4.5.2 Recruitment and selection

According to Khandekar and Sharma (2005:630), a business's ability to sustain a competitive advantage depends, to a large extent, on its ability to attract and retain those individuals with the necessary skills needed to give the business a competitive edge. Within the corporate entrepreneurial context this means recruiting and selecting individuals who are flexible, willing to take risks and strongly committed to constant innovation and the changes it brings (Ireland *et al.*, 2006:15). In this regard Scarbrough (2003:502) is of the opinion that the conventional approaches to recruitment and selection will need to be revised. A more wide-ranging recruitment and selection process are proposed because of the more widely defined jobs (see section 4.5.1). This more open process allows for more self-selection into entrepreneurial positions, creating a better fit between the business's and the individual's needs, which in turn leads to higher motivation (intrinsic) and creativity (see section 3.2.3.2) (Morris *et al.*, 2008:172). Furthermore, because of the less predictable external environments that entrepreneurial behaviour creates, which may put a strain on the availability of internal human resources, business rely on a balance between internal and external sources for candidates (Morris *et al.*, 2008:171). The focus lately has however been on using external sources of recruiting (Jiménez-Jiménez & Sanz-Valle, 2005:366).

Wunderer (2001:196) suggests concentrating on three key entrepreneurial competencies namely conceptual competencies (strategic oriented capacity of creative problem-solving), social competencies (successful combination of autonomy and co-operation) and implementation competencies (effective persuasiveness and enforcement) rather than a catalogue of general, technical or job-specific characteristics. Importantly, is to focus on competencies rather than intelligence as these two concepts are not the same. There are exceptionally intelligent people who are only moderately creative and vice versa (also see section 3.2.3.1). Leavy (2005:38) presents three guidelines that can be used when it comes to recruiting and selecting creative talent namely, hiring individuals with a range of abilities and interests, hiring people with a variety of background and personalities and heavily involving peers in the selection process.

4.5.3 Performance appraisal

Controversy exists in the literature concerning performance appraisals whether to base appraisals on results (outcomes) or on performance (means used to produce these outcomes) (Jiménez-Jiménez & Sanz-Valle, 2005:368).

Arguments in favour of performance appraisals based on outcomes argue that corporate entrepreneurship often depends on the ability of employees to obtain resources from novel sources or in non-traditional ways which occasionally violates or ignores standard business policies and procedures (Morris *et al.*, 2008:172) and can thus not be based on the means (performance) employed to obtain outcomes. Arguments in favour of performance appraisals based on performance argue that fixed goals can inhibit creativity and Mumford (2000:324) suggest that appraisals should be based on progress made, rather than critical appraisals of outcomes. Furthermore, in the context of entrepreneurial activities, outcomes are uncertain and may often take many years to achieve (Hayton, 2005:34).

Perhaps the solution lies in a balance between performance measures and outcomes. This is supported by Ireland *et al.* (2006:16) and Thite (2004:38) stating that performance appraisals should be based on both processes and outcomes. Processes could be appraised in terms of the achievement of significant milestones

(Hayton, 2005:34) tailoring the appraisal process to the life cycle of the entrepreneurial project (Morris *et al.*, 2008:172). Product and process innovations are in themselves examples of desired outcomes (Ireland *et al.*, 2006:16).

Finally, performance appraisals should also include some explicit measures of innovativeness, risk-taking and proactive behaviour and will likely be conducted at intermittent and irregular time intervals (Morris *et al.*, 2008:172).

4.5.4 Compensation and rewards

There is much disagreement over the relative value of intrinsic and extrinsic rewards from the perspective of encouraging entrepreneurial behaviours. It is argued by some that the challenge, autonomy, responsibility and status associated with bringing a new idea to fruition should be sufficient reward in itself. Others argue that there is evidence that extrinsic rewards are indeed associated with greater innovativeness (Hayton, 2005:35). Entrepreneurial behaviour however, calls for both intrinsic and extrinsic motivation (Mumford, 2000:324) and therefore compensation and reward systems for corporate entrepreneurs should emphasize financial gains (extrinsic) as well as formal recognition (intrinsic) for their achievements (Ireland *et al.*, 2006:16; Kuratko, Ireland & Hornsby, 2001:63).

Concerning financial rewards, incentive programs are increasingly developed to encourage entrepreneurial behaviour for both individuals as well as teams (Laursen & Foss, 2003:256). This strategy attempts to align individual motivation and goals with the objectives of the business (Schraeder & Becton, 2003:20), reinforce risk-taking, increase teamwork and promote flexibility (Morris *et al.*, 2008:172). Whilst there are seemingly infinite types (structure of the program) of incentive programs that work, successful programs seem to exhibit several consistent traits (Schraeder & Becton, 2003:19). These are depicted in table 4.4. Other financial rewards, which are more linked to product success, include offerings such as profit sharing, bonuses, stock options and sharing patent rights (Mumford, 2000:324).

Table 4.4: Traits of effective incentive programs

Traits of an effective incentive program
<ul style="list-style-type: none">• A well founded salary program with appropriate base pay• The plan should fit the environment• It should be fair to employees and the business• Must set total cash compensation• Yield financial rewards to the employees and the business• Involve employees and supervisors• Use internal and external data• Achieve clarity through communication on the structure and purpose of the program.

Source: Schraeder and Becton (2003:20)

Creating unique non-financial rewards are also important. Often, entrepreneurial behaviour is motivated, not only by financial gains or power, but also by the intellectual stimulation and excitement of seeing ideas transformed into action (Davenport *et al.*, 2003:63). In such instances, recognition rewards such as status, challenging work and autonomy, could be offered as reward. Recognition rewards should furthermore be genuine and generous and customised to suit different types of people and their preferences (Thite, 2004:39). Businesses such as 3M and Intel, for example, grant the status of “fellow” to employees who continually make important innovative contributions to the business (Davenport *et al.*, 2003:63).

The previous discussion on compensation and rewards mainly focus on outcomes, i.e. a successful new innovation. Given the inherent risk involved in entrepreneurial behaviour, businesses should also compensate and reward effort, irrespective of whether the project was a success or failure (Martins & Terblanche, 2003:71). This will importantly reinforce the notion that risk-taking and failure are acceptable (Ireland *et al.*, 2009:32).

4.5.5 Training and development

As mentioned (in the previous section on recruiting) businesses would most likely rely on a balance between internal and external sources of entrepreneurial talent. In instances where entrepreneurial talent is sourced from the external market, a narrow application of training is being advocated (Jiménez-Jiménez & Sanz-Valle,

2005:367). The role of the human resource department would thus be to provide an extensive orientation and socialising program (Morris *et al.*, 2008:169).

Entrepreneurial behaviours can be learned and increased (Twomey & Harris, 2002:47) and therefore training can provide the opportunity to develop employee skills and knowledge needed for entrepreneurial behaviour (Lau & Ngo, 2004:689). Furthermore, because of changing job demands and the need to keep abreast of the latest technologies the need exists for continuous, on going training which are less structured or standardised and is focussed on individualised knowledge requirements (Ireland *et al.*, 2006:16). These training and development programs usually consist of, amongst others, communication and team skills (Lau & Ngo, 2004:689), problem solving and lateral thinking skills (Searle & Ball, 2003:56) and may also include an attitudinal component wherein acceptance of change, willingness to take risks and responsibility is enhanced (Morris *et al.*, 2008:172).

4.6 CONTROL AND CORPORATE ENTREPRENEURSHIP

Control is defined as the process for ensuring that behaviours and performance conform to a business's standards, including rules, procedures and goals. Unfortunately the term control has a negative connotation of restraining, forcing, delimiting, watching, or manipulating to most employees (Hellriegel *et al.*, 2005:266). which obviously has a negative effect on entrepreneurial behaviour (Ireland *et al.*, 2006:15). Yet without control, businesses would be reduced to chaos since controls ultimately create a sense of accountability and help ensures that business assets are employed efficiently (Morris *et al.*, 2008:364). To foster corporate entrepreneurship, business controls would thus be required to simultaneously provide the stability the business needs to exploit current competitive advantages and also the flexibility required for employees to behave entrepreneurially (Ireland *et al.*, 2006:15).

This section will thus explore the dimensions of an entrepreneurial control system. Initially four unintended consequences (as related to corporate entrepreneurship) with control are briefly discussed.

4.6.1 Unintended consequences of control

As businesses grow in size so too do their control systems, becoming more complex. The problem is that control often feeds on itself, continually growing and ultimately starts strangling the business. Although most control initiatives are well intended, they frequently have unintended consequences, which are problematic for corporate entrepreneurship. Morris *et al.* (2008:367-368) present four reasons namely the trust problem, the slowness problem, the “means-end-problem” and the efficiency-effectiveness problem.

Formal controls (rules, procedures and regulations) are essential for corporate entrepreneurship since it specifies desirable patterns of behaviour. When these controls however become too excessive and start intruding on the way employees perform their jobs it may inhibit entrepreneurial behaviour (Antonicic & Hisrich, 2004:527). All too often employees feel “...they just don’t trust me”, which undoubtedly undermines their willingness to be creative and come up with innovative ideas (Morris *et al.*, 2008:367). In this context, trust becomes an important issue. Studies have revealed that trust is positively associated with such variables as, amongst others, open communication, problem solving, coordination and importantly individual risk taking (Moye & Henkin, 2006:102) (Tzafrir, Harel, Baruch & Dolan, 2004:629). Therefore, corporate entrepreneurship can be enhanced in a culture that promotes a high degree of trust (Martins & Martins, 2002:62).

Well conceptualised controls can eliminate mistakes and wastage, thereby speeding up the process. As controls evolve though and no flexibility exists, controls can actually slow the business down (Morris *et al.*, 2008:368). Cumbersome documentation requirements and elaborate steps take up more time and employees become discouraged to try new initiatives (Kanter, 2006:76). Fortunately, the mechanistic approach to control is being replaced by a more organic-based approach (Sisaye, 2005:59) which emphasises the use of flexible authority, relative loose job descriptions, individual self-controls and other informal methods for preventing and correcting deviations from desired behaviours and results (Hellriegel *et al.*, 2005:277).

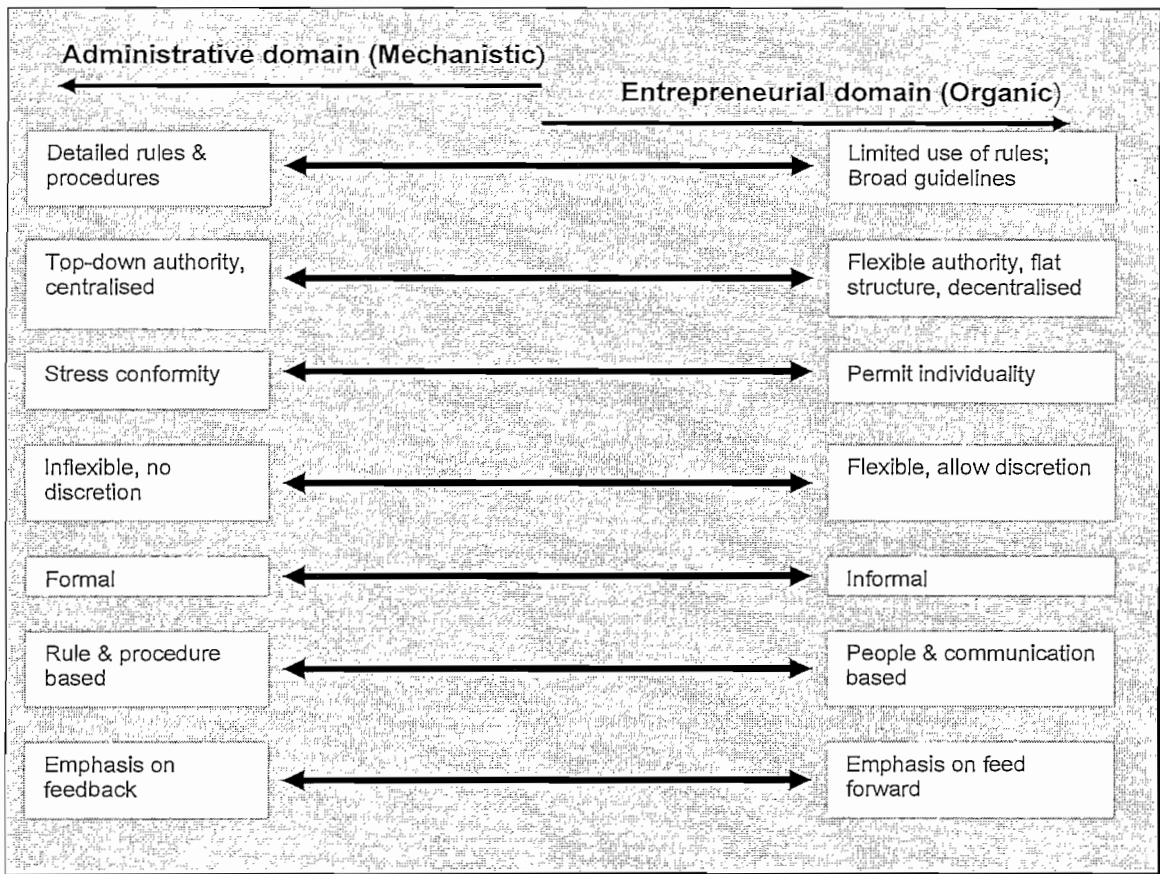
Another unintended consequence of controls is the “means-end problem”. Controls are meant to be a means to an end. Managers often get so caught up in trying to create control mechanisms that they lose sight of what the controls were ultimately meant to achieve. Controls then become an end in itself, rather than a means to an end (Morris *et al.*, 2008:368).

Lastly, there is the “efficiency-effectiveness problem” which is directly related to the means-end problem. Managers tend to over-emphasize controls on efficiency (doing things right), which is largely concerned with financial controls. These controls tend to be clear, unambiguous and introduce a high degree of discipline into the control process which is not conducive to entrepreneurial behaviour (Morris *et al.*, 2008:368-369). Emphasizing strategic controls, which is primarily concerned with effectiveness, encourages employees to accept risk since it is capable of rewarding employees for incremental, but substantive progress on innovations that take time to realise (Ireland *et al.*, 2006:15).

4.6.2 Dimensions of entrepreneurial controls

Control systems are characterised by a variety of attributes such as the degree of formality, desire for conformance and compliance, degree of rigidity, desire for consistency, use of coercive power, distribution of authority and responsibility, desire for individual initiative, level of freedom, degree of horizontal interaction and communication and the level of detail (Morris *et al.*, 2008:369). Figure 4.4 summarises these attributes in terms of seven underlying dimensions.

Figure 4.4: Underlying characteristics of a business's control system



Source: Morris *et al.* (2008:370)

In most traditional businesses (mechanistic businesses) the purpose of control is to reduce risk, eliminate uncertainty, create highly efficient operations, establish goal conformance and give specific role definitions. These outcomes are inconsistent with corporate entrepreneurship (Morris *et al.*, 2008:370). Risk taking or risk tolerance has tended to be more consistent with corporate entrepreneurial businesses in a work environment that provides a strong impetus for risk taking (see sections 2.4.3 & 4.4.2.4) (Dess & Lumpkin, 2005:147). Because the outcomes of entrepreneurial behaviour is uncertain (Hayton, 2005:34) and the fact that entrepreneurial business specifically focus on and capture the benefits of uncertainty (also see section 4.2.1.1), corporate entrepreneurship would seem more likely where controls allow for the management of uncertainty instead of seeking to eliminate uncertainty (Morris *et al.*, 2008:370). Efficiency, as mentioned (see section 4.6.1), usually implies strict

adherence to set performance standards which may be beneficial to traditional businesses, but it does not encourage entrepreneurial behaviour and innovation (Burns, 2008:183). In contrast, entrepreneurial behaviour would be more likely where slack is deliberately designed into cost controls and budgeting, budget deviations are more tolerated and success measures include both financial and non-financial indicators (Morris *et al.*, 2008:370).

Also, entrepreneurial businesses will most likely focus on goal congruence rather than goal conformance. With the greater degree of empowerment and autonomy (see sections 2.4.1 & 3.2.3.3) expected in entrepreneurial businesses, it is expected that self-control and social control would play a larger role than procedural control in aligning individual and business goals (Daft, 2008:467; Morris *et al.*, 2008:370-371). Finally, entrepreneurial behaviour seem to be more consistent with role flexibility where employees are allowed to exercise discretion and personal initiative (also see discussion on job design in section 4.5.1). Control systems should thus focus on the outer boundaries (limits on financial, technical, human and other resources) for activities and behaviours (also see discussion on performance appraisals in section 4.5.3) (Morris *et al.*, 2008:371).

Control systems that promote and nurture corporate entrepreneurship thus need to create a balance between encouraging individual action through flexible control and ensuring coordination, consistency and accountability through tight control. In this regard Burns (2008:183) advocates a minimalist approach to control, namely to control what you must, not what you can; control when you must, not when you can. Thus, should a control procedure not be essential, eliminate it.

4.7 SUMMARY

Creating an environment where all employees are encouraged and willing to behave entrepreneurially is a centrepiece of effective corporate entrepreneurship.

Essentially business will first need to provide a sense of overall direction. Corporate entrepreneurship and innovation thus need to be incorporated into the strategic management process of a business. Although the strategic management process

itself will in essence be the same, it is the orientation or mindset (strategic way of thinking) that is important. The process of strategic management was not discussed but rather an integration between corporate entrepreneurship (opportunity seeking behaviour) and strategic management (advantage seeking behaviour), a term referred to as strategic entrepreneurship, reiterating an entrepreneurial orientation.

Structure usually follows strategy and it is imperative to design a structure that facilitates and promotes corporate entrepreneurial behaviour. Mechanistic structures have been found to stifle entrepreneurial behaviour because of its rigid bureaucracies and an organic business structure is proposed. Furthermore, structuring an entrepreneurial project may also be problematic. Two important variables, strategic importance and relatedness, are proposed which could lead to tentative conclusions about a variety of business design alternatives. Cross-functional teams were highlighted as an approach to structuring entrepreneurial projects because of its increasing popularity. The problems surrounding an appropriate business structure that would foster corporate entrepreneurial behaviour have lead many businesses to experiment with new innovative business designs. Three such business designs were presented.

Business culture is cited as the single most important element of creating an environment fostering corporate entrepreneurship since it can either stifle or enhance entrepreneurial behaviour. It is also the most difficult element to change. Creating an entrepreneurial culture therefore started with an understanding of the nature of culture followed by the different elements of an entrepreneurial culture.

Human resource management is often neglected as a determining factor in the context of corporate entrepreneurship. Whilst attaching great importance on entrepreneurial behaviour, many businesses fail to translate their entrepreneurial orientation into their human resource policies. Although controversial, practices such as job design, recruitment and selection, performance appraisals, compensation and rewards and training and development have emerged as being important to the promotion of corporate entrepreneurship.

Another controversial element is that of control mechanisms. Most employees have a negative connotation to control. However, control mechanisms are just as important in entrepreneurial businesses as in any other business. To promote corporate entrepreneurship, control mechanisms should simultaneously provide the stability the business requires and also the flexibility for employees to behave entrepreneurially.

CHAPTER 5

AN OVERVIEW OF AGRIBUSINESSES IN SOUTH AFRICA

5.1 INTRODUCTION

South Africa has a well developed commercial agriculture sector consisting of field crops, horticulture products, animal products, aquaculture and game farming (South Africa, 2008). Agribusinesses play an important role in the development of a countries' agricultural sector as suppliers of farming requisites, marketers of agricultural commodities and providing services such as storage and transport (Ortmann & King, 2007:62).

This chapter will therefore firstly provide a brief overview of the South African agricultural sector and its contribution to the economy. Secondly, the evolution of agribusinesses which includes the restructuring and deregulation of the agricultural sector as well as the competitiveness of South African agribusinesses are briefly discussed. Finally, the reasons for this study are presented.

5.2 BRIEF OVERVIEW

South Africa does not have ideal conditions for agriculture. Less than 12% of its land is arable of which only 22% can be regarded as high-potential arable land. Furthermore, South Africa's rainfall is spread unevenly throughout the country with some areas prone to drought. Consequently, almost 1.5% of agriculture land (1.3 million hectares) is under irrigation. South Africa's gross value of agricultural production during the 2007 season is shown in table 5.1 for its major products.

Table 5.1: Gross value of agricultural production per commodity

Agricultural commodities	R'000
Field crops	
Maize	11 451 671
Wheat	3 878 983
Hay	2 314 555
Grain sorghum	294 562
Sugar cane	4 198 557
Ground-nuts	285 121
Tobacco	228 445
Sunflower seed	921 985
Cotton	87 809
Other	1 525 972
Total	25 287 668
Horticulture	
Viticulture	2 907 086
Citrus fruit	5 013 038
Subtropical fruit	1 689 069
Deciduous & other fruit	5 755 887
Vegetables	5 476 294
Potatoes	3 405 277
Other	1 437 148
Total	25 683 799
Animal products	
Wool	1 312 768
Poultry & poultry products	20 409 362
Cattle & cattle slaughtered	12 689 536
Sheep & goats slaughtered	2 296 452
Pigs slaughtered	2 247 136
Milk	7 565 475
Other	2 446 444
Total	48 967 173
Grand total	99 938 640

Source: South Africa (2009:6)

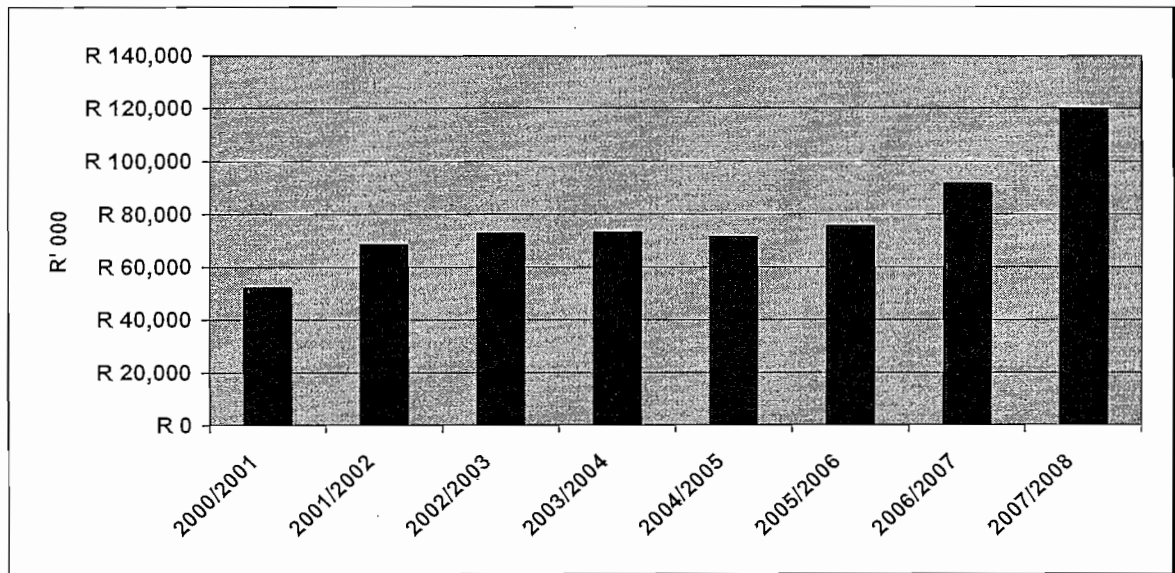
5.2.1 Agricultures' contribution to the economy

Agricultures' contribution to the economy is discussed in terms of its contribution to the gross national product, exports and employment.

5.2.1.1 Gross national product (GDP)

The primary agriculture sector contributes about 2.5% of gross domestic product. However, with the strong backward and forward linkages into the economy the agro-industrial sector is estimated to comprise about 15% of GDP (Standard Bank, 2008a:1). Although agriculture's contribution to GDP has been declining over the past few years, this does not constitute a decline in the agriculture industry. On the contrary, South Africa's nominal agricultural production has grown almost constantly over the last number of years as indicated in figure 5.1.

Figure 5.1: Gross value of agricultural production



¹2007/2008 – Preliminary

Source: Department of agriculture (2009:78)

5.2.1.2 Exports

For the years 2001 to 2007, agricultural exports have contributed on average about 8% of total South African exports as indicated in table 5.2.

Table 5.2: Agricultural exports

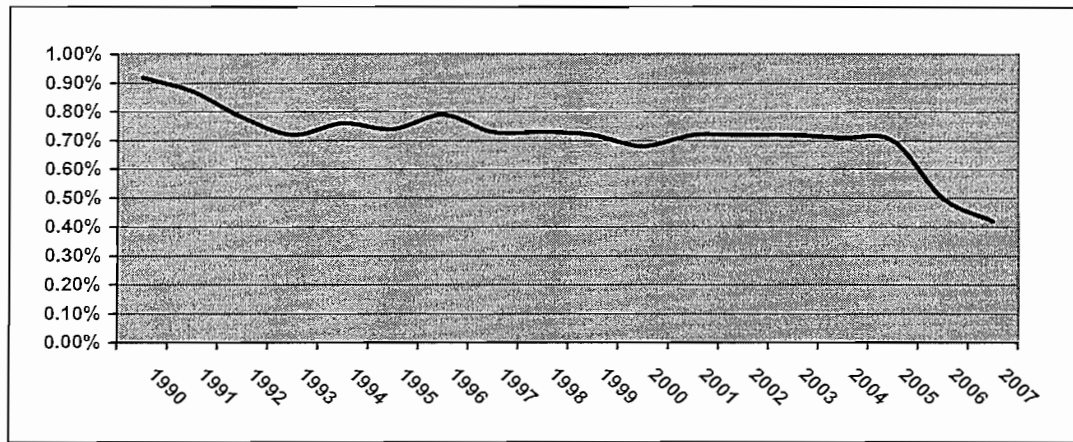
South African exports							
Year	2001	2002	2003	2004	2005	2006	2007
Total exports (R' 000)	245	315	275	292	327	393	463
Agricultural exports (R' 000)	20.1	25.8	23.2	22.6	26.1	26.9	30.6
Agriculture as % of total exports	8.2	8.1	8.4	7.7	8.2	6.8	6.6

Source: Department of Agriculture (2009:84)

Major export groups include wine, citrus, sugar, grapes, maize, fruit juice, wool and deciduous fruit such as apples, pears, peaches and apricots. Other important export products are dairy products, flowers, food preparations, hides and skins, meat, non-alcoholic beverages, pineapples and preserved fruit and nuts. Furthermore, South Africa is also the world's top exporter of avocados, tangerines and ostrich products, the second largest exporter of grapefruit, the third largest exporter of plums and pears and the fourth largest exporter of table grapes (South Africa, 2009).

South African exports of agricultural products as percentage of global exports however show a definite decline over the past years as indicated in figure 5.2.

Figure 5.2: South African agriculture exports as percentage of global exports



Source: Agriculture Business Chamber (2008)

5.2.1.3 Employment

The employment figures in the agriculture, hunting, forestry and fishing industries for the years 2002 to 2007 are indicated in table 5.3.

Table 5.3: Employment in agriculture, hunting, forestry and fishing

Year	Sept' 2002	Sept' 2003	Sept' 2004	Sept' 2005	Sept' 2006	Sept' 2007
Number of workers 1000						
Agriculture, Hunting, forestry & fishing	1420	1212	1063	925	1088	1041
Skilled agriculture ¹	706	341	329	302	432	341
Total employment ²	11 296	11 424	11 643	12 301	12 800	13 306
% of employment	12.5	10.6	9.1	7.5	8.5	7.8

¹ Skilled labour figures are included in the number of workers for agriculture, hunting, forestry and fishing.

² Total employment refers to all employment in all sectors

Source: Department of Agriculture (2009:4)

A general decline is shown in actual employment as well as the percentage contribution to total employment which is largely attributed to the decrease in the number of commercial farms, legislation regarding minimum wages and tenure

security and the demise of farming subsidies which diluted the farmers' ability to support unproductive people (Standard Bank, 2008a:1-2).

Although the percentage of employment has declined to 7.8% in 2007, it is estimated that the income of around 10 million South Africans are dependent in part on direct and indirect agricultural activities (Anon., 2007:73).

5.3 THE AGRIBUSINESS SECTOR IN SOUTH AFRICA

South Africa's agricultural co-operative movement started in the early 1900s to provide commercial farmers with collective buying, marketing and organisational power. They became a powerful lobby for agriculture, holding a virtual monopoly in key agricultural sectors, backed by ready finance through the Land Bank, with effective control of the marketing boards (Competition Commission, 2007:27).

5.3.1 Evolution of agribusinesses in South Africa

The evolution of the South African agribusinesses has to be viewed in the context of the evolution of the South African agriculture sector, the regulation and the eventual deregulation of the agricultural sector (Competition Commission, 2007:13).

Traditionally, cooperatives were involved in three main areas of business namely, the purchase and sale of agricultural inputs and equipment, the purchase, storage and subsequent sale of agricultural commodities and transport services (Ortmann & King, 2007:46).

The South African Land and Agricultural Bank also used co-operatives as agents providing short and medium-term credit to farmers at subsidised rates. Debt was allowed to be carried over and essentially guaranteed by the government. The state also used this channel to provide disaster assistance to farmers, usually in the form of debt consolidation. Agricultural co-operatives thus acted as financial intermediaries (Piesse *et al.*, 2005:200).

The marketing Act of 1937, which was revised in 1968 (59/1968), was a central instrument of agricultural marketing policy. The Act contained a number of initiatives that controlled the marketing of commodities through 23 control boards (Piesse *et al.*, 2005:201). Five types of control schemes were put in place with the goal of stabilising prices and reducing the marketing margins between producers and consumers namely: (1) single-channel fixed-price schemes (board and minister set a price at which the total production would be purchased, marketed and sold by the control board); (2) single-channel pool schemes (control board was only buyer and seller); (3) surplus removal scheme (in case of surplus, government could remove products from market); (4) supervisory schemes; and (5) publicity schemes. It is estimated that around 80% of agricultural products (in value terms) were subjected to the control of marketing boards (Dóyer *et al.*, 2007:496). Co-operatives were usually appointed as agents to the respective marketing boards, giving them effective regional monopoly powers (Ortmann & King, 2007:46). In addition to the marketing acts, the government also paid subsidies for handling and storage costs and took responsibility for any export losses (Piesse *et al.*, 2005:200).

The substantial costs of supporting commercial farmers, in terms of subsidies, price support, tax concessions and the misallocation of resources caused by distorted prices, were not sustainable and significant changes to agricultural policy started in the period around 1980. As a result of the De Kock Commission on monetary policy, the South African financial sector was extensively liberalised. The most immediate effect on agriculture came from changes in the external value of the rand and in the interest rate costs on agriculture loans. The reserve requirements of the banking sector changed which made it impossible for the Land Bank to continue subsidising farmers' interest rates (Sandrey & Vink, 2006:4).

The White Paper on Agricultural Policy issued in 1984 (South Africa, 1984) also brought about significant changes. This was in response to the government having to provide massive financial transfers to farmers both when natural conditions were favourable and when they were unfavourable (Sandrey & Vink, 2006: 4). This led to the removal of indiscriminate subsidies and tax concessions. This reduced the role of cooperatives and weaned them from dependence on state support (Piesse *et al.*, 2005:201).

The deregulation and liberalisation during the 1980s was characterised by change within an existing institutional structure. The main role players in the sector remained in place despite the general relaxation in government intervention. This changed with the election of 1994, although in agriculture, most of the direct policy changes occurred from 1996.

5.3.1.1 Major agricultural policy changes

The most important policy initiatives include land reform, trade policy, institutional restructuring in the public sector, the promulgation of the marketing of agricultural products act and labour market policy reforms. The purpose of these policy reforms was to correct the injustices of past policy, principally through land reform, to get the agricultural sector on a less capital-intensive growth path and to enhance the international competitiveness of the sector (Sandrey & Vink, 2006:5).

- **Land reform**

The land reform programme was launched in 1994 and consists of three main programmes namely: (1) restitution of land taken unjustly from people and communities; (2) land redistribution; and (3) land tenure reform. The land restitution is well advanced with 61% of claims settled. The land redistribution programmed is aimed at settling small farmers on viable farming operations in the commercial farming sector (Competition Commission, 2007:21). Despite a well-formulated land reform policy and a well-funded land reform programme (land restitution, land redistribution, tenure reform) progress has been slow. According to Vink (2004:159), less than 2% of commercial farms have been transferred to new owners and private transfers of land have outstripped state-assisted transfers. For commercial farmers, the main sources of risk are land claims made under the restitution programme. Land claims prevent investments in land until the claims have been settled. The slow progress in settling claims, therefore, has a negative effect on farm competitiveness due to lower productivity (Ortmann, 2005:290). Newly settled farmers have also not received farmer support services. Tenure reforms have been especially slow and land tenure remains legally insecure and uncertain and in recent years land administration has become increasingly chaotic and contested (Clover & Eriksen,

2009:61). Sandrey and Vink (2006:7) are also of the opinion that there is also no evidence that the supposed beneficiaries of the land reforms are better off as a result of the participation in these programmes.

- **Trade policy reforms**

The new South African government embarked on a process of trade policy reform with the aim to reverse decades of “inward industrialisation” strategies. The objective of the trade policy in the agricultural sector is to promote the integration of this sector into the world economy in order to encourage greater access to markets, technology, capital as well as competition (Chitiga, Kandiero & Ngwenya, 2008:77). Part of the trade reform included the reduction of border tariffs and the elimination of export subsidies. Sandrey, Oyewumi, Nyhodo and Vink (2007) are however of the opinion that these tariff reforms went beyond what was mandated by the Uruguay Round agreement of the World Trade Organisation (WTO). Furthermore, countries in the Southern African region have been granted preferential access through the abolition of quantitative controls over agricultural trade within the Southern African Customs Union and a range of bilateral treaties. South Africa has also signed a free trade agreement with the European Union (Vink, 2004:156). The net effects of these changes are that the South African agricultural sector has improved access to foreign markets (OECD, 2006:13) but is increasingly exposed to the vagaries of international markets (Doyer *et al*, 2007:497).

- **Institutional restructuring in the public sector**

Institutional restructuring in the public sector concerning agriculture also took place and Van Zyl, Vink, Kirsten and Poonyth (2001:727) present three reasons for these changes.

- Some institutions such as the Land Bank and the Agricultural Research Council, amongst others, were believed to be too closely aligned with apartheid policies and favouring commercial farmers. Such institutions were subjected to restructuring programmes aimed at aligning them to the new mandate of the new government.

- Public sector agencies supporting the agricultural sector were subjected to the same process of “provincialisation”. The former “own” and “general affairs” departments were amalgamated to form the core of the new National Department of Agriculture. During this process a change was also affected between the National and Provincial departments of agriculture and farmer lobby groups (formerly the South African Agriculture Union, now known as Agriculture South Africa or Agri-SA).
- Finally, agricultural institutions in the public sector were reoriented to fit in with new policy directions. The most radical of these changes occurred in the changes to agricultural marketing policy (see next section).
- **Reform of Marketing Institutions**

The 1993 recommendations of the Committee of Enquiry into the Marketing Act on deregulation of agricultural marketing and the repeal of the Marketing Act of 1968 led to the Marketing of Agricultural Products Act (47/1996), which ended state control of agricultural commodities and also resulted in the demise of the marketing boards (Traub & Jayne, 2008:224-225). This policy reform had a material affect on the role of co-operatives since they were no longer agents of the marketing boards thus losing their regional monopoly powers (Ortmann & King, 2007:47). Because of the elimination of the single channel process, farmers can now sell their produce directly or through other agents. In addition, prices are no longer fixed and farmers can store, for example, their grain themselves for direct sale later in the year (Piesse *et al.*, 2005:205). The objectives of the new Act are therefore, amongst others, to increase market access for all market participants; the promotion of efficiency in the marketing of agricultural products; optimising of export earnings from agricultural products; and enhancing the viability of the agricultural sector (Vink & Kirsten, 2000).

- **Labour market reform**

Prior to the 1980s, farm workers in South Africa had very little protection of their rights to organise and to basic conditions of employment. The Agriculture Labour Act

(147/1993), to some extent addressed these shortcomings, but it was only after 1994 that the four major labour laws in South Africa, namely the Labour Relations Act (66/1995); Basic Conditions of Employment Act (75/1997); Skills Development Act (97/1998); Employment Equity Act (55/1998) were also applied to the agricultural sector (Sandrey & Vink, 2006:6). Although controversial, many argue that these reforms (specifically minimum wage and higher administrative costs of employment), together with the extension of security of the tenure act (Vink & Kirsten, 2003:104) have led farmers to cut down on the number of permanent workers resulting in a rapid decline of employment in the agricultural sector (see table 5.3) (Vink, 2004:160).

Although the deregulation of the agricultural sector created many uncertainties and the withdrawal of most forms of farmer support created adjustment pressures, at the same time it opened up opportunities for entrepreneurial farmers and led to a more efficient allocation of resources in agriculture. The following are some of the most important effects on the agricultural sector according to the Organisation for Economic Co-operation and Development (2006:3).

- The opening of the agricultural sector increased exports and the beginning of the current decade witnessed a particular strong agricultural export growth with revenues averaging around 8% of total exports (see table 5.2).
- Shifts in the production of grain to livestock in marginal production areas and an increase in intensive farming in high potential areas.
- More farmer involvement in risk management by means of storage, forward contracts and diversification.
- Strengthening the role of organised markets and producer responsiveness to price signals.
- Accelerating the establishment of new enterprises in agriculture and downstream food processing sectors.

More specifically, the policy reforms had a material effect on the role of co-operatives. They no longer had the privilege of being appointed as agents of the various marketing boards, thus losing their regional monopoly powers and were no longer involved in distributing government subsidies. Although they still provide short- and medium-term credit to farmers, they have to perform this function on a commercial basis as the Land Bank now also has to compete with commercial banks for this business (Ortmann & King, 2007:47).

With the deregulation of the agricultural sector, many co-operatives converted to companies which are subject to the companies act rather than the co-operatives act. The advantage of the conversion includes the expanded range of products and services. On the financial side this includes crop insurance, the ability to hedge input costs (such as diesel) and personal financial planning for the farmer. On the technical side, the services include precision farming techniques and access to cutting edge feed, plant and seed technologies. On the retail side, farmers get access to keener pricing through bulk buying and wide retail store distribution (Competition Commission, 2007:32). These changes, together with changes in the forces that affect the global market for agricultural products, require that agribusinesses now have to position themselves as business driven competitors in a less controlled “free market” global trading environment (Van Rooyen, Esterhuizen & Doyer, 2000).

5.3.2 Competitiveness of agribusinesses in South Africa

Prior to discussing the competitiveness of agribusinesses in South Africa it is important to define what is meant by competitiveness and on what basis the competitiveness of agribusinesses are measured.

5.3.2.1 Defining and measuring competitiveness

- **Defining competitiveness**

Competitiveness is defined as the ability of a sector, industry or firm to compete successfully in order to achieve sustainable growth within the global environment

while earning at least the opportunity cost of returns on resources employed (Esterhuizen *et al.*, 2008:32).

From this definition, the following aspects emerge as being important namely:

- Competitiveness is a dynamic and involved process, instead of an absolute state of affairs.
- Competitiveness can only be assessed within a relative sense.
- Competitiveness is a holistic viewpoint on the ability to sustain gains achieved through trade and is dependant on key success factors and constraints that must be identified.
- To predict change correctly and act upon such predictions in an innovative manner to mobilise and attract scarce resources from other economic endeavours.

For South African agribusinesses this would imply the ability to adapt to market changes, to produce and adopt technological innovations, its particular access to capital and its capacity to obtain and retain market share within the global market (Van Rooyen *et al.*, 2000).

- **Measuring competitiveness**

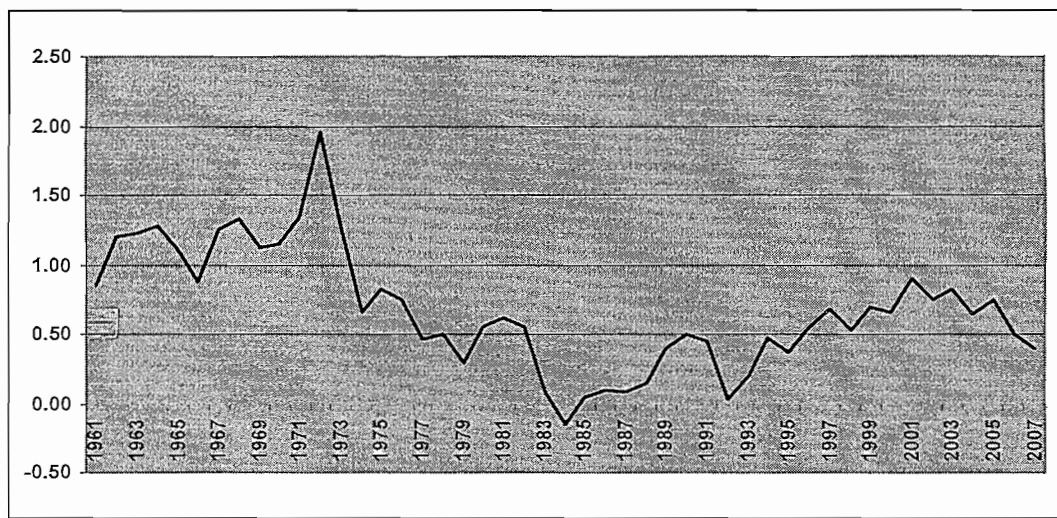
To measure the competitiveness of agribusinesses in South Africa it is necessary to determine how successfully this sector sold its products over time in the local and global market. The relative trade advantage method (RTA) is a popular method used for the measurement of competitiveness under real world conditions and is based on Balassa's revealed comparative advantage (RCA) which is a method that compares a country's share of the world market in one commodity relative to its share of all traded goods. Furthermore, the RTA indicator implicitly weights the revealed competitive advantage by calculating the importance of relative export and relative import competitive advantages (Esterhuizen *et al.*, 2008:33). A RTA value of more

than 1 = competitive; a value of between 1 and -1 = marginal competitive and a RTA value of -1= not competitive (Agriculture Business Chamber, 2008).

5.3.2.2 The competitive status of agribusinesses in South Africa

The agribusiness competitive status index (ACS), using RTA values as measure for South Africa from 1960 to 2007 is indicated in figure 5.3.

Figure 5.3: Agribusiness competitive status index



Source: Agriculture Business Chamber (2008)

The ACS index, as shown in figure 5.3, has RTA values of less than one for most of the period which means that the competitive status of the South African agribusiness sector can be classified as generally marginal in terms of global competitiveness.

Despite the increase in competitiveness from 1992, which is attributed to the second phase of deregulation and agribusinesses converting from co-operatives to companies (Esterhuizen *et al.*, 2008:38), the agribusiness sector is in a declining phase since 2004.

The reasons for the decline in the competitiveness of the agribusiness sector are presented below in order of importance (Agriculture Business Chamber, 2008) namely:

- Cost of crime.
- Trust in the political system.
- Competence of personnel in public sector.
- Electricity supply in South Africa.
- Availability of skilled labour.
- Cost of transport.
- The cost of finance.
- Aids.
- South Africa's labour policy.
- Cost of technology.
- Quality of unskilled labour.
- Land reform policy.
- Administrative regulations.
- Lack of scientific research institutions in the agribusiness sector.
- Overall cost of doing business in South Africa.

5.4 CAUSAL FACTORS FOR THIS STUDY

The causal factors relating to this study are presented firstly according to the challenges faced by the agricultural sector in general and secondly, more specific agribusiness factors.

5.4.1 Factors relating to the agricultural sector

The following factors, relating to the agricultural sector in general, namely the importance of the agricultural sector, policy changes in the agricultural sector, the high food price of late and poor research and development in agriculture.

5.4.1.1 Importance of the agriculture sector

The importance of the agriculture sector in terms of its economic contribution is presented in section 5.2.1. Although the agriculture sector is small in relation to other sectors, it is the far reaching multiplier effects in the economy through its backward and forward linkages in other sectors that are of significance. According to Armitage (2007:3), a recovery in agricultural output growth to an annualised rate of 5-6% would inspire cross-sectoral activity, add value in other sectors, reinforce the overall pace of economic growth and support job security.

The importance of agriculture has also recently been highlighted by the global food crises and energy crisis and it is thus important for South Africa to remain self-sufficient in terms of its food security (Vashee, 2008:1). South African agriculture has, since 1985 to 2006, been a net exporter however, in 2007 imports (R30.3 billion) exceeded exports (R29.9 billion) (Robbins, 2008). The reason is that the volume of agricultural output has not kept pace with the growing demand. Between 1991 and 2007 the South African population increased by 32.2% (not including the number of unregistered immigrants) whilst agricultural production only increased by 10% over the same period (Xingwana, 2008:9). Given South Africa's agriculture conditions (land and rainfall - see section 5.2) this is indeed a worrying trend. Although Piesse *et al.* (2005:197) are of the opinion that agribusinesses have increased their efficiency since the introduction of policy reforms in the agricultural sector, this has clearly not been enough as agribusinesses are still only marginally competitive in international markets (Esterhuizen *et al.*, 2008:31).

Finally, agriculture is also viewed as an ideal platform for revitalising growth in rural communities and attracting business functions which increase social benefits to these communities and accommodates unskilled labour. Unfortunately, difficult farming conditions, the demise of subsidies, coupled with less protection and government support as well as labour legislation and security of tenure has contributed to disincentives for hiring permanent workers and a subsequent decline in employment in this sector (see table 5.3) (Standard Bank, 2008a:1-2).

5.4.1.2 Policy changes in the agricultural sector

The major policy reforms in the South African agricultural sector have been discussed in section 5.3.1.1. Many of these policy changes created much uncertainty (land reform); (demise of marketing boards) and the withdrawal of most forms of farmer support created adjustment pressures (OECD, 2006:3).

5.4.1.3 High food prices

Food prices have increased considerably over the past months. Soft commodity prices have seen record price levels where white maize, wheat, soybeans and sunflower have increases by 67%, 176%, 215% and 173% respectively from April 2006 to April 2008 (Standard Bank, 2008b:7). Significant increases in production costs, more specifically fertiliser and fuel, have largely contributed to this state of affair. South African agriculture will therefore require major investment and innovative development of energy-saving measures for future survival.

5.4.1.4 Poor research and development in agriculture

Agricultural research is a high-payoff investment and developing and implementing technological innovations are essential for any country to remain competitive. Although public sector financing remains the dominant source of funding for research and development in the South African agricultural sector it has decreased substantially over the past number of years and only constitutes approximately 3% of agriculture GDP. Also, the decrease in core government funding and changes in the leadership styles have led to an exodus of top researchers from the Agricultural Research Council (ARC), which is the main agricultural research provider in South Africa (Ortmann, 2005:305-306). The minister of agriculture and land affairs has however indicated a need to implement the Maputo Declaration which proposes an investment in agricultural research of 10% of agricultural GDP (Xingwana, 2008:9). If realised, it could significantly promote research activity and resource productivity in the agricultural sector.

Furthermore, Esterhuizen, Van Rooyen and Doyer (2001:17) observed that agribusinesses generally invest very little in research and development and that a technological innovation crisis for South African agriculture may be in the making.

5.4.2 Agribusiness specific factors

Agribusiness specific challenges include the changing role of agribusinesses in the South African agricultural sector, the global competitiveness of South African agribusinesses, unfair playing field and constant change.

5.4.2.1 Changing role of agribusinesses

Agribusinesses play an important role in the agriculture sector as the suppliers of inputs (fertilizer, machinery and equipment), the marketers of farming produce and providing services such as storage, transport and farm management services (Ortmann & King, 2007:62). The success and competitiveness of agribusinesses in the past (then agricultural co-operatives) were promoted because they served as agents to the marketing boards and Land Bank (see section 5.3.1). The policy changes introduced in the agriculture sector (see section 5.3.1.1) changed the role and viability of agribusinesses (Ortmann & King, 2007:63). Agribusinesses are now exposed to international trends and have to shoulder their own responsibilities and risks in agricultural markets that were previously assumed by government agencies (Doyer *et al.*, 2007:495).

5.4.2.2 Global competitiveness of agribusinesses

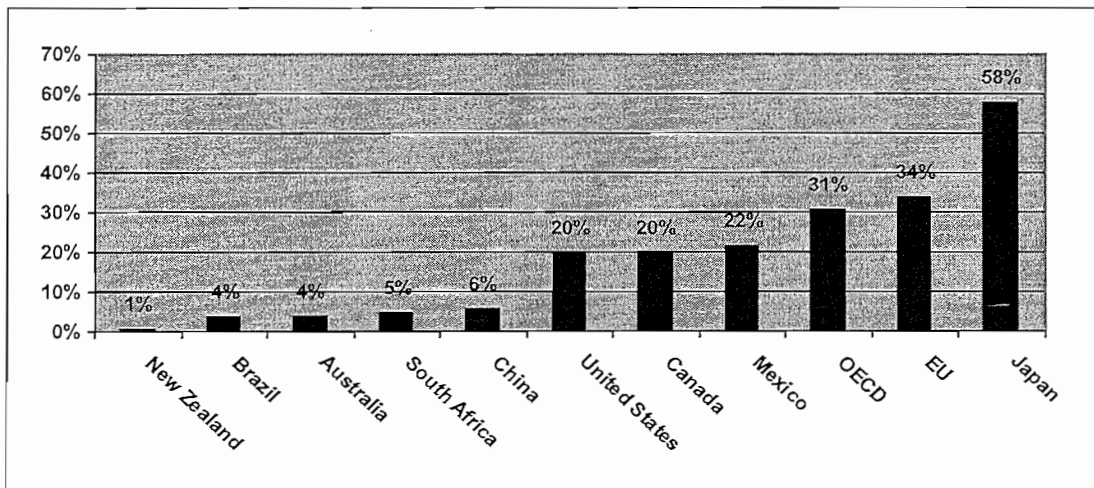
The marginal competitiveness and more specifically, the decline in the competitiveness of the agribusiness sector (see figure 5.3) as well as the decline in agricultural exports (see table 5.2) as a percentage of global exports are of concern. Many of the factors cited as reasons for having a negative influence on the competitiveness of agribusinesses (see section 5.3.2.2.) are beyond the control (external factors) of agribusinesses. Nevertheless, agribusinesses will have to find innovative ways to manage these factors.

5.4.2.3 Unfair playing field

South African agricultural commodities have to compete in international markets where the “playing fields” are anything but fair and agricultural subsidies and high protective barriers are more the norm than the exception (Robinson, 2009:12).

One of the measures of support to agriculture is the Producer Support Estimate (PSE) and can be interpreted as the percentage of total agricultural returns to the sector or sub-sector that comes from taxpayers in the form of either direct or indirect support measures (Sandrey & Vink, 2006:5). Figure 5.4 shows these PSE percentages (2000-2003) for a few selected countries including South Africa and some of its main agriculture trading partners (EU and United States).

Figure 5.4: PSE values for selected countries



Source: OECD (2006:4)

Figure 5.4 shows that South Africa has a PSE percentage of 5%, compared to the EU, its main trading partner, of 34%. Although South Africa has a bilateral Trade, Development and Co-operation (TDCA) Agreement with the EU, this agreement excludes “sensitive products” such as sugar, maize, fruits and vegetables (amongst others) which are South Africa’s main export products.

Furthermore, agricultural subsidies of developed countries average around US\$300 billion a year, suppressing world prices and undermining the exports of developing countries. It is estimated that the full elimination of agricultural protection and production subsidies of developed countries could increase global trade in agriculture by 17% with agricultural exports from developing countries increasing by 24% (Stern, 2002).

5.4.2.4 Constant change

The twenty first century business environment is characterised by constant and rapid change, diffusion of new technology (Hitt *et al.*, 1999:145) increasing risk, decreased ability to forecast, fluid structures and an innovative managerial mindset (Kuratko & Audretsch, 2009:1). No business, including South African agribusinesses is immune to the immense pressures of these forces. The only way to meet the challenges of this ever changing business scenario is when agribusinesses are competitive in creating new value for customers (Bhardwaj *et al.*, 2007:131). Corporate entrepreneurship provides a tool that allows businesses to create new value for customers through innovation, whilst simultaneously coping with the challenges embedded in the twenty first century business environment (Ireland & Webb, 2009:470).

Furthermore, the South African society is becoming more multi-cultured and tends to adopt different respective cultures and preferences in accordance with culture. Consumers are also becoming more aware of links between diet and health, resulting in changing dietary preferences. This resulted in agribusinesses shifting from the traditional product-driven focus to a consumer-driven focus. Agribusinesses will therefore be required to be more flexible and able to react to market trends and changing consumer preferences (Standard Bank, 2008b:1), reiterating the importance of corporate entrepreneurship in creating new value for customers.

In summary, the above causal factors for the study highlight the importance of creating an entrepreneurial climate within agribusinesses i.e. corporate entrepreneurship. According to Doyer *et al.* (2007:500), South African agribusinesses have focused their growth strategies mainly on market penetration and market

development and to a lesser extent on new product development. Corporate entrepreneurship can provide the tool to achieve these growth strategies since corporate entrepreneurship, amongst others, encourage businesses to develop new markets offering current products (Harper *et al.*, 2008:13). Furthermore, through a continuous focus on discovery, enactment, evaluation and exploitation of opportunities (Muzychenko, 2008:367), corporate entrepreneurship not only serve to develop current and new markets, but also involves developing breakthrough first-generation products and services, serving unmet needs of current and new customers of agribusinesses (Harper *et al.*, 2008:13).

Through corporate entrepreneurship the creative and innovative potential of all employees in agribusinesses can be unlocked (Amo & Kolvereid, 2005:8). This could lead to innovative products, new productive processes and new markets which in turn may lead to a sustained competitive advantage.

5.5 SUMMARY

The importance of the agricultural sector in terms of its economic contribution to the South African economy has been highlighted. Of concern however is the general decline of GDP contribution, exports (not only as percentage of South African exports, but also a decline in percentage of global exports) and employment.

Traditionally agribusinesses (then co-operatives) were involved in the purchase and sale of agricultural inputs and equipment, purchase, storage and subsequent sale of agricultural commodities and provided transport services. In South Africa, agribusinesses were also used as financial intermediaries by the Land and Agriculture Banks providing short and medium term credit to farmers. The state also used agribusinesses as a channel to provide farmers with subsidies and disaster assistance. Furthermore, agribusinesses also acted as agents for the respective marketing boards giving agribusinesses regional monopoly powers.

The role of agribusinesses however changed with the deregulation and liberalisation of the agricultural sector. Major policy changes included land reform, trade policy reform (reduction in border tariffs and elimination of export subsidies), institutional

restructuring in the public sector, reform of marketing institutions (demise of marketing boards) and labour market reform. Agribusinesses adapted well to the policy reforms and liberalisation efforts and many (of the then) co-operatives converted to companies and resulted in an increase in the competitiveness of agribusinesses (for the period 1992 -2004 – see figure 5.3).

Of concern is the declining competitiveness of agribusinesses from 2004 onwards as measured by the agribusiness competitive status index using the relative trade advantage method. In this regard many factors were presented that constrain the competitiveness of agribusinesses in South Africa.

South African agribusinesses are in a relative unique situation. Not only do they have to contend with the deregulation and liberalisation of the agricultural sector but also face increasing globalisation and changing consumer preferences. These issues led to the reasons for this study namely the importance of the agricultural sector in terms of food security and rural development, high food prices, changing consumer preferences, the unfair playing field in which agribusinesses must compete, the declining competitiveness of agribusinesses and the poor investment in research and development in agriculture. These reasons also highlight the importance of corporate entrepreneurship within these businesses as a means of developing innovative products, processes and new markets that could lead to a sustained competitive advantage.

CHAPTER 6

EMPIRICAL RESEARCH METHODOLOGY

6.1 INTRODUCTION

This chapter elaborates on the research methodology described in chapter one by discussing the process of business research and how it was applied to this study.

The discussion on the empirical research in this chapter consists of a discussion on the research process. Seven steps are identified in the research process (Bryman & Bell, 2007:28-66; Zikmund, 2003:59-73).

The first step entails the identification of the problem and setting of the research objectives.

Step two involves the research design and a discussion is presented on the various types of research design.

Zikmund (2003:65) identifies four basic research methods. Step three subsequently deals with these four research methods. More emphasis is placed on surveys, as a research method and more specifically on questionnaires, since this was the method used in this study.

The following step, step four, discusses the sampling design and also indicated the design used in this study.

Step five presents a discussion on the process of gathering the data. The way in which the data was gathered in this study, is also indicated.

After gathering the data, the next step, step six, is concerned with the processing and analysis of the gathered data. The data collected during the survey was processed and analysed by the Statistical Consultation Services of the North-West University

(Potchefstroom campus). The various statistical processes and analysis used in this study are discussed and clarified.

Finally, step seven offers a discussion on the reporting of the results.

6.2 RESEARCH DEFINED

Research is viewed as a systematic process of collecting, analysing and interpreting information (data) to increase the understanding of a phenomenon or concern of interest. In every subject area, knowledge is incomplete and problems exist that need to be solved. This incomplete knowledge and unresolved problems can be addressed by asking relevant questions and then seeking answers through systematic research (Leedy & Ormrod, 2005:1).

For managers, the purpose of research is to fill the gap of incomplete knowledge concerning their business, markets, the economy or any other area of uncertainty for use in decision making (Zikmund, 2003:7). It is thus concerned, with understanding the nature of businesses and also with solving problems that are related to managerial practice (Bryman & Bell, 2007:5).

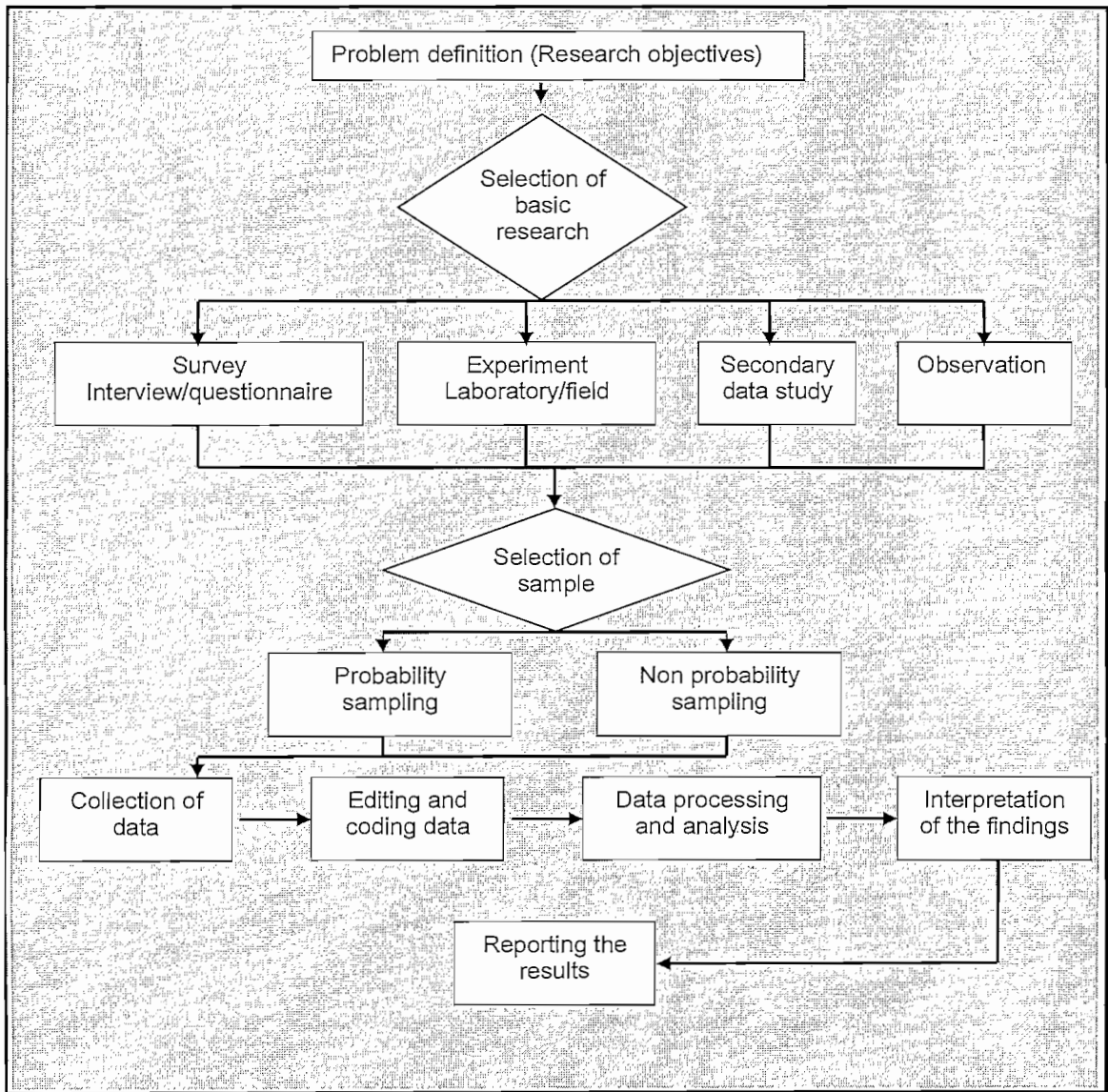
For the purpose of this study, the term business research is used since the research methodology presented is applicable to business settings. Business research is therefore defined as the systematic and objective process of gathering, recording and analysing data for aid in decision making. As an essential tool for management in its decision-making and problem-solving activities, business research provides the necessary qualitative and quantitative information upon which to base decisions (Zikmund, 2003:6).

6.3 THE BUSINESS RESEARCH PROCESS

Various steps in the process of business research can be identified in the literature. This study will make use of a combination of the steps as presented by Zikmund (2003:59-73) and Bryman and Bell (2007:28-66). These phases are depicted in figure

6.1 and will be discussed in detail as well as the way in which the research process was applied to this study.

Figure 6.1: Steps in the business research process



Source: Zikmund (2003:61)

6.3.1 Step 1: Problem statement and research objectives

6.3.1.1 Identification of problem statement

The research process starts with the recognition of a business problem or opportunity (McDaniel & Gates, 2001:22). However, recognition of a problem or opportunity does not mean that a problem has been defined. A problem statement indicates a specific managerial decision-making area to be clarified or problem to be solved (Zikmund, 2003:94). It must be well stated, relevant and must represent the reason for the research being conducted. Consequently, the quality of any research in improving business decisions is ultimately limited by the quality of the problem definition. Problem definition is therefore often viewed as one of the most important phases in the research process and is likely to be the most complex (Zikmund & Babin, 2007:104).

6.3.1.2 Research objectives

The second part of step one is the setting of objectives which is derived from the problem/opportunity statement. According to Zikmund (2003:99), this relates to the purpose of the research expressed in measurable terms. These objectives must be as specific and unambiguous as possible since the entire research effort is geared towards achieving these objectives (Riley *et al.*, 2007:46). Well formulated objectives thus serve as a road map for the entire research process and are the basis of the research design.

6.3.2 Step 2: Research design

The second step in the business research process is creating a research design which provides the overall structure for the procedures to be followed, the data to be collected and the data analysis (Leedy & Ormrod, 2005:85). Put simply, it is the plan to be followed to answer the research objectives.

6.3.2.1 Types of research designs

One of the first considerations in research design is what general approach or, as referred to by Bryman and Bell (2007:28), research strategy will be followed to solve the problem. Two research strategies are identified namely quantitative and qualitative research.

Quantitative research can be construed as a research strategy that emphasises quantification in the collection and analysis of data (Bryman & Bell, 2007:28) and places reliance upon the research instrument employed to gather the data (Riley *et al.*, 2007:40). It is used to answer questions about relationships among measured variables with the purpose of explaining, predicting and controlling phenomena. The intent is to establish, confirm or validate relationships and to develop generalisations that contribute to theory (Leedy & Ormrod, 2005:94-95).

By contrast, qualitative research can be construed as a research strategy that usually emphasises words rather than quantification in the collection and analysis of data (Bryman & Bell, 2007: 28) and rely on the skill of the researcher (Riley *et al.*, 2007:40). Qualitative research is typically used to answer questions about the complex nature of phenomena, often with the purpose of describing and understanding the phenomena (Leedy & Ormrod, 2005:94-95). Table 6.1 presents a comparison between quantitative and qualitative research strategies.

Table 6.1: Comparison between quantitative and qualitative research strategies

Qualitative research	Research aspect	Quantitative research
Discover ideas, used in exploratory research with general research objectives	Common purpose	Test hypothesis or specific research question
Observe and interpret	Approach	Measure and test
Unstructured, Free-forms	Data collection approach	Structured response
Researcher is intimately involved	Research independence	Researcher uninvolved
Small samples, often in natural setting	Samples	Large samples to produce generalisable results
Exploratory research	Most often used	Descriptive and casual research designs

Source: Zikmund and Babin (2007:131)

After considering the nature of the two strategies and the nature of this study, it was decided to use quantitative research as the primary research strategy.

After selecting a quantitative research strategy, Zikmund (2003:54) identifies three types of research designs namely exploratory, descriptive and casual research. Table 6.2 shows the characteristics of each of the different research designs.

Table 6.2: Characteristics of different types of research designs

	Exploratory research	Descriptive research	Casual research
Amount of uncertainty	Highly ambiguous	Partially defined	Clearly defined
Key research statement	Research question	Research question	Research hypothesis
When conducted?	Early stage of decision making	Later stages of decision making	Later stages of decision making
Usual research approach	Unstructured	Structured	Highly structured
Nature of results	Discovery oriented, often in need of further research	Confirmatory, managerially actionable	Confirmatory oriented, fairly conclusive

Source: Zikmund and Babin (2007:57)

- **Exploratory research**

Exploratory research is mostly conducted to clarify ambiguous problems and endeavours to increase the understanding of the nature of the problem. Exploratory research is generally followed by a more rigorous research at a later date (Davis, 2005:146). As far as this study is concerned, no exploratory research was undertaken.

- **Descriptive research**

Descriptive research, as the name implies, describes characteristics of objects, people, groups, organisations or environments (Zikmund & Babin, 2007:51). It seeks to determine answers to who, what, when, where and how questions and tries to “paint a picture” of a given situation. Frequently, descriptive research attempt to

determine the extent of differences in the needs, perceptions, attitudes and characteristics of subgroups (Zikmund, 2003:57). In this study an attempt was made to determine the extent to which managers (top, middle and junior) in agribusinesses perceived their organisational climate as conducive to corporate entrepreneurship.

- **Casual research**

Casual research (often also referred to as correlational research) goes beyond mere descriptions and begins discussing the relationship that certain events may have to one another, i.e. it seeks to identify cause-and-effect relationships (Salkind, 2006:11). In essence, casual research examines whether one variable causes or determines the value of another variable, thus allowing casual inferences to be made (Zikmund & Babin, 2007:53). Leedy and Ormrod (2005:181-182) warn that even though two variables are correlated, a cause-and-effect relationship cannot be inferred based on correlation alone. In other words, correlation does not, in and of itself, indicate causation. Zikmund (2003:57-58) presents three criteria that could assist in inferring causality:

- Establish the appropriate casual order or sequence of events.
- Measure the concomitant variation (occurrence of two variables or events that vary together) between the presumed cause and the presumed effect.
- Recognise the presence or absence of alternative plausible explanation or casual factors.

Care must however still be taken when inferring causality since even if the above criteria are met, the casual explanation may not be adequate.

6.3.3 Step 3: Selecting a research method

The next step in the research process is selecting a means of gathering data. The various methods of data gathering will be presented as well the questionnaire design.

6.3.3.1 Basic research design methods

Zikmund (2003:65) identifies four basic research methods for descriptive and casual research namely, experiments, secondary data studies, observation and surveys.

- **Experiments**

Experiments hold the greatest potential for establishing cause-and-effect relationships (Salkind, 2006:217). It involves a carefully controlled study in which the researcher manipulates a proposed cause and observes any corresponding change in the proposed effect (Zikmund & Babin, 2007:56). Two groups are established which form the basis for experimental manipulation of the independent variable. The experimental group (treatment group) receives the treatment and is compared to the control group which does not receive any treatment. The dependent variable is measured before and after the experimental manipulation, so that a before-and-after analysis can be conducted. The groups are also assigned randomly to their respective groups which enable the researcher to feel confident that any difference between the two groups can be attributed to manipulation of the independent variable (Bryman & Bell, 2007:45).

Two major subtypes of experiments are commonly designated namely field experiments and laboratory experiments. A field experiment is a research project involving experimental manipulations in a natural environment (Zikmund & Babin, 2007:270). The primary strength of a field experiment is that the study situation is usually highly realistic, allowing the independent variable's effect to be accurately assessed (Davis, 2005:147). An alternative to field experiments is laboratory experiments. Here the experiment is conducted in an artificial or laboratory setting and allows the researcher more complete control over the research setting and extraneous variables (Zikmund & Babin, 2007:269). The primary strength of laboratory experiments is that the strongest conclusions can be drawn since researchers were able to minimise the possibility that other casual factors had a chance to operate (Davis, 2005:149-150).

- **Secondary data studies**

Secondary data are data gathered and recorded by someone else prior to and for purposes other than the current needs of the researcher. Secondary data usually are historical data and already assembled (Zikmund & Babin, 2007:160).

Bryman and Bell (2007:328-334) offer a number of advantages of secondary data studies:

- Secondary data saves cost and time.
- Many of the data sets that are employed most frequently for secondary studies are of high quality (representative and often covers a wide region).
- Secondary data offers the opportunity for longitudinal analysis.
- Secondary data offers the opportunity for cross-cultural analysis.
- Secondary data allows the researcher to gather insights into the problem.

In this study, secondary data was obtained by means of a literature study. The purpose of the literature study was to obtain further information concerning business factors that may either foster or hinder corporate entrepreneurship. The literature study was then used to compile a questionnaire to gather primary data.

- **Observation**

Observation is the systematic process of recording the behavioural patterns of people, objects and occurrences as they are witnessed (Zikmund, 2003:235). The researcher is actually in or directly adjacent to the environment being studied but is not actually a participant in the environment itself and no questioning of or communicating with people occur (Salkind, 2006:203).

A wide variety of information about the behaviour of people and objects can be observed such as physical actions, verbal behaviour, expressive behaviour, spatial relations, temporal patterns, physical objects and verbal and pictorial records. However, cognitive phenomena, such as attitudes, motivations, expectations,

intentions and preferences cannot be observed. A further limitation to observations is that the observation period is generally of short duration (Zikmund, 2003:235).

- **Surveys**

Business research relies heavily on the use of active primary data collection methods. Business is largely a social phenomenon and much of the data needed to make decisions has to come from people. Data collection methods using survey instruments are designed specifically to obtain large amounts of information from people (Davis, 2005:274). A survey is a method of collecting primary data based on communication with a representative sample of individuals (respondents) (Zikmund & Babin, 2007:186). Surveys are appropriate for research questions about beliefs, opinions, characteristics and past and present behaviour (Neuman, 2006:273). A number of survey instruments are available and will be discussed briefly.

- **Interviews**

To conduct interviews, the researcher communicates with individuals in person or intercepting people at shopping malls or interviews may take place over the telephone.

Personal interviewing is a form of direct communication in which an interviewer asks respondents questions in a face-to-face situation. This method generally increases the percentage of people willing to participate because of the presence of an interviewer (Zikmund & Babin, 2007:211). The greatest advantage of personal interviews is probably that the interviewer is in complete control of the interview situation. Where respondents are evasive, interviewers can attempt to gain their confidence (Welman, Kruger & Mitchell, 2005:164). Moreover, well trained interviewers can be flexible by asking all types of complex questions and can use extensive probing (Neuman, 2006:301). The biggest disadvantage of personal interviews is the high costs associated with its preparation and application. Apart from the time required to conduct the interview, interviewers need to be trained, paid for conducting the interview and reimbursed for travelling expenses (Welman *et al.*, 2005:163). Furthermore, although interviewing is a skilled activity, the appearance,

tone of voice and question wording may affect the respondent. Probing and prompting may also be approached in different ways. Researchers recognise these problems and use ways such as training, briefing, quality control and guidelines to minimise their impact (Kent, 2007:187).

Mall intercept interviews are personal interviews conducted in shopping malls. Interviewers typically intercept shoppers at a central point in a mall or at an entrance. Mall intercept interviews involve less cost since the respondents come to the interviewer. The biggest drawback however, is that individuals are usually in a hurry and the incidence of refusal can be as high as fifty percent (Zikmund & Babin, 2007:213).

Telephone interviews are interviews conducted over a telephone and include using landlines and/or cell phones (Tustin, Ligthelm, Martins & Van Wyk, 2005:155). Telephone interviews have a number of advantages over face-to-face interviews such as:

- o It produces faster results.
- o It is convenient and relatively inexpensive.
- o It offers anonymity.
- o It is easily controlled and supervised.

There are also a number of drawbacks such as:

- o They are limited to verbal exchange – can't show respondents any visual material.
- o There are no observational data – facial expressions.
- o Interviews have to be short and factual – may limit their use.
- o The rise of telesales has made people suspicious of calls from strangers.
- o Answering machines and caller-id has made telephone interviewing more difficult.

- **Mail surveys**

Mail surveys involve the researcher sending a structured paper questionnaire to a group of respondents who complete it in their own time and return it to the researcher (Tustin *et al.*, 2005:186). This method of data collection can reach a geographically dispersed sample at a relatively low cost, which makes it a very widely used method in business research. It also offers the respondents advantages such as anonymity, confidentiality and the leisureliness of response (Davis, 2005:279). Mail surveys are however not without their problems. With this method, the researcher has the least control over the conditions under which the questionnaire is completed. The chances are good that some questions may be omitted or even that someone else (other than the intended respondent) completed the questionnaire. Furthermore, mail surveys tend to have the poorest response rate of all survey methods (Welman *et al.*, 2005:187).

In this study a mail survey method was used. Structured questionnaires were sent to the particular agribusinesses by mail. A designated person (appointed by management) within each agribusiness distributed (through their internal mail system) and collected the questionnaires.

6.3.3.2 Questionnaire design and content

Because questionnaires are widely used with surveys and therefore form part of the research method, the issues involved in questionnaire design will be discussed. Although each step in the business research process is important, because of its interdependence with other steps in the process, a survey is only as good as the questions it asks. Zikmund (2003:330) is of the opinion that questionnaire design is one of the most critical steps in the business research process. Welman *et al.* (2005:174) add and also suggest that the researcher must seek out as much previous research on the topic or related topics. Questions from similar previous studies can thus serve as inputs to the questionnaire design process.

The following questionnaires were used as the basis for the design of the

questionnaire used in this study:

- Measuring intrapreneurship (Hill, 2003).
- The organisation structure and strategic posture scale (Covin & Slevin, 1989:85-86).
- Corporate entrepreneurship assessment instrument (CEAI) (Hornsby *et al.*, 2002:264-265).
- Entrepreneurial orientation items (Lumpkin & Dess, 2001:442).
- Entrescale (Knight, 1997:223-225).
- Intrapreneurship items (Antoncic & Hisrich, 2001:509-511).
- Entrepreneurial climate (Oosthuizen, 2006).
- Entrepreneurial characteristics (Jordaan, 2008).

Kent (2007:151) define a questionnaire as any document that is used as an instrument with which to capture data generated by asking people questions and which, furthermore:

- Lists all the questions a researcher wishes to address to each respondent.
- Provides space or some mechanism for recording the responses.
- Puts questions in a logical sequence.
- Draws accurate information from respondents.
- Standardises the format of the questions.
- Facilitates data processing.

For a questionnaire to fulfil its purpose, the questions must meet the basic criteria of relevancy and accuracy. To achieve these ends, Zikmund and Babin (2007:353) state that a researcher will be required to make several decisions, typically, but not necessarily in the following order:

- What should be asked?
- How should questions be phrased?
- In what sequence should questions be arranged?
- What questionnaire layout will best serve the research objectives?

- **What should be asked?**

The first step in the business research process is to identify a problem statement and determine the research objectives. These in turn, clearly indicate what must be asked (Zikmund & Babin, 2007:353). It is thus important that only relevant questions be asked and that the information collected addresses the research objectives (Kent, 2007:152). Asking the wrong or irrelevant questions is a common pitfall. Furthermore, questions also need to be accurate. This means that the information should be reliable and valid. There is no step-by-step procedure for ensuring accuracy in question writing (Zikmund & Babin, 2007:354). Finally, it is important to consider the ability of respondents to answer the questions (McDaniel & Gates, 2001:304). Questionnaires, in this study, were therefore sent only to respondents on managerial level within the particular agribusinesses, since many of the questions are of a strategic nature.

- **How should questions be phrased?**

How to ask questions represents the crux of considerations surrounding the use of survey instruments such as questionnaires. There are many ways to phrase questions and many standard question formats have been developed. Neuman (2006:278-281) provides some guidelines about the phrasing of questions in order to improve the quality of data that can be obtained namely:

- Avoid jargon, slang and abbreviations.
- Avoid ambiguous and vague questions. If respondents are unsure of the meaning of a question, they cannot be expected to provide accurate information.
- Avoid double-barrelled questions. Make each question about one and only one topic.
- Avoid leading questions.
- Avoid asking questions that are beyond the respondents' capabilities.
- Avoid double negatives. Double negatives in ordinary language are grammatically incorrect and confusing.

One of the most significant considerations for many researchers is whether to ask open ended questions or fixed-alternative questions (also called closed questions).

Open ended questions are those that respondents have total freedom to answer as they please (Davis, 2005:208). Open ended questions are valuable to researchers who wish to obtain data about opinions, attitudes and behaviour. They also enable researchers to probe further into answers provided by respondents by offering respondents the opportunity to further explain their answers. The biggest disadvantage of open ended questions is the difficulty that researchers have in coding the responses because of the high degree of variation in the responses. This may imply that results are more qualitative in nature than quantitative and should thus be used with care (Tustin *et al.*, 2005:397).

Fixed-alternative questions are questions in which respondents are given specific, limited-alternative responses and asked to choose the one closest to their own viewpoint. These questions take less time and are easier for the respondent to answer. Because answers are classified into standardised groupings prior to data collection, fixed-alternative questions facilitate coding, tabulating and ultimately interpreting the data (Zikmund & Babin, 2007:356).

The following forms of fixed alternative questions can be identified.

- **Dichotomous question**

The simplest form of fixed alternative questions is the dichotomous question which requires the respondent to choose one of two alternatives. The answer can be a simple yes/no, true/false or male/female. For these responses to be valid, the answer must fall into one of the two categories (Tustin *et al.*, 2005:397-398).

- **Multiple-choice questions**

Multiple choice questions are similar to dichotomous questions, but offer more than two fixed alternatives responses. Respondents may be required to give only one

alternative that correctly expresses their opinion or, in some instances, to indicate all the alternatives that apply (Tustin *et al.*, 2005:398). These types of questions are useful when information can be classified into reasonably fixed categories. Kent (2007:156) however warns that fixed categories may force respondents into answering in ways that do not correspond with their true feelings.

- **Scaled responses**

A number of scaling techniques are commonly used in business research. These techniques are outlined in table 6.3. Two classes of scaled responses are distinguished namely rating scales and attitude scales.

Table 6.3: Some commonly used scaling methods

Scaling techniques	Description
Rating scales	Raters evaluate a single dimension of a person, object or other phenomenon at a point along a continuum or in a category. A numerical value is then assigned to that point or category.
Graphic rating scale	Raters mark or indicate how they feel on a graphic scale of some sort.
Itemised rating scale	Raters select one of a limited number of categories that are ordered in some fashion
Comparative rating scales	Raters judge a person, object or phenomenon against some standard or some other person, object or phenomenon.
Attitude scales	Attitude scales measure a respondent's predisposition toward any person, object or phenomenon.
Likert scale	Respondent indicates degree of agreement or disagreement with a variety of statements about some attitude, object, person or event.
Semantic differential	Respondent rates an attitude object on a number of 5 – 7 point bipolar adjectives or phrases.

Source: Davis (2005:211)

In a rating scale, the rater evaluates a single dimension of a person, object or other phenomenon at a point along a continuum or in a category. A numerical value is then assigned to that point or category (Davis, 2005:210).

Attitude scales measure a respondent's attitude (Davis, 2005:210) or preference (Zikmund & Babin, 2007:332) toward any object or phenomenon. Attitude scales are

in essence a combination of rating scales however attitude scales are generally more complex, multi-item scales (Davis, 2005:210).

This study made use of dichotomous questions, multiple-choice questions and attitude scales using the Likert scale technique. A breakdown of the use of the various types of questions is presented in table 6.4.

Table 6.4: Breakdown of the types of questions used

Question	Type of question
Section A: Questions A01 - A90	5 – point Likert scale; Alternatives range from 1. strongly disagree, 2. disagree, 3. uncertain, 4. agree and 5. strongly agree.
Section B: Questions B1/01 - B1/30 B2/01 - B2/30	5 – point Likert scale; Alternatives range from 1. definite weakness, 2. moderate weakness, 3. neither weakness nor strength, 4. moderate strength and 5. definite strength.
Section C: Questions C01 - C06	Fixed-alternative questions

From table 6.4 it is clear that the majority of questions asked in this study used the Likert scale technique. Subsequently this technique will be discussed in more detail.

- **Likert scale**

A Likert scale is defined by Zikmund and Babin (2007:333) as a measure of attitudes designed to allow respondents to rate how strongly they agree or disagree with carefully constructed statements, ranging from very positive to very negative attitudes toward some object. Although response alternatives may vary between three and nine responses (Zikmund & Babin, 2007:333) respondents generally choose from approximately five response alternatives ranging from strongly disagree, disagree, uncertain, agree and strongly agree (Riley *et al.*, 2007:122; Davis, 2005:211). These alternatives are assigned scores, usually 1 – 5 (Kent, 2007:135). Since identical response categories are used for several items intended to measure a given variable, each of these items can be scored in a uniform manner. For example, respondents that “strongly disagree” are assigned a score of 1, whilst respondents that “strongly agree” are assigned a score of 5. The scores are then summed to obtain a total score (Tustin *et al.*, 2005:408). Because of its high reliability when it comes to the

ordering of people with regard to a particular attitude (Davis, 2005:212) the Likert scale was used in this study with a five response alternative as discussed above.

- **In what sequence should questions be arranged?**

The order of questions or the question sequence is an important issue in the design of a questionnaire. In an attempt to “warm up” respondents to the questionnaire, researchers often ask demographic questions at the beginning. According to Zikmund and Babin (2007:365), this is not advisable, because asking for personal information such as income or education level may embarrass or threaten respondents. This view is supported by Kent (2007:163) stating that these questions may be too personal at the beginning. It is for these reasons that the demographic questions in this study were placed at the end.

More specifically, as far as attitude scales are concerned, there may also be an “anchoring effect”. This is where the first concept measured tends to become a comparison point from which subsequent evaluations are made (Zikmund & Babin, 2007:366). To minimise this type of order bias (bias caused by the influence of earlier questions in a questionnaire) the questions in this study was randomised using uniformly distributed random digits (Jacobs *et al.*, 2009:746).

- **What questionnaire layout will best serve the research objectives?**

Good layout and physical attractiveness are crucial in mail questionnaires (Zikmund & Babin, 2007:368). In this study the questionnaire, named Corporate Entrepreneurial Climate Questionnaire, consisted of a front page and a covering letter which included the instructions to the questionnaire (see annexure A). The questionnaire was divided into three sections namely:

- **Section A: Corporate entrepreneurial climate**

The purpose of this section was to determine the corporate entrepreneurial climate within an agribusiness.

The following format was used:

Respondents were requested to select the number which best describes their opinion about a specific question or statement. In the example below, the respondent agreed to the statement listed.

	Statement	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
A06	The vision and strategies of our business often help me in setting priorities.	1	2	3	<input checked="" type="checkbox"/>	5

All questions/statements can be answered by marking the relevant block with an X. Use the following key to indicate your preference.

Grade	Term used
5	Strongly agree
4	Agree
3	Uncertain
2	Disagree
1	Strongly disagree

- **Section B: Core attributes of entrepreneurs**

Successful entrepreneurs have certain characteristics in common (refer to Oosthuizen, 2006 and Jordaan, 2008). Section B of this questionnaire is aimed at determining the extent to which employees at agribusinesses are inclined towards an entrepreneurial mind. The following format was used:

In section **B1** respondents were requested to **evaluate themselves** on a 1 to 5 scale in terms of how well each of the characteristics applies to them. Similarly, in section **B2** respondents were requested to **evaluate their supervisor/manager** (superior). Section B2 is thus an evaluation of how **respondents** viewed **their superior** in terms of the specific entrepreneurial characteristic. Mark the appropriate block with an **X**.

Grade	Term used
5	Definite strength
4	Moderate strength
3	Neither strength nor weakness
2	Moderate weakness
1	Definite weakness

▪ **Section C: Biographical information**

For determining possible correlations between biographical information and the opinions expressed in the corporate entrepreneurial survey, respondents were requested to indicate their age group, gender, race, managerial level, highest academic qualification and division they worked in according to predefined categories.

6.3.4 Step 4: Sample design

In business research a sample is viewed as a “subset from a larger population”. The sample thus refers to the people who will complete the questionnaires, also referred to as respondents (McDaniel & Gates, 2003:64). According to Bryman and Bell (2007:180), the need to sample is one that is almost invariable encountered in quantitative research.

Although it may be desirable to measure each and every element of the population on some characteristic of interest (referred to as a census) because of its completeness, some important considerations make sampling an attractive alternative for business researchers (Davis, 2005:231). Resource constraints in terms of time and money often make sampling the only option (Kent, 2007:229). Furthermore, a well-drawn sample can provide the researcher with pre-specified margins of error, as the use of probability sampling makes it easier to estimate the degree of sample error in a study (Davis, 2005:232).

Two major sampling methods are identified namely, probability sampling and non-probability sampling. Within these two major headings, a number of alternatives are available.

6.3.4.1 Probability sampling

Probability sampling is defined as a sampling technique in which every member of the population has a known, nonzero probability of selection (Zikmund & Babin, 2007:411). Probability sampling techniques are the most commonly used because the selection of the respondents is determined by chance. Salkind (2006:86-92) presents four techniques of probability sampling, namely simple random sampling, systematic sampling, stratified sampling and cluster sampling.

- **Simple random sampling**

Simple random sampling is the most basic form of probability sampling and each member of the population has an equal and independent chance of inclusion in the sample (Bryman & Bell, 2007:186). The researcher develops an accurate sampling frame, selects elements from the sampling frame according to a mathematically random procedure and then locates the exact element that was selected for inclusion in the sample (Neuman, 2006:227).

- **Systematic sampling**

Systematic sampling is a variation on the simple random sample technique (Bryman & Bell, 2007:187). With this type of technique every n^{th} name on the list is chosen. The term n^{th} stands for a number between zero and the size of the sample (Zikmund & Babin, 2007:415). In other words, instead of using a list of random number as in simple random sampling, the interval (n^{th} number) becomes the researcher's quasi-random selection method (Neuman, 2006:230).

- **Stratified sampling**

Stratified sampling is a random sample in which the researcher first identifies a set of mutually exclusive subgroups (strata), divides the sample frame by the subgroups and then uses random selection to select respondents from each subgroup (Neuman, 2006:231). This technique is most important if the characteristics that distinguish population members from one another (race, gender, social class or degree of intelligence) are related to what is being studied (Salkind, 2006:91). Random sampling error will thus be reduced with the use of stratified sampling because each group is internally homogeneous and will be adequately represented when strata are combined (Zikmund & Babin, 2007:416).

- **Cluster sampling**

Cluster sampling selects units of individuals rather than the individuals themselves (Zikmund & Babin, 2007:417). This method is used where researchers lack a good sampling frame for a dispersed population and the cost to reach a sample element is very high. First the cluster (usually randomly) is sampled and then a second sample (also randomly) from within the cluster is sampled (Neuman, 2006:234). Although a great time saver the researcher must be sure that the units are homogeneous enough such that any difference in the units itself might not contribute to bias (Salkind, 2006:92).

6.3.4.2 Non-probability sampling

Non-probability sampling is a sampling technique in which members of the sample are selected on the basis of personal judgement or convenience. The probability of any particular member of the population being chosen is unknown. Zikmund and Babin (2007:411-414) identify four types of non-probability sampling, namely convenience sampling, judgement sampling, quota sampling and snowball sampling.

- **Convenience sampling**

This type of sampling refers to sampling by obtaining people or units that are conveniently available (Kent, 2007:235). This method is easy to use but may not produce a representative sample and can therefore not be used to project the results beyond the sample used (Salkind, 2006:93). For this reason Davis (2007:251) is of the opinion that convenience sampling is best used for exploratory research when additional research will subsequently be conducted using a probability sampling technique.

- **Judgement sampling**

Judgement sampling is a non-probability sampling technique in which an experienced researcher selects the sample based on his or her judgement about some appropriate characteristic required of the sample member (Zikmund & Babin, 2007:412).

- **Quota sampling**

Quota sampling refers to a sample technique that ensures that various subgroups of a population will be represented on pertinent characteristics. This method is similar to stratified sampling (a probability sampling technique; see section 6.3.4.1) which also subdivides the population into subgroups, but with quota sampling the researcher has a quota to achieve (Zikmund & Babin, 2007:412). Quota sampling is mostly used in market research and political opinion polling (Bryman & Bell, 2007:201).

- **Snowball sampling**

Snowball sampling involves using probability techniques for an initial selection of respondents and then obtaining additional respondents through information provided by the initial respondents (Zikmund & Babin, 2007:414). This technique is used to locate difficult-to-find respondents and those who are located are asked to suggest others who might fit the population specification (Kent, 2007:235).

6.3.4.3 Sampling method used in this study

The study population for this study is defined as all managers (junior, middle and senior management) within agribusinesses formally known as agricultural co-operatives. It would be too costly and time consuming for every employee in the agribusinesses concerned to complete the questionnaire. More importantly, many of the questions posed in the questionnaire are of such a nature that the information required to make a meaningful response would not be available to the ordinary employee.

Five of the largest agribusinesses (in terms of group turnover and group assets) were subsequently identified based on a judgement sample. Three smaller agribusinesses also indicated their willingness to participate in the study and have been included.

With the assistance of the Human Resource manager in each of the agribusinesses, the management levels were identified by means of the particular job grading system used by that specific agribusiness. Questionnaires were then sent to all junior, middle and senior management within the participating agribusinesses.

6.3.5 Step 5: Gathering the data

The actual gathering of the data was done by means of the following procedure:

- An e-mail was sent to each of the Chief Executive Officers (CEO) of the respective agribusinesses explaining the purpose of the study and requesting permission to distribute questionnaires within the business.
- After permission was obtained, a designated person (in most instances the Human Resource manager) was appointed by the CEO whom acted as a contact person and also assisted with the distribution and subsequent collection of the questionnaires.

This greatly simplified the data gathering process, since all the questionnaires were sent to one person within each agribusiness whom distributed the questionnaire to the relevant respondents. Upon completion of the questionnaire, respondents forwarded the questionnaire to this designated person who in return forwarded all the completed questionnaires to the researcher. Table 6.5 indicates the response rate for each of the agribusinesses. For the purpose of confidentiality each agribusiness was assigned either A, B, C, D, E, F, G or H, in no particular order.

Table 6.5: Response rate of agribusinesses

Agricultural business	No sent out	No returned	Response %
A	295	46	15.59
B	465	164	35.26
C	130	56	43.07
D	12	11	91.66
E	30	5	16.66
F	300	22	7.33
G	322	162	50.31
H	238	67	28.15
TOTAL	1792	533	29.74

Although an average response rate of almost 30% was obtained, the response rate for individual agribusinesses ranged from a high of almost 92% to a low of 7%. Care should be exercised in the interpretation and application of the results and cannot be generalised to all agribusinesses (also see limitations of this study in section 1.6).

6.3.6 Step 6: Data processing and analysis

Data analysis is the process whereby researchers create information from the raw data they have constructed. This information must address the objectives for which the research was undertaken. The raw data is of little value until they have been structured in some way, summarised and a range of conclusions drawn from them (Kent, 2007:261). Before data can be analysed, it needs to be edited and coded. Editing data is the process of checking the completeness, consistency and accuracy of the responses obtained. Once the data is edited, it is ready for coding, a process

whereby a numerical score is assigned to the edited data (Zikmund & Babin, 2007:480-485). The following data analysis was conducted in this study:

- Completed questionnaires were processed by the Statistical Consultation Services of the North-West University.
- The data collected were statistically analysed, using Statistica (Statsoft, 2008) and Statistical Package for Social Sciences (SPSS) (SPSS, 2008).
- Frequencies and percentages were calculated for the demographic variables age, gender, race, highest qualifications and functional division in which the respondents worked in according to predefined categories.
- To measure the construct validity of the measuring instrument an exploratory factor analysis was conducted. The reliability was determined by means of Cronbach alpha coefficients.
- Furthermore, the relationships between the extracted constructs were investigated by calculating the Pearson correlation coefficients (r). Effect sizes were measured to determine whether the effect of the relationship between two constructs were important or meaningful.
- The results of the corporate entrepreneurial survey were presented showing the arithmetic mean and standard deviation for each of the variables.
- A comparison of the mean differences between the demographic variables and entrepreneurial climate variables were also examined by means of independent t-tests (p -values) and effect sizes (d -values).
- The arithmetic mean and standard deviation were calculated for each of the entrepreneurial characteristics regarding the self- and superior assessment. In order to determine how respondents' self perceptions of the entrepreneurial characteristics compare to their perception of their superiors,

the mean scores of each of the entrepreneurial characteristics were compared by means of a t-test (*p*-values) and effect sizes (*d*-values).

Analysis of data required that the researcher determine the reliability and validity of the study as well as the types of statistics that will be used for analysis purposes.

6.3.6.1 Reliability and validity

The reliability and validity of a measurement instrument are essential because they are the first line of defence against spurious and incorrect conclusions (Salkind, 2006:106).

- **Reliability**

According to Kent (2007: 141), reliability refers to the extent to which the application of a scale produces consistent results if repeated measures are taken. Different forms of reliability can be identified namely test-retest and internal consistency.

- **Test-retest reliability**

According to Salkind (2006:110), the test-retest reliability examines consistency over time. The same test is given to the same group of people at two different points in time. The results of the tests are then correlated.

- **Internal consistency**

Internal consistency represents a measure's homogeneity or the extent to which each item of a concept converges on some common meaning (Zikmund & Babin, 2007:321). This meaning of reliability applies to a multi-item measure in which respondent's answers to each question are aggregated to form an overall score (Bryman & Bell, 2007:163) and is measured by correlating these scores on subsets of items making up the scale (Zikmund & Babin, 2007:321). Cronbach's coefficient alpha is a commonly used test of internal reliability (consistency of results obtained across different items within a measuring instrument) for multi-item summated rating

scales. It essentially calculates the average of all possible split-half reliability coefficients (Bryman & Bell, 2007:164). The basic rationale for such reliability assessments is that items in a scale should behave similarly (Davis, 2005:191). A computed alpha coefficient will vary between 1 (denoting perfect internal reliability) and 0 (denoting no internal reliability). Despite its wide use, there is little guidance as to what constitutes an acceptable or sufficient value for alpha to achieve (Kent, 2007:143). According to Bryman and Bell (2007:164), most users of this statistic recommend that a value of 0.7 should be achieved. Kent (2007:143) and Field (2005:668) however warn that this general rule (value of 0.7 for alpha) should be used with caution and state that when interpreting alpha coefficients, the values achieved are in part a function of the number of items and the more items on the scale the larger the value of alpha will be. Furthermore, there is agreement that the desired degree of reliability is also a function of the purpose of the research (Kent, 2007:143) and values of below 0.7 can realistically be expected with psychological constructs (Field, 2005:668).

- **Validity**

The second element that researchers need to consider is validity. Kent (2007:141) defines validity as the extent to which the test or instrument that is being used actually measures what was intended. Salkind (2006:113-114) presents three aspects of validity that should be kept in mind when using this term:

- Validity refers to the results of the test, not to the test itself.
- Just as with reliability, validity is never a question of all or none. It's a progression that occurs in degrees from low validity to high validity.
- The validity of the results of a test must be interpreted within the context in which the test occurs.

Kent (2007, 144-145), Salkind (2006:114-116) and Welman *et al.* (2005:142-144) explain that three main types of validity, namely construct, criterion-related and content validity, can be identified. These types are depicted in table 6.6.

Table 6.6: Types of validity

Types of validity	What it is	How established
Construct	A measure of how well a test assesses some underlying construct	Assess the underlying construct on which the test is based and correlate these scores with the test scores
Criterion: <i>Concurrent</i>	A measure of how well a test estimates a criterion	Select a criterion and correlate scores on the test with scores on the criterion in the present
<i>Predictive</i>	A measure of how well a test predicts a criterion	Select a criterion and correlate scores on the test with scores on the criterion in the future
Content	A measure of how well the items represent the entire universe of items	Ask an expert if the items assess what you want them to assess

Source: Salkind (2006:114)

6.3.6.2 Types of statistics

Two main types of statistics can be identified, namely, descriptive and inferential statistics. According to Welman *et al.* (2005:231), descriptive statistics are concerned with the description and/or summary of the data obtained from the respondents. Where one variable is involved descriptive statistics is called univariate statistic, two variables are called bivariate statistics and more than two variables it is called multivariate statistics. Inferential statistics, on the other hand, are used to infer something about the population from which the sample was drawn based on the characteristics of the sample (Salkind, 2006:165).

Various descriptive and inferential statistics can be used when dealing with quantitative data and questionnaires. The statistical techniques that are used in this study are briefly presented.

- **Mean**

Kent (2007:310) defines the mean as a measure of central tendency and is calculated by totalling all the values in a distribution and dividing by the number of

values in the distribution. Zikmund and Babin (2007:424) provide the following formula for calculating the mean:

$$\sum_{i=1}^n X_i$$

where n = number of observations

- **Percentage distribution**

Percentage distribution is defined by Zikmund and Babin (2007:431) as a frequency distribution organised into a table or graph that summarises percentage values associated with particular values of a variable.

- **Frequencies**

Frequencies are used to determine whether the distribution is even across the intervals or whether they cluster around one or two intervals. This measurement allows researchers to determine whether responses are skewed towards one end of the scale (Welman, *et al.*, 2005:230).

- **Standard deviation**

The standard deviation, according to Zikmund and Babin (2007:436), is perhaps the most valuable index of spread or dispersion and is essentially the average amount of variation around the mean (Bryman & Bell, 2007:361). It presents a measure of variability that presents a quantitative index of the dispersion of the distribution (Zikmund & Babin, 2007:437) and is calculated by taking the difference between each value in a distribution and the mean and then dividing the total differences by the number of values (Bryman & Bell, 2007:360).

The formula for calculating the standard deviation is as follow:

$$\sqrt{\frac{\sum (x - \bar{x})^2}{(n-1)}}$$

where:

X = each score,

\bar{x} = the mean or average,

n = number of values and

\sum = means one sums across the values.

- **Statistical significance**

Inferential statistics, which is a statistical analysis used to reach conclusions that extend beyond the immediate data alone (Trochim & Donnelly, 2007:294), allow decisions to be made about the difference between two groups. One of the most useful tools for doing this is a test for statistical significance. Tests of significance are based on a null hypothesis such as $H_0: \mu_1 = \mu_2$, representing no difference between the means of two samples (Salkind, 2006:171).

Statistical significant tests, for example t-tests, are used to show that the difference between two means is significant. In this study, for example, the difference between the self assessment and superior assessment in terms of the entrepreneurial characteristics were tested for statistical significance. This was done by calculating the p -value which is an estimate of the probability for a test of a hypothesis (Trochim & Donnelly, 2007:295). A small p -value ($p < 0.05$) is considered sufficient evidence that the result is significant (Ellis & Steyn, 2003:51). However, just because a test statistic is significant it does not mean that the effect it measures is meaningful (Field, 2005:32) or that the difference is large enough to have an effect in practice (Ellis & Steyn, 2003:51).

- **Effect size (Practical significance)**

Statistical significant tests have a tendency to yield small p -values (indicating significance) as the size of the data sets increase (Ellis & Steyn, 2003:51). This implies, that although a test statistic is significant, it doesn't mean that the effect it measures is meaningful or important (Field, 2005:32). The measure of the size of the effect is called an effect size and is simply an objective and standardised measure of the magnitude of the observed effect (Kent, 2007:392).

Various types of effect sizes exist, the most frequently being used for the difference between means, relationships in two-way frequency tables and in multiple regressions (Ellis & Steyn, 2003:51). In this study the effects were represented by a statistic called Cohen's d , which reflects the standardised mean difference between the self assessment and superior assessment in terms of the entrepreneurial characteristics (Trochim & Donnelly, 2007:355). Cohen, as quoted by Ellis and Steyn (2003:52), gives the following guidelines for interpretation of the effect size:

- $d = 0.2$: small effect
- $d = 0.5$: medium effect
- $d = 0.8$: large effect

- **Pearson's product moment correlation coefficient (r)**

The most popular technique for indicating the relationship of one variable to another is correlation. A correlation coefficient is a statistical measure of covariance, or association between two variables (Zikmund & Babin, 2007:577). According to Davis (2005:365), the Pearson product moment correlation coefficient is the most appropriate indicator of association between two variables. The correlation coefficient, r , ranges from -1 to +1. If the value of r equals +1, a perfect positive correlation exists. No correlation is indicated if r equals 0 and if the value of r equals -1, a perfect negative relationship exists. In this study the relationships between the extracted constructs were investigated by calculating the Pearson product moment correlation coefficients (r).

- **Factor analysis**

In recent years, the multivariate statistical technique of factor analysis has found increased use in all realms of business research (Davis, 2005:444). Factor analysis is defined by Zikmund and Babin (2007:608) as a prototypical multivariate, interdependence technique that statistically identifies a reduced number of factors from a larger number of measured variables. The primary purpose of a factor analysis is to define the underlying structure in a set of variables that refer to a common theme or topic. When many variables are being measured, factor analysis recognises that some of these variables may be measuring different aspects of the same phenomenon and hence will be interrelated. It systematically reviews the correlation between each variable and all the other variables and groups together those that are highly intercorrelated with one another. The groups identify factors and are called latent variables which help to reduce redundancy where, for example, two or more variables may be measuring the same construct. They are latent in the sense that they are not directly observable, but each variable has a factor loading (correlation between a variable) that is the correlation between the variable and the factor with which it is mostly associated (Kent, 2007:420).

It often happens that some variables may be heavily loaded on other factors and this makes it unclear as to which factor the variable is describing. To solve this problem, factor rotation is used which is a mathematical way of simplifying factor results. Briefly, it involves creating new reference axes for a given set of variables and produces more obvious patterns of loadings. Two methods can be used namely the varimax and oblimin procedures (Zikmund & Babin, 2007:610-611).

The uses of factor analysis can broadly be classified into exploratory or confirmatory. Exploratory factor analysis is a method which is used for exploratory purposes to replace a large set of variables with a smaller set of factors (Kent, 2007:421). This is helpful when researchers are uncertain about how many factors may exist among a set of variables (Zikmund & Babin, 2007:608). In contrast, confirmatory factor analysis is method used to test the extent to which a hypothesised factor structure is supported by the data (Kent, 2007:421).

6.3.7 Step 7: Reporting the results

The final stage in the business research process is to interpret the information and draw conclusions relevant to managerial decision-making. During this step the researcher reports the conclusions and makes recommendations (Zikmund & Babin, 2007:68). In this study, this step is presented in the next chapter where the obtained results are discussed and interpreted.

6.4 SUMMARY

This chapter describes the business research process. Firstly, research is defined and more specifically the term business research. The business process comprises of seven steps and each of these steps is elaborated upon.

Identifying the problem and subsequent formulation of the problem statement is regarded as one of the most important steps in the business research process. The quality of the research is ultimately limited by the quality of the problem statement. A well stated and relevant problem statement is also important for the setting of the objectives which is derived from the problem statement. Objectives must therefore be specific and unambiguous.

The research design creates the overall structure for the rest of the procedures to be followed. A general approach or research strategy is firstly decided upon choosing between quantitative and qualitative research. Since quantitative research is typically used to answer questions about the complex nature of phenomena, with the purpose of describing and understanding the phenomena, this was also the research strategy adopted for this study. Three types of research designs are available namely exploratory research, descriptive research and casual research. Since this study is an attempt to determine the extent to which managers in agribusinesses perceived their organisational climate as conducive to corporate entrepreneurship, a descriptive research design is used. Descriptive research designs attempt to determine the extent of differences in needs, perceptions and attitudes of subgroups.

Four basic research methods for descriptive research, among other, exists namely experiments, secondary data studies, observation and surveys. For this study, surveys are deemed the appropriate method, since it is a method to collect primary data based on communication with a representative sample of individuals. More specifically, a mail survey consisting of a structured questionnaire was sent to managers within the relevant agribusinesses.

Two methods of sampling design are presented. The various types of probability sampling and non-probability sampling are discussed.

The process of gathering the data is discussed and 533 usable questionnaires were returned from respondents representing a response rate of 29.7%. Subsequently the data was processed and analysed. A description of the various statistical methods used in this study is also presented. The reliability of the measuring instrument was determined using an internal consistency test and more specifically Cronbach's coefficient alpha. Validity of the measuring instrument was determined by means of factor analysis.

The final step in the research process concerns the results and analysis of these results. The following chapter presents the results that were obtained from the study and provides an analysis of these results.

CHAPTER 7

DISCUSSION AND INTERPRETATION OF RESULTS

7.1 INTRODUCTION

This chapter builds on the research methodology described in the previous chapter by presenting, discussing and interpreting the results obtained from the empirical research.

In this study an attempt was made to determine the extent to which managers in agribusinesses perceived their business climate as conducive to corporate entrepreneurship.

The type of empirical research conducted was that of administering a measuring questionnaire at managers in agribusinesses in South Africa. The research consisted of a cross-sectional analysis which was conducted by means of a sample survey that made use of a questionnaire (see annexure A) as research measuring instrument to gather the required quantitative data.

Prior to the discussion on the findings of the entrepreneurial climate survey, a demographic profile in terms of the age, gender, race, highest qualifications and functional division in which the respondents worked in is presented.

It is also important that the measuring instrument used in this study be regarded as valid and reliable. To measure the validity of the measuring instrument an exploratory factor analysis was conducted. The reliability was determined by means of Cronbach alpha coefficients.

Furthermore, the relationships between the extracted variables were investigated by calculating the Pearson correlation coefficients. Effect sizes were measured to determine whether the effect of the relationship between two variables were important or meaningful.

Concerning the entrepreneurial climate survey, the results are presented showing the arithmetic means and standard deviation for each of the variables.

A comparison of the mean differences between demographic variables with regard to the determinants of corporate entrepreneurship was also examined by means of independent t-tests and effect sizes.

Finally, an attempt was made to determine the extent of differences between how managers rated themselves on a number of entrepreneurial characteristics and how they rated their superiors in terms of these same entrepreneurial characteristics. The arithmetic mean and standard deviation was calculated for each of the entrepreneurial characteristics regarding the self- and superior assessment. In order to determine how respondents' self perceptions of the entrepreneurial characteristics compare to their perception of their superiors, the mean scores of each of the entrepreneurial characteristics were compared by means of a t-tests and effect sizes.

7.2 DEMOGRAPHIC PROFILE OF RESPONDENTS

Section C of the survey questionnaire consisted of demographic information where respondents had to indicate their age group, gender, race, highest academic qualification and the functional division they work in.

7.2.1 Age group of respondents

- **Purpose of the question**

The purpose of question C01 in section C (refer annexure A) of the questionnaire was to determine the age group classifications of the respondents according to the five predetermined age groups. This data was also required to:

- Compare the differences in means between the demographic variable age (40 years and older and under 40 years old) and the entrepreneurial orientation variables.

- Compare the differences in means between the demographic variable age (40 years and older and under 40 years old) and the entrepreneurial climate variables.
- Compare the differences in means between the demographic variable age (40 years and older and under 40 years old) and the perceived success of the organisation variables.

- **Results obtained**

The age group classification of the respondents is indicated in table 7.1 below.

Table 7.1: Respondents by age group

Age group	Frequency	Percentage	Cumulative percentage
<29	42	7.9	7.9
30-39	173	32.5	40.4
40-49	136	25.5	65.9
50-59	166	31.1	97
60+	15	2.8	99.8
Missing	1	0.2	100
Total	533	100	

- **Analysis of results**

The majority of the participating managers in this study were between the ages 30 to 39 years old (32.5%), followed by the second highest group (31.2%) with the ages between 50 to 59 years old and the third highest group (25.5%) with the ages between 40 and 49 years old. Together these three groups account for 89% of the total respondents. The age groups 29 years and younger and 60 years and older, represent only 7.9% and 2.8% of the respondents respectively. One respondent did not indicate his/her age.

7.2.2 Gender of the respondents

- **Purpose of the question**

The purpose of question C02 in section C (refer annexure A) of the questionnaire was to determine the gender classification of the respondents namely male or female. This data was also required to:

- Compare the differences in means between the demographic variable gender (male and female) and the entrepreneurial orientation variables.
- Compare the differences in means between the demographic variable gender (male and female) and the entrepreneurial climate variables.
- Compare the differences in means between the demographic variable gender (male and female) and the perceived success of the organisation variables.

- **Results obtained**

The gender distribution of respondents is indicated in table 7.2 below.

Table 7.2: Respondents by gender

Gender	Frequency	Percentage
Male	448	84.1
Female	83	15.6
Missing	2	0.3
Total	533	100

- **Analysis of results**

Males clearly make up the majority of the respondents (84.1%) with females constituting 15.6% of the respondents. Two responders did not indicate their gender.

7.2.3 Race of the respondents

- **Purpose of the question**

The purpose of question C03 in section C (refer annexure A) of the questionnaire was to determine the race of the respondents according to the South African racial group classification namely Black, White, Coloured or Indian. This data were also required to:

- Compare the differences in means between the demographic variable race (Whites and Non-whites) and the entrepreneurial orientation variables.
- Compare the differences in means between the demographic variable gender (Whites and Non-whites) and the entrepreneurial climate variables.
- Compare the differences in means between the demographic variable gender (Whites and Non-whites) and the perceived success of the organisation variables.

- **Results obtained**

The race distribution of respondents is indicated in table 7.3 below.

Table 7.3: Respondents by race

Race	Frequency	Percentage
White	487	92.4
Black	10	1.9
Coloured	30	5.6
Indian	1	0.2
Missing	5	0.9
Total	533	100

- **Analysis of results**

The majority of the respondents (92.4%) were from the White race group. Only 10 respondents were Black managers (1.9%), 30 were Coloured managers (5.6%) and only one Indian manager (0.2%). Five respondents (0.9%) did not indicate their race.

7.2.4 Management levels of respondents

- **Purpose of the question**

The purpose of question C04 in section C (refer annexure A) of the questionnaire was to determine the managerial level of the respondents according to three predetermined levels.

This data was also required to:

- Compare the differences in means between the managerial levels (senior and junior management levels)* and the entrepreneurial orientation variables.
- Compare the differences in means between the managerial levels (senior and junior management levels)* and the entrepreneurial climate variables.
- Compare the differences in means between the managerial levels (senior and junior management levels)* and the perceived success of the organisation variables.

* For the purpose of comparing the means, the *top management* level and *middle management* level were combined to form **senior management**.

- **Results obtained**

The three managerial levels are indicated in table 7.4 below.

Table 7.4: Management levels of respondents

Management level	Frequency	Percentage
Top management	59	11
Middle management	182	34
Lower management	281	53
Missing	11	2
Total	533	100

- **Analysis of results**

Most of the managers (54%) were at lower level management with 35% at middle management level and 11% at top management level. Eleven respondents (2%) did not indicate their managerial level.

7.2.5 Highest academic qualifications of respondents

- **Purpose of the question**

The purpose of question C05 in section C (refer annexure A) of the questionnaire was to determine the highest academic qualification of the respondents by indicating their highest academic qualification from a list of six predefined groups in the questionnaire. This data was also required to:

- Compare the differences in means between the academic qualifications (matric and lower and post matric qualifications)* and the entrepreneurial orientation variables.
- Compare the differences in means between the academic qualifications (matric and lower and post matric qualifications)* and the entrepreneurial climate variables.
- Compare the differences in means between the academic qualifications (matric and lower and post matric qualifications)* and the perceived success of the organisation variables.

* For the purpose of comparing the means, the qualifications *matric* and *lower than matric* were combined to form the variable **lower than matric** and the qualifications *certificate*, *diploma*, *degree* and *post graduate degree* were combined to form the variable **post matric**.

- **Results obtained**

The academic qualifications as indicated by the respondents are shown in table 7.5 below.

Table 7.5: Highest academic qualifications of respondents

Qualification	Frequency	Percentage	Cumulative percentage
Lower than matric	19	3.5	3.5
Matric	169	31.7	35.2
Certificate	74	13.9	49.1
Diploma	94	17.6	66.7
Degree	70	13	79.7
Post graduate degree	99	18.8	98.5
Missing	8	1.5	100
Total	533	100	

- **Analysis of results**

The largest group of respondents (31.7%) obtained a matric and 31.8% of the respondents have a degree and post graduate qualification. Certificates and diplomas constitute 13.9% and 17.6% respectively and only 3.5% of the respondents have a lower than matric qualification. Eight respondents (1.5%) failed to indicate their highest academic qualifications.

7.2.6 Divisions in which respondents are working

- **Purpose of the question**

The purpose of question C06 in section C (refer annexure A) of the questionnaire was to determine in which of the divisions the respondents were working. Because the divisions between the various agribusinesses differed, a generic list of divisions was developed that represented all of the divisions within the different agribusinesses.

- **Results obtained**

The divisions representing all the different divisions within the various agribusinesses are indicated in table 7.6 below.

Table 7.6: Divisions in which respondents are working

Divisions	Frequency	Percentage
Executive management	11	2
Marketing, handling, processing & packaging of produce	183	34
Supply of production inputs (seed, crop care, animal feeds & management services)	62	12
Retail stores	76	14
Equipment (marketing, maintenance & manufacture of agriculture equipment)	34	6
Financial services & insurance	46	9
Corporate services	83	16
Other (commodity trading & subsidiaries)	20	4
Missing	18	3
Total	533	100

- **Analysis of results**

The majority of respondents (34%) work in a division that is concerned with the marketing, handling, processing and packaging of agricultural produce. The second largest group (16%) are in corporate services (internal audit, human resources and

corporate marketing) and the third largest group (14%) in retail stores. Executive management (2%) understandably is the smallest group. Financial services (9%), equipment (6%) and other (4%) which includes commodity trading and subsidiaries make up the remainder of the respondents. Eighteen respondents (3%) did not indicate the division in which they were working.

7.3 ENTREPRENEURIAL ORIENTATION

This section firstly describes the findings concerning the construct validity and reliability of the measuring instrument measuring the entrepreneurial orientation of agribusinesses. Entrepreneurial orientation was discussed in chapter two of this study (see section 2.4).

To measure the validity of the measuring instrument an exploratory factor analysis was conducted. Internal consistency (reliability) was determined by means of coefficient alpha by computing the average of all possible split-half reliabilities for the multiple item scale (Zikmund & Babin, 2007:322).

Secondly, the relationship between the five extracted variables, namely proactiveness, autonomy, risk-taking, innovativeness and competitive aggressiveness, were investigated by determining the Pearson correlation coefficients (r) between the variables.

Finally a comparison is also made between the differences in means of the demographic variables and the entrepreneurial orientation variables.

7.3.1 Construct validity of the measuring instrument

It is important that the measures or instrument a researcher uses measures precisely and accurately what it is supposed to measure. Reliability represents how precise a measure is in that the different attempts at measuring the same thing converge on the same point. Validity is the accuracy of a measure or the extent to which a score truthfully represent its concept (Zikmund & Babin, 2007:323). Reliability and validity are therefore characteristics of good measurement (Kent, 2007:144-145).

To assess the discriminant validity of the 27 items measuring the entrepreneurial orientation of managers in agribusinesses, an exploratory factor analysis was conducted using the computer programme SPSS (SPSS, 2008). An Oblimin oblique rotation was performed on the principal components of the exploratory factor analysis since there was theoretical justification to believe that the factors measuring entrepreneurial orientation would correlate with each other (Field, 2005:636). This was confirmed by the correlation matrix for these five variables which indicated correlations of 0.033 to 0.383 between the variables (Ellis & Steyn, 2003:53).

To determine the number of factors to be extracted, Kaiser's criterion was used, namely to retain factors with eigen-values greater than one (Field, 2005:735). A total of 24 items demonstrated sufficient discriminant validity by loading to a sufficient extent. The loading of three items, **innovativeness 09**, **proactiveness 01** and **competitive aggressiveness 04** (see appendix 1), was not significant (below the value of 0.4) and was deleted. The pattern matrix of the remaining 24 items is provided in Table 7.7.

Applying the factor extraction criterion that the eigen-values must be greater than one (Davis, 2005:446), five factors were extracted in the exploratory factor analysis explaining 53.15% of the variance before rotation. After rotation, these factors could be identified as the theoretical dimensions of **proactiveness**, **autonomy**, **risk-taking**, **innovativeness** and **competitive aggressiveness**. Two tests, Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were considered important in determining the appropriateness of the data for factor analysis (Gürbüz & Aykol, 2009:327). The data measuring the entrepreneurial orientation yielded a sampling adequacy of 0.897 and the Bartlett's test of sphericity yielded a *p*-value of smaller than 0.000 indicating that patterns of correlations are compact and that factor analysis should yield reliable factors (Field, 2005:640).

Table 7.7: Pattern matrix of Oblimin rotated-principle component factor analysis ⁽¹⁾

Item ⁽²⁾	Factor 1: Proactiveness	Factor 2: Autonomy	Factor 3: Risk taking	Factor 4: Innovativeness	Factor 5: Competitive Aggressiveness
Proactive 4	0.763	-0.056	0.108	-0.023	0.020
Innovativeness 7	0.761	-0.020	0.091	0.008	-0.026
Proactive 3	0.719	-0.066	0.041	0.232	-0.022
Innovativeness 2	0.647	0.030	0.083	0.146	0.020
Innovativeness 4	0.630	0.008	0.037	0.170	0.079
Innovativeness 8	0.590	0.143	0.016	0.003	-0.007
Risk 3	0.544	0.063	-0.181	-0.066	0.121
Innovativeness 6	0.457	0.080	0.220	0.085	0.006
Autonomy 4	0.141	0.768	-0.064	-0.028	0.094
Autonomy 1	-0.079	0.762	-0.067	0.083	0.008
Autonomy 2	0.199	0.700	0.038	0.034	-0.060
Autonomy 5	-0.159	0.414	0.367	0.113	0.049
Risk 2	0.000	-0.283	0.764	0.154	0.065
Risk 5	0.160	0.043	0.634	-0.011	0.108
Risk 4	0.204	0.222	0.523	-0.217	0.009
Autonomy 3	-0.044	0.306	0.507	-0.080	-0.060
Risk 1	0.061	-0.035	0.466	0.043	0.073
Innovation 3	-0.039	0.083	-0.103	0.882	0.007
Innovation 1	0.277	-0.044	-0.049	0.711	-0.018
Innovation 5	0.029	0.091	0.175	0.581	0.050
Competitive 1	-0.223	-0.014	0.031	-0.005	0.912
Competitive 3	0.315	0.086	0.001	-0.005	0.504
Competitive 2	0.295	-0.017	0.094	0.121	0.497
Proactive 2	0.311	0.030	0.053	0.005	0.445
Cronbach Alpha	0.855	0.676	0.647	0.678	0.672

(1) Loadings greater than 0.4 were considered significant

(2) The items included in the factor analysis are provided in Appendix 1

- **Factor 1: Proactiveness**

Factor one comprised of eight items. Two items (**proactiveness 03** and **proactiveness 04**) that were used to measure the latent variable *proactiveness* loaded onto factor one. Five items (**Innovativeness 07**, **Innovativeness 02**, **Innovativeness 04**, **Innovativeness 08** and **Innovativeness 06**), related to the latent variable *innovativeness* were also included in factor one, being regarded by respondents as being related to **proactiveness**. One item (**risk-taking 03**), used to

measure the latent variable *risk-taking*, was also included in factor one, being regarded by respondents as also being related to factor one.

- **Factor 2: Autonomy**

The second factor comprised four items. Out of the five items that were used to measure the latent variable *autonomy*, four items (**autonomy 04**, **autonomy 01**, **autonomy 02** and **autonomy 05**) loaded onto factor two as expected.

- **Factor 3: Risk-taking**

With regard to the third factor, comprising of five items, four items (**risk-taking 02**, **risk-taking 05**, **risk-taking 04** and **risk-taking 01**), out of the five items that were used to measure the latent variable, *risk-taking*, loaded onto this factor. One item (**autonomy 03**), measuring the latent variable *autonomy*, also loaded onto factor three.

- **Factor 4: Innovativeness**

Factor four consisted of three items. All three these items (**innovativeness 03**, **innovativeness 01** and **innovativeness 05**) were used to measure the latent variable *innovativeness*.

- **Factor 5: Competitive aggressiveness**

The final factor consisted of four items. Three items (**competitive aggressiveness 01**, **competitive aggressiveness 03** and **competitive aggressiveness 02**) that were used to measure the latent variable *competitive aggressiveness* loaded onto factor five. One item (**proactiveness 02**) used to measure the latent variable *proactiveness*, was also included in the fifth factor, being regarded by respondents as also being related to factor five.

The wording of the statements (items) measuring the five latent variables are provided in Appendix 1.

7.3.2 Reliability of the measuring instrument

To assess the internal consistency between the items of the measuring instrument, Cronbach alpha coefficients were calculated (Bryman & Bell, 2007:164). Coefficient alpha represents internal consistency by computing the average of all split-half reliabilities for a multiple-item scale (Zikmund & Babin, 2007:322). The coefficient varies between 0, for no reliability, to 1 for maximum reliability (Kent, 2007:142) and values of below 0.7 can realistically be expected with psychological constructs (Field, 2005:668). In this regard Bagozzi (1994:18) argues that a value of 0.6 is acceptable, although 0.7 is preferred to indicate a higher level of reliability.

All 533 participants' responses were used to determine the reliability of the extracted factors. The results indicate that the instrument used in this study to measure the entrepreneurial orientation of agribusiness managers, has acceptable reliability, with no factors below the Cronbach alpha value of 0.6 (refer to Table 7.7).

7.3.3 Relationship between the variables

To investigate the relationship between the five entrepreneurial orientation variables, namely **proactiveness**, **autonomy**, **risk-taking**, **innovativeness** and **competitive aggressiveness**, the Pearson correlation coefficients (*r*) were calculated and are presented in Table 7.8 (Field, 2005: 111).

Table 7.8: Results of the Pearson correlation coefficients (*r*) between variables

Variable	Proactiveness	Autonomy	Risk taking	Innovativeness	Competitive aggressiveness
Proactiveness	1.000	0.442*	0.344*	0.504*	0.593*
Autonomy	0.442*	1.000	0.410*	0.269*	0.411*
Risk-taking	0.344*	0.410*	1.000	0.175*	0.279*
Innovativeness	0.504*	0.269*	0.175*	1.000	0.340*
Competitive aggressiveness	0.593*	0.411*	0.279*	0.340*	1.000

* Correlations significant at the $p = 0.01$ level (2-tailed)

Factor scores for each participant were computed as the average of all items contributing to the relevant factor. This means that missing values for an individual were automatically replaced by the average of the other responses contributing to the relevant factor for the specific individual.

In order to determine whether the effect of the relationship between two variables is important or meaningful, the size of the effect should be measured. Effect sizes are useful because they provide an objective measure of the importance of an effect (Field, 2005:32). A correlation coefficient of 0 means there is no visible relationship and a value of 1 means that there is a perfect relationship. Cohen (1992:155-159) gave the following widely accepted guidelines about the interpretation of effects:

- $r = 0.10$ (small effect): in this case, the effect explains 1% of the variance
- $r = 0.30$ (medium effect): the effect accounts for 9% of the variance
- $r = 0.50$ (large effect): the effect accounts for 25% of the variance (Field, 2005:32; Cohen, 1992:155-159).

The results in Table 7.8 indicate that there are statistical significant ($p < 0.01$) correlations between all the variable combinations. Furthermore, practical significant (large effect: $r > 0.500$) correlations were calculated between the variable *proactiveness* and two other variables **innovativeness** ($r = 0.504$) and **competitive aggressiveness** ($r = 0.593$). Medium effects ($r > 0.3$) were calculated for the variable *autonomy* and three other variables **proactiveness** ($r = 0.442$), **risk-taking** ($r = 0.410$) and **competitive aggressiveness** ($r = 0.411$). Small effects ($r > 0.1$) were calculated between the variable *risk-taking* and two other variable **innovativeness** ($r = 0.175$) and **competitive aggressiveness** ($r = 0.279$) as well as between the variables **innovativeness** and **autonomy** ($r = 0.269$).

7.3.4 Entrepreneurial orientation survey results

The survey embodies the collective perceptions of managers in agribusinesses with regard to the five variables measuring the entrepreneurial orientation.

Managers in the agribusinesses were requested to answer the 27 items that measured the five extracted variables. The measuring items were rated on a five-point Likert scale where 1 = strongly disagree; 2 = disagree; 3 = uncertain; 4 = agree and 5 = strongly agree. Managers therefore had to indicate the extent to which they agreed with each of the measuring items. Table 7.9 indicates the results showing the mean and standard deviation (*s*) for each variable, ranking the means from highest to lowest.

Table 7.9: Entrepreneurial orientation survey results

Factor	<i>n</i>	Mean	<i>s</i>
Innovativeness	531	3.839	0.194
Proactiveness	522	3.754	0.251
Autonomy	527	3.592	0.414
Competitive aggressiveness	524	3.497	0.249
Risk-taking	521	2.893	0.247

The factor **innovativeness** ($\bar{x} = 3.839$) was ranked the highest by managers in agribusinesses with **risk-taking** ($\bar{x} = 2.893$) ranked a disappointing last. **Proactiveness** ($\bar{x} = 3.754$) was ranked second highest followed by **autonomy** ($\bar{x} = 3.592$) and **competitive aggressiveness** ($\bar{x} = 3.497$). The standard deviation (*s*) ranged between a high of 0.414 and a low of 0.194. The results in table 7.9 indicate that there was general agreement amongst respondents regarding the entrepreneurial orientation variables.

7.3.5 Comparing the mean differences between the demographic variables with regard to the entrepreneurial orientation variables

The difference in the means between the demographical variables **age** (under 40 years and 40 years and older), **gender** (male and female), **race** (white and non-white), **management levels** (senior and junior) and highest academic **qualifications** (matric and lower and post matric) of the participating managers with regard to the entrepreneurial orientation variables **proactiveness**, **autonomy**, **risk-taking**, **innovativeness** and **competitive aggressiveness**, were examined by independent t-tests (*p*-values) and effect sizes (*d*-values).

Statistical significance tests have the tendency to yield small p -values (indication of significance) as the size of the data set increases. The effect size, however, is independent of sample size and is a measure of practical significance (Ellis & Steyn 2003: 51). Effect sizes (d) will be interpreted, according to Cohen's guidelines, as follows: small effect ($d = 0.2$), medium effect ($d = 0.5$) and large effect ($d = 0.8$). Results with medium effects can be regarded as visible effects and with $d \geq 0.8$ as practically significant, since it is the result of a difference having a large effect (Field, 2005: 32; Ellis & Steyn, 2003: 51-53; Thompson, 2001: 80-93).

Table 7.10 shows the relationship between the five variables (extracted factors) and the demographic variables, with the means (\bar{x}), standard deviation (s), independent t-test (p -value) and effect sizes (d -values).

Table 7.10: Relationship between extracted entrepreneurial orientation factors and demographical variables

Age								
Variable	Under 40			40+			Comparison	
	n	mean	s	n	mean	s	p	d
Proactiveness	215	3.734	0.539	317	3.770	0.514	0.439	0.07
Autonomy	215	3.541	0.658	317	3.626	0.610	0.129	0.13
Risk-taking	215	2.854	0.646	317	2.936	0.578	0.128	0.13
Innovativeness	215	3.837	0.657	317	3.838	0.673	0.981	0.00
Competitive aggressiveness	215	3.493	0.646	317	3.509	0.585	0.764	0.03
Gender								
Variable	Male			Female			Comparison	
	n	mean	s	n	mean	s	p	d
Proactiveness	448	3.755	0.524	83	3.758	0.583	0.957	0.01
Autonomy	448	3.605	0.297	83	3.518	0.637	0.249	0.14
Risk-taking	448	2.885	0.603	83	3.001	0.627	0.112	0.18
Innovativeness	448	3.860	0.672	83	3.875	0.643	0.575	0.07
Competitive aggressiveness	448	3.497	0.607	83	3.529	0.629	0.668	0.05

Race								
Variable	Non White			White			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Proactiveness	41	3.807	0.512	487	3.752	0.523	0.514	0.11
Autonomy	41	3.548	0.714	487	3.594	0.625	0.656	0.06
Risk-taking	41	3.086	0.596	487	2.887	0.606	0.044	0.33
Innovativeness	41	3.756	0.856	487	3.846	0.645	0.403	0.11
Competitive aggressiveness	41	3.573	0.623	487	3.498	0.605	0.448	0.12
Managerial levels								
Variable	Senior			Junior			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Proactiveness	204	3.721	0.528	188	3.736	0.533	0.779	0.03
Autonomy	204	3.704	0.611	188	3.551	0.572	0.011	0.25
Risk-taking	204	2.891	0.615	188	2.875	0.603	0.799	0.03
Innovativeness	204	3.801	0.696	188	3.805	0.683	0.960	0.01
Competitive aggressiveness	204	3.490	0.618	188	3.432	0.614	0.349	0.09
Qualifications								
Variable	Matric and lower			Post matric			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Proactiveness	186	3.807	0.460	339	3.722	0.556	0.076	0.15
Autonomy	186	3.528	0.639	339	3.626	0.625	0.091	0.15
Risk-taking	186	2.929	0.575	339	2.884	0.620	0.414	0.07
Innovativeness	186	3.993	0.527	339	3.750	0.719	0.000	0.34
Competitive aggressiveness	186	3.516	0.525	339	3.487	0.652	0.595	0.05

* Statistical significant at the $p = 0.05$ level (2-tailed)

The results indicated no statistical significant difference ($p < 0.05$) in the mean values between the perceptions of respondents 40 years and older and respondents younger than 40 years with regard to all the variables. Although the respondents 40 years and older rated the variables more positive than their younger counterparts, the differences were not practical significant and only small effect sizes could be determined.

Except for autonomy, female managers rated the variables more positive than their male counterparts. No statistical difference for any of the variables could be calculated and only small effect sizes were realised.

With regard to the variable race, a statistical significant difference ($p = 0.044$) between Non-white managers (Black, Indian and Coloured) and White managers with regard to the variable risk-taking was calculated. Although Non-white managers rated the variable more positive than White managers, the difference was not practical significant and only a small effect size ($d = 0.33$) could be determined.

Senior management (top and middle management) rated the variable autonomy statistical significant ($p = 0.011$) higher than junior management. The difference is however not practical significant and only a small effect size ($d = 0.25$) could be determined.

The variable innovativeness were rated statistical significant ($p = 0.000$) more positive by the respondents with a post matric qualification than those respondents with a matric and lower qualification. A small effect size ($d = 0.34$) indicates that the difference is not practical significant.

7.4 ENTREPRENEURIAL CLIMATE

This section firstly describes the findings concerning the construct validity and reliability of the measuring instrument measuring the entrepreneurial climate of agribusinesses. Creating an entrepreneurial climate to support corporate entrepreneurship was the topic of chapter 4.

To measure the validity of the measuring instrument an exploratory factor analysis was conducted. Internal consistency (reliability) was determined by means of coefficient alpha by computing the average of all possible split-half reliabilities for the multiple item scale (Zikmund & Babin, 2007:322).

Secondly, the relationship between the seven extracted variables, namely **management support/encouragement, customer orientation, rewards/**

incentives, strategic intent, idea generation, discretionary time and organisational learning were investigated by determining the Pearson correlation coefficients (r) between the variables.

Finally a comparison is also made between the differences in means of the demographic variables and the entrepreneurial climate variables.

7.4.1 Construct validity of the measuring instrument

It is important that the measures or instrument a researcher uses measures precisely and accurately what it is supposed to measure. Reliability represents how precise a measure is in that the different attempts at measuring the same thing converge on the same point. Validity is the accuracy of a measure or the extent to which a score truthfully represent its concept (Zikmund & Babin, 2007:323). Reliability and validity are therefore characteristics of good measurement (Kent, 2007:144-145).

To assess the discriminant validity of the 52 items measuring the entrepreneurial climate of agribusinesses an exploratory factor analysis, using the Varimax rotation method on the principle components, was conducted using the computer programme SPSS (SPSS, 2008).

Kaiser's criterion was used to determine the number of factors to be extracted, namely to retain factors with eigen-values greater than one (Field, 2005:735). A total of 47 items demonstrated sufficient discriminant validity by loading to a sufficient extent. The loading of five items, **structure 06, structure 08, culture 18, culture 19 and human resource management 03**, was not significant (for the purpose of this analysis below the value of 0.35) and was deleted. The pattern matrix of the remaining 47 items is provided in Table 7.11.

Table 7.11: Rotated component matrix of Varimax rotated-principle component factor analysis ⁽¹⁾

Item ⁽²⁾	Factor 1: Management Support/ encouragement	Factor 2: Customer orientation	Factor 3: Rewards/ incentives	Factor 4: Strategic intent	Factor 5: Idea generation	Factor 6: Discretionary time	Factor 7: Organisational learning	Factor 8: Organisational boundaries	Factor 9: Tolerance For failure	Factor 10: Work discretion
Culture 05	0.660	0.143	0.213	0.145	-0.014	0.106	0.024	0.048	0.087	0.210
Structure 05	0.646	0.094	0.073	0.036	0.157	0.014	0.157	0.125	0.035	-0.069
Culture 14	0.635	0.088	0.130	0.094	-0.032	0.038	0.077	-0.076	-0.022	-0.016
Hrm 08	0.590	0.189	0.242	0.201	0.082	-0.009	0.013	0.060	0.086	-0.046
Culture 12	0.543	0.159	0.145	0.044	0.326	0.142	0.137	-0.031	0.060	0.103
Culture 04	0.510	0.064	0.181	0.188	0.268	0.215	0.086	0.059	0.028	0.141
Culture 20	0.474	0.266	0.024	0.150	0.370	-0.003	-0.025	0.075	-0.161	-0.016
Structure 01	0.445	0.260	0.260	0.205	0.051	0.336	0.188	-0.010	0.045	0.024
Vision 01	0.435	0.183	0.341	0.368	0.228	0.015	0.011	0.042	-0.073	-0.061
Culture 21	0.388	0.329	0.135	0.268	0.220	0.019	0.137	-0.014	-0.224	0.176
Culture 02	0.367	0.034	0.169	0.259	0.167	-0.116	-0.030	0.170	0.251	0.264
Customer 04	0.221	0.753	0.121	0.025	0.077	0.093	0.016	0.011	0.033	-0.101
Customer 06	0.113	0.714	0.176	0.079	-0.003	-0.017	-0.007	-0.115	0.162	0.006
Customer 02	0.039	0.703	0.043	0.075	0.073	0.055	0.229	0.107	-0.065	0.084
Customer 05	0.118	0.612	-0.055	0.137	0.238	0.031	-0.072	-0.036	0.086	-0.066
Customer 01	0.244	0.569	0.033	0.169	-0.023	0.031	0.212	0.172	-0.184	0.034
Customer 03	0.134	0.555	0.154	0.319	0.177	0.094	0.056	0.026	-0.093	0.023
Hrm 11	0.157	0.047	0.714	0.105	0.060	-0.009	0.041	0.054	0.111	0.108
Culture 10	0.231	0.074	0.623	0.208	0.160	0.072	-0.010	0.026	0.028	-0.050
Hrm 10	0.342	0.027	0.548	0.219	0.025	-0.185	-0.029	0.256	0.148	0.078
Culture 09	0.213	0.186	0.511	0.028	0.072	0.239	0.214	0.181	-0.155	-0.178
Culture 01	0.376	0.218	0.467	0.167	0.158	0.276	0.063	-0.011	-0.036	0.048
Culture 08	0.420	0.113	0.452	0.066	0.051	0.217	-0.013	0.121	0.285	0.118
Vision 02	0.258	0.175	0.132	0.747	0.132	0.060	0.043	0.038	-0.032	-0.057
Vision 03	0.085	0.226	0.265	0.592	0.128	0.120	0.173	-0.087	-0.065	0.172
Hrm 01	0.258	0.278	0.102	0.579	-0.113	0.042	0.320	-0.020	0.009	-0.064
Vision 04	0.390	0.190	0.265	0.421	0.199	0.203	-0.019	-0.045	0.006	-0.108
Culture 07	0.139	0.110	0.366	0.375	0.268	0.156	0.214	0.048	0.083	0.074
Hrm 07	0.210	0.090	0.130	0.358	0.322	0.019	0.151	0.206	-0.211	-0.244
Culture 13	0.327	0.167	0.174	0.093	0.528	0.105	-0.059	0.031	0.236	0.030
Hrm 06	0.170	0.096	0.447	0.085	0.522	0.127	0.089	-0.019	0.042	0.011
Structure 06	0.090	0.288	0.122	0.111	0.486	0.105	0.269	-0.294	-0.051	0.059
Culture 16	0.264	0.257	0.091	0.219	0.453	0.032	0.322	-0.040	-0.063	0.049

Item ⁽²⁾	Factor 1: Management Support/ encouragement	Factor 2: Customer orientation	Factor 3: Rewards/ Incentives	Factor 4: Strategic intent	Factor 5: Idea generation	Factor 6: Discretionary time	Factor 7: Organisational learning	Factor 8: Organisational boundaries	Factor 9: Tolerance For failure	Factor 10: Work discretion
Culture 06	0.097	0.025	0.020	0.056	0.114	0.726	0.120	0.103	0.052	-0.022
Culture 07	0.361	0.027	0.115	0.010	0.142	0.622	0.123	0.061	0.074	-0.019
Structure 07	-0.131	-0.188	0.110	-0.199	-0.094	0.607	-0.180	-0.034	0.050	0.286
Hrm 05	0.034	0.006	-0.129	0.259	0.112	-0.022	0.695	-0.008	0.160	0.005
Culture 17	0.120	-0.198	0.290	-0.168	0.089	0.211	0.565	-0.022	-0.033	-0.002
Hrm 13	0.380	0.197	0.292	-0.155	0.039	0.160	0.495	-0.094	-0.089	0.032
Structure 03	0.111	0.071	0.064	0.099	0.031	-0.049	0.029	0.694	0.170	0.051
Structure 02	0.084	0.086	0.149	-0.130	-0.089	0.140	0.038	0.571	-0.071	0.209
Hrm 02	-0.140	-0.076	0.052	0.063	-0.098	0.209	-0.283	0.511	0.181	0.102
Culture 03	0.026	-0.009	-0.050	-0.043	0.083	0.234	0.037	0.107	0.624	-0.025
Hrm 12	-0.002	0.060	0.277	-0.061	-0.120	-0.077	0.037	0.036	0.594	0.280
Culture 11	0.279	-0.046	0.114	0.001	0.071	-0.062	0.022	0.301	0.435	-0.225
Hrm 04	0.197	0.002	0.064	0.032	-0.027	0.067	0.024	0.140	0.027	0.710
Hrm 09	-0.051	-0.127	-0.041	-0.112	0.278	0.004	0.003	0.423	0.046	0.568
Cronbach Alpha	0.858	0.796	0.784	0.780	0.652	0.509	0.541	0.478	0.368	0.445

(1) Loadings greater than 0.35 were considered significant

(2) The items included in the factor analysis are provided in Appendix 2

Applying the factor extraction criterion that the eigen-values must be greater than one (Davis, 2005:446), ten factors were extracted in the exploratory factor analysis explaining 53.37% of the variance before rotation. After rotation, these factors could be identified as the theoretical dimensions of **management support/encouragement**, **customer orientation**, **rewards/incentives**, **strategic intent**, **idea generation**, **discretionary time**, **organisational learning**, **organisational boundaries**, **tolerance for failure** and **work discretion**. Two tests, Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were considered important in determining the appropriateness of the data for factor analysis (Gürbüz & Aykol, 2009:327). The data measuring the entrepreneurial orientation yielded a sampling adequacy of 0.923 and the Bartlett's test of sphericity yielded a p-value of smaller than 0.000 indicating that patterns of correlations are compact and that factor analysis should yield reliable factors (Field, 2005:640).

After rotation, seven items loaded significantly onto more than one factor (values greater than 0.35). The items **culture 01** and **culture 08** loaded on both the factors **management support/encouragement** and **rewards/incentives**. Rather than deleting the items, it was decided to classify it under the factor that has the highest interpretation value and both items were classified under the factor **rewards/incentives**. The item **vision 04** loaded on both the factors **management support/encouragement** and **strategic intent**. This item was classified under the factor **rewards/incentives** since it yielded the highest loading. The item **culture 07** loaded onto both the factors **rewards/incentives** and **strategic intent**. The item was classified **strategic intent**, under the factor that yielded the highest factor loading. The item **human resource management 06** loaded onto both factors **reward/incentives** and **idea generation**. Yielding the highest factor loading the item was classified under the factor **idea generation**. The items **vision 01** and **culture 20** loaded both onto factor **management support/encouragement** and **strategic intent** and **idea generation** respectively. In both instances the items were classified under **management support/encouragement** which yielded the highest factor loading.

The wording of the statements (items) measuring the four latent variables are provided in Appendix 2.

- **Factor 1: Management support/encouragement**

Factor one comprised of eleven items. Seven items (**culture 05**, **culture 14**, **culture 12**, **culture 04**, **culture 20**, **culture 21** and **culture 02**), that were used to measure the latent variable *culture* loaded onto this factor. Two items (**structure 05** and **structure 01**) that were used to measure the latent variable *structure* also loaded onto this factor. The items **human resource management 08** and **vision 01** that were used to measure the latent variables *human resource management* and *vision* respectively were also regarded by respondents as additional measures to measure factor one.

- **Factor 2: Customer orientation**

The second factor labelled **customer orientation** consisted of six items. All six items that were used to measure the latent variable *customer orientation* (see appendix 2) loaded onto factor two as expected.

- **Factor 3: Rewards/ incentives**

With regard to the third factor, labelled **rewards/incentives** consisted of six items. Four items (**culture 10**, **culture 09**, **culture 01** and **culture 08**) that were used to measure the latent variable *culture* loaded onto factor three. Two items (**human resource management 11** and **human resource management 10**) that were used to measure the latent variable *human resource management* were also regarded by respondents as items measuring factor three.

- **Factor 4: Strategic intent**

Factor four labelled **strategic intent** consisted of six items. Three items (**vision 02**, **vision 03** and **vision 04**) that were used to measure the latent variable *vision* loaded onto factor four. Two items (**human resource management 01** and **human resource management 07**) that were used to measure the latent variable *human resource management* also loaded onto factor four. One item (**culture 07**) that was

used to measure the latent variable *culture* were also regarded by respondents to measure factor four.

- **Factor 5: Idea generation**

The fifth factor labelled **idea generation** consisted of four items. Two items (**culture 13** and **culture 16**) that were used to measure the latent variable *culture* loaded onto factor five. Item **human resource management 06** and item **structure 06** that were used to measure the latent variables *human resource management* and *structure* respectively also loaded onto factor five.

- **Factor 6: Discretionary time**

Three items make up factor six and was labelled **discretionary time**. Two items (**culture 06** and **culture 07**) that were used to measure the latent variable *culture* loaded onto factor six. One more item (**structure 07**) that was used to measure the latent variable *structure* was also regarded by respondents to measure factor six.

- **Factor 7: Organisational learning**

With regards to factor 7, labelled **organisational learning** consisted of three items. Two items (**human resource management 05** and **human resource management 13**) that were used to measure the latent variable *human resource management* loaded onto factor seven. Respondents regarded one more item (**culture 17**) that was used to measure the latent variable *culture*, to also measure factor seven.

- **Factor 8: Organisational boundaries**

Factor eight consisted of three items and labelled **organisational boundaries**. Two items (**structure 03** and **structure 02**) that were used to measure the latent variable **structure** and one item (**human resource management 13**) that were used to measure the latent variable *human resource management*, loaded onto factor eight.

- **Factor 9: Tolerance for failure**

Three items make up factor nine and was labelled **tolerance for failure**. Two items (**culture 03** and **culture 11**) that were used to measure the latent variable **culture** loaded onto factor six. One more item (**human resource management 12**) that was used to measure the latent variable *human resource management* was also regarded by respondents to measure factor nine.

- **Factor 10: Work discretion**

Factor ten consists of two items and was labelled **work discretion**. Both items (**human resource management 04** and **human resource management 09**) that were used to measure the latent variable *human resource management* loaded onto factor ten.

7.4.2 Reliability of the measuring instrument

To assess the internal consistency between the items of the measuring instrument, Cronbach alpha coefficients were calculated (Bryman & Bell, 2007:164). Coefficient alpha represents internal consistency by computing the average of all split-half reliabilities for a multiple-item scale (Zikmund & Babin, 2007:322). The coefficient varies between 0, for no reliability, to 1 for maximum reliability (Kent, 2007:142). In this regard Field (2005:668) argues that the values achieved are in part a function of the number of items and the more items on the scale the larger the value of alpha will be. Furthermore, there is agreement that the desired degree of reliability is also a function of the purpose of the research (Kent, 2007:143) and values of below 0.7 can realistically be expected with psychological constructs (Field, 2005:668). This study consisted of psychological constructs and because factors six and seven only consisted of three items each, a lower Cronbach alpha value of 0.5 was regarded as acceptable for the purpose of this study.

All 533 participants' responses were used to determine the reliability of the extracted factors. The results indicate that the instrument used in this study to measure the

entrepreneurial climate of agribusiness managers, does not have acceptable reliability and three factors were below the Cronbach alpha value of 0.5. These three factors **organisational boundaries**, **tolerance for failure** and **work discretion** will therefore be disregarded for the remainder of the study. Refer to Table 7.11.

7.4.3 Relationship between the variables

To investigate the relationship between the seven variables, namely **management support/encouragement**, **customer orientation**, **rewards/incentives**, **strategic intent**, **idea generation**, **discretionary time** and **organisational learning** the Pearson correlation coefficients (r) were calculated and are presented in Table 7.12 (Field, 2005: 111). Factor scores for each participant were computed as the average of all items contributing to the relevant factor. This means that missing values for an individual were automatically replaced by the average of the other responses contributing to the relevant factor for the specific individual.

Table 7.12: Results of the Pearson correlation coefficients (r) between variables

Variable	Management support/encouragement	Customer orientation	Rewards/incentives	Strategic intent	Idea generation	Discretionary time	Organisational learning
Management support/encouragement	1.000	0.512**	0.695**	0.672**	0.648**	0.342**	0.122
Customer orientation	0.512**	1.000	0.394**	0.530**	0.460**	0.250**	0.020
Rewards/incentives	0.695**	0.394**	1.000	0.582**	0.533**	0.336**	0.215**
Strategic intent	0.672**	0.530**	0.582**	1.000	0.587**	0.320**	0.018
Idea generation	0.648**	0.460**	0.533**	0.587**	1.000	0.307**	-0.009
Discretionary time	0.342**	0.250**	0.336**	0.320**	0.307**	1.000	0.150**
Organisational learning	0.122	0.020	0.215**	0.018	-0.009	0.150**	1.000

* Correlations significant at the $p = 0.01$ level (2-tailed)

In order to determine whether the effect of the relationship between two variables is important or meaningful, the size of the effect should be measured. Effect sizes are useful because they provide an objective measure of the importance of an effect

(Field, 2005:32). A correlation coefficient of 0 means there is no visible relationship and a value of 1 means that there is a perfect relationship.

Cohen (1992:155-159) gave the following widely accepted guidelines about the interpretation of effects:

- $r = 0.10$ (small effect): in this case, the effect explains 1% of the variance
- $r = 0.30$ (medium effect): the effect accounts for 9% of the variance
- $r = 0.50$ (large effect): the effect accounts for 25% of the variance (refer to Field, 2005:32; Cohen, 1992:155-159).

The results in Table 7.12 indicate that there are statistical significant ($p < 0.01$) correlations between all the variable combinations except for the variable combinations between *organisational learning* and **management support/encouragement**, **customer orientation**, **strategic intent** and **idea generation**.

Practical significant (large effect: $r > 0.500$) correlations were calculated between the variable combinations of *management support/encouragement* and **customer orientation** ($r = 0.512$), **rewards/incentives** ($r = 0.695$), **strategic intent** ($r = 0.672$) and **idea generation** ($r = 0.648$), between the variable combinations of *customer orientation* and **strategic intent** ($r = 0.530$), between the variable combinations of *rewards/incentives* and **strategic intent** ($r = 0.582$) and **idea generation** ($r = 0.533$) and finally between the variable combination of *strategic intent* and **idea generation** ($r = 0.587$).

Medium effect ($r > 0.3$) correlations were determined between the variable combinations of *discretionary time* and the variables **management support/encouragement** ($r = 0.342$), **rewards/incentives** ($r = 0.336$), **strategic intent** ($r = 0.320$) and **idea generation** ($r = 0.307$) and between the variable combinations of *customer orientation* with **rewards/incentives** ($r = 0.394$) and **idea generation** ($r = 0.460$).

Finally, small effect ($r > 0.1$) correlations were determined between the variable combination of *customer orientation* and **discretionary time** ($r = 0.250$) and between the variable combinations of *organisational learning* and **rewards/incentives** ($r = 0.215$) and **discretionary time** ($r = 0.150$).

7.4.4 Entrepreneurial climate survey results

The results for the entrepreneurial climate survey is presented in table 7.13 and ranked in order of the highest to the lowest mean value.

Table 7.13: Entrepreneurial climate survey results

Factor	<i>n</i>	Mean	<i>s</i>
Organisational learning	531	3.952	0.291
Customer orientation	530	3.770	0.298
Strategic intent	529	3.598	0.256
Idea generation	528	3.553	0.317
Management support/ encouragement	525	3.331	0.251
Discretionary time	530	2.979	0.148
Rewards/incentives	525	2.962	0.305

Organisational learning ($\bar{x} = 3.952$) was ranked highest by managers in the agribusinesses followed by **customer orientation** ($\bar{x} = 3.770$), **strategic intent** ($\bar{x} = 3.598$), **idea generation** ($\bar{x} = 3.553$) and **management support/encouragement** ($\bar{x} = 3.331$). **Discretionary time** ($\bar{x} = 2.979$) and **rewards/incentives** ($\bar{x} = 2.962$) were ranked the lowest. The standard deviation (*s*) ranged between a high of 0.317 and a low of 0.148. The results in table 7.13 indicate that there was general agreement amongst respondents regarding the entrepreneurial climate variables.

7.4.5 Comparing the mean differences between the demographic variables with the entrepreneurial climate variables

The difference in the means between the demographical variables **age** (under 40 years and 40 years and older), **gender** (male and female), **race** (white and non-white), **management levels** (senior and junior) and highest academic **qualifications**

(matric and lower and post matric) of the participating managers with regard to the variables measuring the entrepreneurial climate in the participating businesses, namely **management support/encouragement, customer orientation, rewards/incentives, strategic intent, idea generation, discretionary time and organisational learning** were examined by independent t-tests (p -values) and effect sizes (d -values).

Statistical significance tests have the tendency to yield small p -values (indication of significance) as the size of the data set increases. The effect size is independent of sample size and is a measure of practical significance (Ellis & Steyn 2003: 51). Effect sizes (d) will be interpreted, according to Cohen's guidelines, as follows: small effect ($d = 0.2$), medium effect ($d = 0.5$) and large effect ($d = 0.8$). Results with medium effects can be regarded as visible effects and with $d \geq 0.8$ as practically significant, since it is the result of a difference having a large effect (Field, 2005: 32; Ellis & Steyn, 2003: 51-53; Thompson, 2001: 80-93). Table 7.14 shows the relationship between the seven variables (extracted factors) and the demographic variables, with the means (\bar{x}), standard deviation (s), independent t-test (p -value) and effect sizes (d -values).

Table 7.14: Relationship between extracted factors and demographical variables

Variable	Age						Comparison	
	Under 40			40+				
	n	mean	s	n	mean	s	p	d
Management support/encouragement	215	3.332	0.601	317	3.337	0.551	0.931	0.01
Customer orientation	215	3.812	0.581	317	3.743	0.580	0.182	0.12
Rewards/incentives	215	2.896	0.659	317	3.017	0.631	0.033*	0.18
Strategic intent	215	3.582	0.689	317	3.612	0.626	0.598	0.04
Idea generation	215	3.507	0.605	317	3.576	0.530	0.162	0.11
Discretionary time	215	2.903	0.756	317	3.037	0.763	0.045*	0.18
Organisational learning	215	3.950	0.555	317	3.959	0.547	0.851	0.02

Gender								
Variable	Male			Female			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Management support/encouragement	448	3.339	0.567	83	3.318	0.600	0.753	0.04
Customer orientation	447	3.773	0.584	83	3.759	0.574	0.834	0.03
Rewards/incentives	448	2.973	0.654	83	2.934	0.594	0.613	0.06
Strategic intent	448	3.604	0.654	83	3.596	0.646	0.949	0.01
Idea generation	448	3.547	0.545	83	3.551	0.654	0.955	0.01
Discretionary time	448	3.042	0.763	83	2.662	0.685	0.000*	0.50
Organisational learning	448	3.969	0.542	83	3.883	0.592	0.190	0.15
Race								
Variable	Non White			White			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Management support/encouragement	41	3.479	0.588	487	3.324	0.569	0.096	0.26
Customer orientation	41	3.905	0.588	487	3.760	0.580	0.125	0.25
Rewards/incentives	41	3.155	0.597	487	2.952	0.647	0.054	0.31
Strategic intent	41	3.756	0.614	487	3.588	0.655	0.115	0.26
Idea generation	41	3.561	0.544	487	3.546	0.566	0.872	0.03
Discretionary time	41	3.178	0.683	487	2.963	0.767	0.083	0.28
Organisational learning	41	4.020	0.497	487	3.949	0.556	0.429	0.13

Managerial levels								
Variable	Senior			Junior			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Management support/encouragement	204	3.312	0.559	188	3.317	0.590	0.929	0.01
Customer orientation	204	3.780	0.586	188	3.775	0.535	0.931	0.01
Rewards/incentives	204	2.953	0.653	188	2.928	0.628	0.698	0.04
Strategic intent	204	3.556	0.660	188	3.579	0.662	0.728	0.04
Idea generation	204	3.562	0.519	188	3.541	0.574	0.701	0.04
Discretionary time	204	3.178	0.732	188	2.919	0.745	0.001*	0.35
Organisational learning	204	3.970	0.548	188	4.000	0.527	0.589	0.05
Qualifications								
Variable	Matric and lower			Post matric			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Management support/encouragement	186	3.385	0.530	339	3.300	0.593	0.105	0.14
Customer orientation	186	3.744	0.595	339	3.783	0.574	0.463	0.07
Rewards/incentives	186	2.999	0.616	339	2.942	0.660	0.329	0.09
Strategic intent	186	3.659	0.568	339	3.560	0.693	0.096	0.14
Idea generation	186	3.560	0.552	339	3.538	0.572	0.669	0.04
Discretionary time	186	2.863	0.758	339	3.051	0.757	0.007*	0.25
Organisational learning	186	3.977	0.546	339	3.947	0.552	0.554	0.05

* Statistical significant at the $p = 0.05$ level (2-tailed)

The results indicated that respondents over the age of 40 years rated all the variables, except **customer orientation**, more positively than their younger counterparts. The variables **rewards/incentives** ($p = 0.033$) and **discretionary time** ($p = 0.045$) indicated a statistical significant difference in the mean values between respondents older than 40 years and respondents 40 years and younger. None of the

differences were practical significant and only small effect sizes ($d = 0.18$ and $d = 0.18$ respectively) were calculated.

Female respondents were less positive in rating the variables with none of the variables more positive than males. The variable **discretionary time** indicated a statistical significant difference in the mean values between males and females ($p = 0.000$). The difference is not practical significant and a medium effect size ($d = 0.5$) was calculated.

As far as race is concerned, Non-whites rated the entire variables more positive than Whites. None of the variables indicated a statistical difference in the mean values between Non-white and White respondents.

Senior management rated four of the variables more positive than their junior counterparts, whilst junior management were more positive in three of the variables. One variable, **discretionary time** ($p = 0.001$), showed a statistical significant difference in the mean value between senior and junior management. The difference was not practical significant with a small effect sizes of $d = 0.35$ calculated.

Finally, respondents with a matric and lower qualification rated four of the variable more positive and three of the variables less positive than respondents with a post matric qualification. One variable, **discretionary time** ($p = 0.007$) showed a statistical significant difference in the mean values between respondents with a matric and lower qualification and respondents with a post matric qualification. With a small effects size ($d = 0.25$) determined, the difference is not practical significant.

7.5 PERCEIVED SUCCESS

This section describes the findings concerning the construct validity and reliability of the measuring instrument and the relationship between the variables. A comparison is also made between the mean differences of demographic variables with the perceived success variables.

7.5.1 Construct validity of the measuring instrument

It is important that the measures or instrument a researcher uses measures precisely and accurately what it is supposed to measure. Reliability represents how precise a measure is in that the different attempts at measuring the same thing converge on the same point. Validity is the accuracy of a measure or the extent to which a score truthfully represent its concept (Zikmund & Babin, 2007:323). Reliability and validity are therefore characteristics of good measurement (Kent, 2007:144-145). To assess the discriminant validity of the 11 items measuring the perceived success of agribusinesses, an exploratory factor analysis was conducted using the computer programme SPSS (SPSS, 2008). An Oblimin oblique rotation was performed on the principal components of the exploratory factor analysis since there was theoretical justification to believe that the factors measuring perceived success would correlate with each other (Field, 2005:636). This was confirmed by the correlation matrix for the two variables which indicated a correlation of 0.569 between the variables (Ellis & Steyn, 2003:53), confirming that an oblique rotation should have been used (Field, 2005:636).

To determine the number of factors to be extracted, Kaiser's criterion was used, namely to retain factors with eigen-values greater than one (Field, 2005:735). A total of 11 items demonstrated sufficient discriminant validity by loading to a sufficient extent. The pattern matrix of the 11 items is provided in Table 7.15.

Table 7.15: Pattern matrix of Oblimin rotated-principle component factor analysis ⁽¹⁾

Item ⁽²⁾	Factor 1: ⁽³⁾ Business development and improvement	Factor 2: Business growth
People development 01	0.801	0.161
People development 03	0.791	0.008
People development 02	0.714	0.064
Future success 01	0.510	-0.361
Process measures 02	0.471	-0.334
Future success 02	0.449	-0.017
Process measures 03	0.382	-0.352
Financial measures 02	-0.067	-0.848
Financial measures 01	-0.151	-0.846
Financial measures 03	0.213	-0.610
Process measures 01	0.397	-0.418
Cronbach Alpha	0.812	0.731

(1) Loadings greater than 0.35 were considered significant

(2) The items included in the factor analysis are provided in Appendix 3

Applying the factor extraction criterion that the eigen-values must be greater than one (Davis, 2005:446), two factors were extracted in the exploratory factor analysis explaining 50.45% of the variance before rotation. After rotation, these factors could be identified as the theoretical dimensions of **business development and improvement and business growth**. Two tests, Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were considered important in determining the appropriateness of the data for factor analysis (Gürbüz & Aykol, 2009:327). The data measuring the perceived success yielded a sampling adequacy of 0.863 and the Bartlett's test of sphericity yielded a *p*-value of smaller than 0.000 indicating that patterns of correlations are compact and that factor analysis should yield reliable factors (Field, 2005:640).

After rotation, three items loaded significantly onto both factors (values greater than 0.35). The item **process measures 01** loaded on both the factors. Rather than deleting the item, it was decided to classify the item under the factor that has the

highest interpretation value namely **business development and improvement**. The items **future success 01** and **proactiveness 03** was classified under the factor **business growth** since it yielded the highest loading.

- **Factor 1: Business development and improvement**

Factor one comprised of seven items. Three items (**people development 01**, **people development 02** and **people development 03**), that were used to measure the latent variable **people development** loaded onto factor one. Two items (**future success 01** and **future success 02**), related to the latent variable *future success* were also included in factor one, being regarded by respondents as being related to **business development and improvement**. The final two items (**process measures 02** and **process measures 03**), used to measure the latent variable *process measures*, was also included in factor one, being regarded by respondents as also being related to factor one.

- **Factor 2: Business growth**

The second factor comprised four items. Three items (**financial measures 01**, **financial measures 02** and **financial measures 03**), that were used to measure the latent variable *financial measures*, loaded onto factor two as expected. One item (**process measures 01**), that were used to measure the latent variable *process measures* were also regarded by respondents as also being related to **business growth**.

The wording of the statements (items) measuring the four latent variables are provided in Appendix 3.

7.5.2 Reliability of the measuring instrument

To assess the internal consistency between the items of the measuring instrument, Cronbach alpha coefficients were calculated (Bryman & Bell, 2007:164). Coefficient alpha represents internal consistency by computing the average of all split-half

reliabilities for a multiple-item scale (Zikmund & Babin, 2007:322). The coefficient varies between 0, for no reliability, to 1 for maximum reliability (Kent, 2007:142) and values of below 0.7 can realistically be expected with psychological variables (Field, 2005:668). In this regard Bagozzi (1994:18) states that a value of 0.6 is acceptable, although 0.7 is preferred to indicate a higher level of reliability.

All 533 participants' responses were used to determine the reliability of the extracted factors. The results indicate that the instrument used in this study to measure the perceived success of agribusinesses, has acceptable reliability, with no factors below the Cronbach alpha value of 0.7.

7.5.3 Relationship between the variables

To investigate the relationship between the two variables, namely **business development** and **improvement and business growth**, the Pearson correlation coefficients (r) were calculated and are presented in Table 7.16 (Field, 2005: 111). Factor scores for each participant were computed as the average of all items contributing to the relevant factor. This means that missing values for an individual were automatically replaced by the average of the other responses contributing to the relevant factor for the specific individual.

Table 7.16: Results of the Pearson correlation coefficients (r) between variables

Variable	Business development and improvement	Business growth
Business development and improvement	1.000	0.569*
Business growth	0.569*	1.000

* Correlations significant at the $p = 0.01$ level (2-tailed)

In order to determine whether the effect of the relationship between two variables is important or meaningful, the size of the effect should be measured. Effect sizes are useful because they provide an objective measure of the importance of an effect (Field, 2005:32). A correlation coefficient of 0 means there is no visible relationship

and a value of 1 means that there is a perfect relationship. Cohen (1992:155-159) gave the following widely accepted guidelines about the interpretation of effects:

- $r = 0.10$ (small effect): in this case, the effect explains 1% of the variance
- $r = 0.30$ (medium effect): the effect accounts for 9% of the variance
- $r = 0.50$ (large effect): the effect accounts for 25% of the variance (refer to Field, 2005:32; Cohen, 1992:155-159)

The results in Table 7.16 indicate that there is a statistical significant ($p < 0.01$) correlations between the two variable combinations. Furthermore, the correlation is practical significant and a large effect ($r = 0.519$) was calculated between the two variables business development and improvement and business growth.

7.5.4 Perceived success survey results

The survey embodies the collective perceptions of managers in agribusinesses with regard to the two variables measuring the perceived success.

Managers in the agribusinesses were requested to answer the 11 items that measured the five extracted variables. The measuring items were rated on a five-point Likert scale where 1 = strongly disagree; 2 = disagree; 3 = uncertain; 4 = agree and 5 = strongly agree. Managers had to indicate the extent to which they agreed with each of the measuring items. Table 7.17 indicates the results showing the mean and standard deviation (s) for each variable, ranking the means from highest to lowest.

Table 7.17: Perceived success survey results

Factor	<i>n</i>	Mean	<i>s</i>
Business growth	529	4.258	0.320
Business development and improvement	530	3.740	0.316

Business growth ($\bar{x} = 4.258$) was ranked the highest followed by **business development and improvement** ($\bar{x} = 3.740$). The standard deviation was almost

similar for both the variables (0.320 and 0.316) and indicated that there was general agreement amongst the respondents regarding the two variables.

7.5.5 Comparing the mean differences between the demographic variables with the perceived success variables

The difference in the means between the demographical variables **age** (under 40 years and 40 years and older), **gender** (male and female), **race** (white and non-white), **management levels** (senior and junior) and highest academic **qualifications** (matric and lower and post matric) of the participating managers with regard to the variables measuring the perceived success of the participating agribusinesses, namely **business development** and **improvement and business growth**, were examined by an independent t-test (p -values) and effect sizes (d -values).

Statistical significance tests have the tendency to yield small p -values (indication of significance) as the size of the data set increases. The effect size is independent of sample size and is a measure of practical significance (Ellis & Steyn 2003: 51). Effect sizes (d) will be interpreted, according to Cohen's guidelines, as follows: small effect ($d = 0.2$), medium effect ($d = 0.5$) and large effect ($d = 0.8$). Results with medium effects can be regarded as visible effects and with $d \geq 0.8$ as practically significant, since it is the result of a difference having a large effect (Field, 2005: 32; Ellis & Steyn, 2003: 51-53; Thompson, 2001: 80-93).

Table 7.18 shows the relationship between the two variables (extracted factors) and the demographic variables, with the means (\bar{x}), standard deviation (s), independent t-test (p -value) and effect sizes (d -values).

Table 7.18: Relationship between extracted factors and demographical variables

Age								
Variable	Under 40			40+			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Business development and improvement	215	3.696	0.548	317	3.704	0.541	0.870	0.01
Business growth	215	4.257	0.521	317	4.257	0.495	0.995	0.00
Gender								
Variable	Male			Female			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Business development and improvement	448	3.709	0.530	83	3.655	0.619	0.411	0.09
Business growth	448	4.259	0.511	83	4.234	0.473	0.683	0.05
Race								
Variable	Non White			White			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Business development and improvement	41	3.777	0.517	487	3.693	0.547	0.347	0.15
Business growth	41	4.341	0.486	487	4.249	0.506	0.262	0.18
Managerial levels								
Variable	Senior			Junior			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Business development and improvement	204	3.730	0.496	188	3.705	0.561	0.641	0.04
Business growth	204	4.226	0.549	188	4.239	0.456	0.792	0.02
Qualifications								
Variable	Matric and lower			Post matric			Comparison	
	<i>n</i>	mean	<i>s</i>	<i>n</i>	mean	<i>s</i>	<i>p</i>	<i>d</i>
Business development and improvement	186	3.681	0.536	339	3.708	0.549	0.576	0.05
Business growth	186	4.261	0.470	339	4.250	0.526	0.810	0.02

* Statistical significant at the $p = 0.05$ level (2-tailed)

The results indicated no statistical significant difference ($p < 0.05$) in the mean values between the perceptions of respondents 40 years and older and respondents younger than 40 years with regard to all the variables. Although the respondents 40

years and older rated the variable **business development and improvement** more positive than their younger counterparts, the difference was not practical significant and only small effect sizes could be determined. With regard to the variable **business growth**, the perceptions were exactly the same.

Male managers rated the variables more positive than their female counterparts. No statistical significant difference for any of the variables could be calculated and only small effect sizes were realised.

With regard to race, Non-white managers (Black, Indian and Coloured) rated the variables more positive than White managers. The difference was not practical significant and only a small effect size could be determined.

Senior management (top and middle management) rated the variable **business development and improvement** higher whilst junior management rated the variable **business growth** higher. The differences were not practical significant and only a small effect sizes could be determined.

Respondents with a post matric qualification were more positive regarding the variable **business development and improvement**, but less positive regarding the variable **business growth**. No statistical significant difference for any of the variables could be calculated and only small effect sizes were realised.

7.6 CORE ATTRIBUTES OF ENTREPRENEURS

The purpose of section B of the questionnaire was to determining the extent to which managers at agribusinesses were inclined towards an entrepreneurial mindset. The section was divided into two parts. Section B1 consisted of a self assessment of the entrepreneurial characteristics and section B2 consisted of a superior assessment of the entrepreneurial characteristics.

7.6.1 Self - assessment of entrepreneurial characteristics

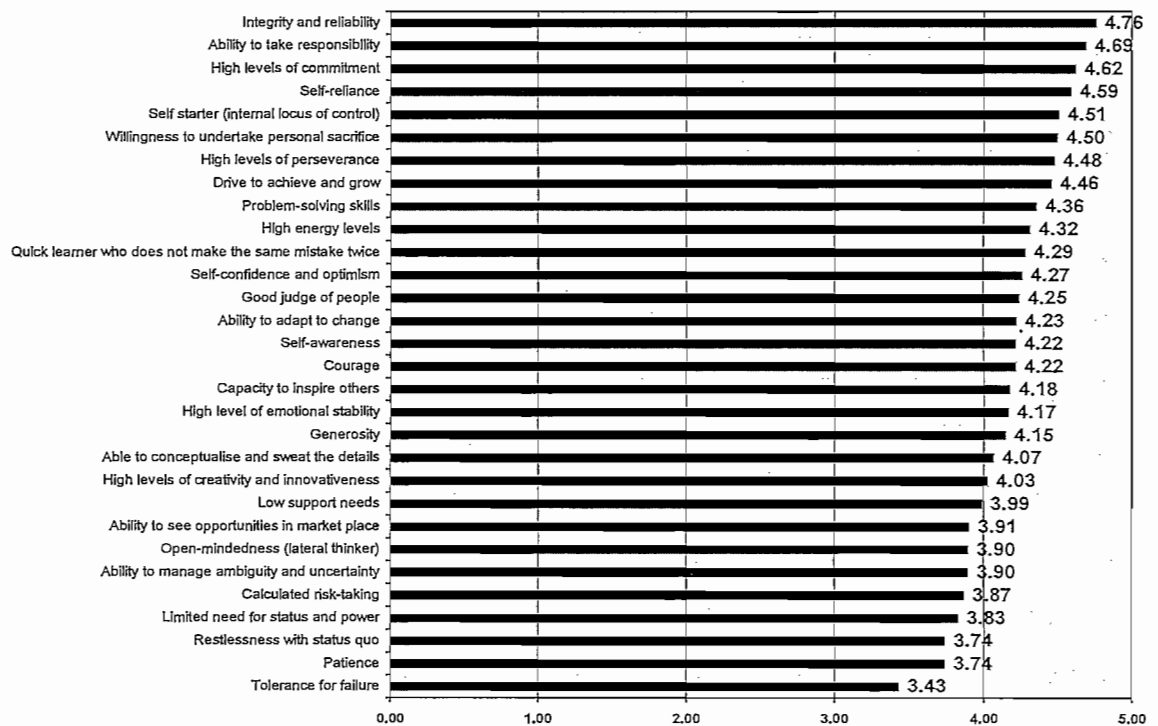
In section B1 of the questionnaire respondents were requested to evaluate themselves on a 1 to 5 Likert scale in terms of how well each of the characteristics applies to them. The results of the self assessment are presented in table 7.19.

Table 7.19: Findings of the self- and superior assessment for the entrepreneurial characteristics

No	Characteristic/ competency	Self – assessment			Superior - assessment		
		n	Mean	s	n	Mean	s
1	High levels of commitment	513	4.62	0.55	513	4.58	0.63
2	High levels of creativity and innovativeness	511	4.03	0.68	511	4.14	0.77
3	High energy levels	513	4.32	0.61	513	4.21	0.78
4	Low support needs	505	3.99	0.73	505	4.00	0.85
5	Calculated risk-taking	512	3.87	0.81	512	3.97	0.87
6	High levels of perseverance	512	4.48	0.58	512	4.42	0.69
7	Ability to take responsibility	512	4.69	0.52	512	4.56	0.72
8	Problem-solving skills	513	4.36	0.62	513	4.35	0.83
9	Capacity to inspire others	513	4.18	0.70	513	4.05	0.98
10	Self-reliance	511	4.59	0.52	511	4.49	0.64
11	Courage	506	4.22	0.66	506	4.34	0.66
12	Self-confidence and optimism	508	4.27	0.70	508	4.46	0.71
13	Ability to manage ambiguity and uncertainty	507	3.90	0.70	507	4.07	0.83
14	Ability to see opportunities in market	506	3.91	0.80	506	4.22	0.79
15	Generosity	506	4.15	0.76	506	4.12	0.88
16	Integrity and reliability	508	4.76	0.47	508	4.53	0.78
17	Good judge of people	506	4.25	0.72	506	4.20	0.83
18	Patience	511	3.74	0.99	511	3.91	0.96
19	Ability to adapt to change	509	4.23	0.71	509	4.22	0.82
20	High level of emotional stability	510	4.17	0.71	510	4.27	0.80
21	Self-awareness	509	4.22	0.63	509	4.24	0.79
22	Quick learner who does not make the same mistake twice	508	4.29	0.67	508	4.37	0.74
23	Able to conceptualise and sweat the details	507	4.07	0.73	507	4.38	0.74
24	Willingness to undertake personal sacrifice	510	4.50	0.64	510	4.34	0.82
25	Self starter (internal locus of control)	507	4.51	0.60	507	4.52	0.68
26	Limited need for status and power	502	3.83	0.83	502	3.87	0.92
27	Restlessness with status quo	499	3.74	0.79	499	3.87	0.83
28	Drive to achieve and grow	510	4.46	0.61	510	4.46	0.72
29	Tolerance for failure	509	3.43	0.99	509	3.64	0.97
30	Open-mindedness (lateral thinker)	507	3.90	0.73	507	3.97	0.93

Furthermore, these results are ranked from the highest to the lowest mean score and are depicted in figure 7.1.

Figure 7.1: Findings of the self- assessment for the entrepreneurial characteristics (in order of highest to lowest)



With regard to the self-assessment respondents generally viewed themselves as having the ability to behave in an entrepreneurial way since the majority of the characteristics (21 characteristics out of 30) fall within the 4-5 range indicating that these characteristics are perceived to be moderate to definite strengths.

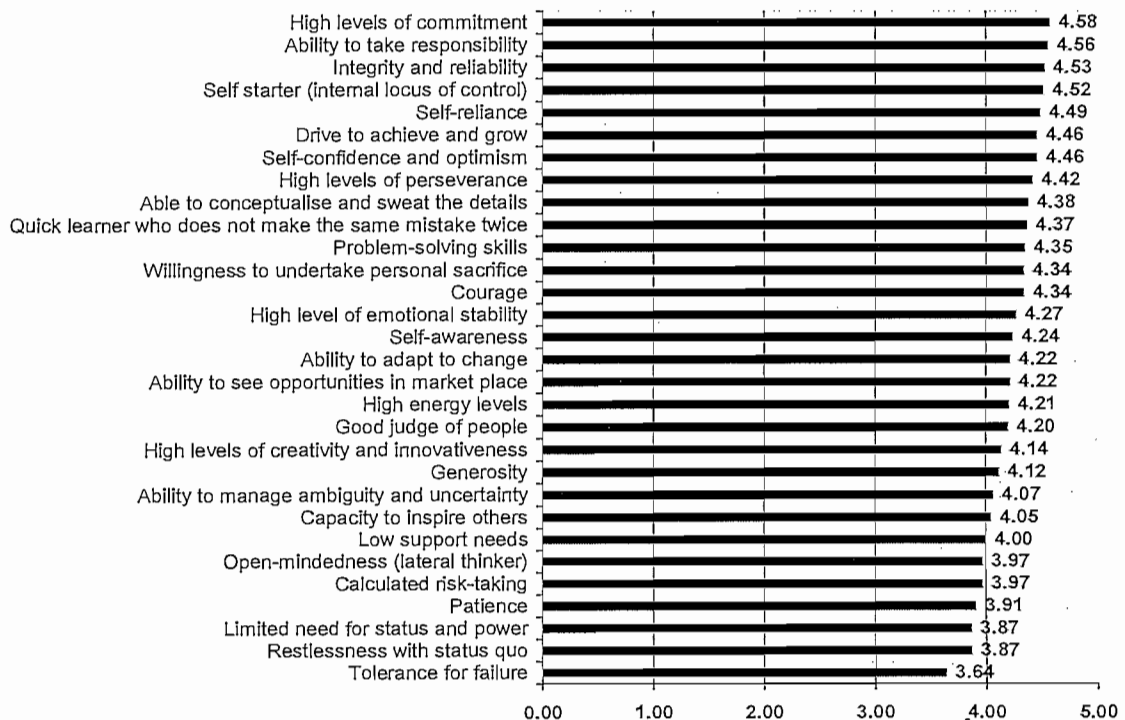
The top five ranked characteristics are **Integrity and reliability** (\bar{x} = 4.76), the **Ability to take responsibility** (\bar{x} = 4.69), **High levels of commitment** (\bar{x} = 4.62), **Self-reliance** (\bar{x} = 4.59) and **Self starter (internal locus of control)** (\bar{x} = 4.51), all with a mean value above 4.5 indicating that these characteristics are leaning towards a definite strength. Of concern however are the nine characteristics, **Low support needs** (\bar{x} = 3.99), **Ability to see opportunities in the market place** (\bar{x} = 3.91), **Open-mindedness (lateral thinker)** (\bar{x} = 3.90), **Ability to manage ambiguity and uncertainty** (\bar{x} = 3.90), **Calculated risk-taking** (\bar{x} = 3.87), **Limited need for status and power** (\bar{x} = 3.83), **Restlessness with status quo** (\bar{x} = 3.74), **Patience** (\bar{x} = 3.74) and **Tolerance for failure** (\bar{x} = 3.43).

uncertainty (\bar{x} = 3.90), Calculated risk-taking (\bar{x} = 3.87), Limited need for power and status (\bar{x} = 3.83), Restlessness with status quo (\bar{x} = 3.74), Patience (\bar{x} = 3.74) and Tolerance for failure (\bar{x} = 3.43) that fall in the 3-4 range, indicating that these characteristics are perceived as possible weaknesses with the potential to limit ongoing entrepreneurial behaviour.

7.6.2 Superior assessment of entrepreneurial characteristics

In section B2 of the questionnaire respondents were requested to evaluate their supervisor/manager (superior). Section B2 is thus an evaluation of how a respondent views his/her superior in terms of the specific entrepreneurial characteristic. The results of the self- and superior assessment are presented in table 7.19. Furthermore, these results are ranked from the highest to the lowest mean score and are depicted in figure 7.2.

Figure 7.2: Findings of the superior assessment for the entrepreneurial characteristics (in order of highest to lowest)



With regard to the superior assessment, respondents generally perceived their superiors as also being able to behave in an entrepreneurial way since the majority of the characteristics (24 characteristics out of 30) fall within the 4-5 range indicating that these characteristics are perceived to be moderate to definite strengths. Four characteristics have a mean higher than 4.5, indicating that these characteristics are leaning towards a definite strength namely, **High levels of commitment** ($\bar{x} = 4.58$), **Ability to take responsibility** ($\bar{x} = 4.56$), **Integrity and reliability** ($\bar{x} = 4.53$) and **Self starter (internal locus of control)** ($\bar{x} = 4.52$). Six characteristics, **Open-mindedness (lateral thinker)** ($\bar{x} = 3.97$), **Calculated risk-taking** ($\bar{x} = 3.97$), **Patience** ($\bar{x} = 3.91$), **Limited need for power and status** ($\bar{x} = 3.87$), **Restlessness with status quo** ($\bar{x} = 3.87$) and **Tolerance for failure** ($\bar{x} = 3.64$), fall in the 3-4 range and are of concern since these characteristics are perceived as possible weaknesses, limiting the potential of the respondents to act entrepreneurially.

7.6.3 Comparison between self- and superior assessment

In order to determine how respondents' perceptions of their relative entrepreneurial characteristics compare to those of their superiors, the mean scores are compared by means of a dependent or paired t-test (p -values) and effect sizes (d -values) in terms of the entrepreneurial characteristics measured. Statistical significant tests, for example t-tests, are used to show that the difference between two means is significant. A small p -value ($p < 0.05$) is considered sufficient evidence that the result is significant (Ellis & Steyn, 2003:51). Although a test statistic is significant it does not mean that the effect it measures is meaningful (Field, 2005:32) or that the difference is large enough to have an effect in practice (Ellis & Steyn, 2003:51). The measure of the size of the effect is called an effect size and is simply an objective and standardised measure of the magnitude of the observed effect (Kent, 2007:392). In this study the effects were represented by a statistic called Cohen's d , which reflects the standardised mean difference between the self assessment and superior assessment in terms of the entrepreneurial characteristics (Trochim & Donnelly, 2007:355).

Many measures of effect size have been proposed, the most common of which is Cohen's d and is also used in this study. Cohen, as quoted by Ellis and Steyn (2003:52) gives the following guidelines for interpretation of the effect size:

- $d = 0.2$: small effect
- $d = 0.5$: medium effect
- $d = 0.8$: large effect

The comparison between the self- and superior assessment is presented in table 7.20 indicating the number of respondents (n), the mean (\bar{x}), standard deviation (s), statistical significance (p -values) and the practical significant (d -values) differences between the means. Refer to figure 7.3 for visual a presentation of the difference in means.

More than half (17 out of 30) of the entrepreneurial characteristics show a statistical significant difference with a p -value less than 0.05. Only six characteristics show a small to medium effect with d -values smaller than 0.5. These entrepreneurial characteristics are, **Self-confidence and optimism** ($d = 0.24$), **Ability to manage ambiguity and uncertainty** ($d = 0.21$), **Ability to see opportunities in market** ($d = 0.31$), **Integrity and reliability** ($d = 0.30$), **Able to conceptualise and sweat the details** ($d = 0.34$) and **Tolerance for failure** ($d = 0.20$).

Of interest though were that the top four ranked entrepreneurial characteristic are the same for both the self- and superior assessment. Similarly, the six lowest ranked entrepreneurial characteristics for both self- and superior assessment are also similar.

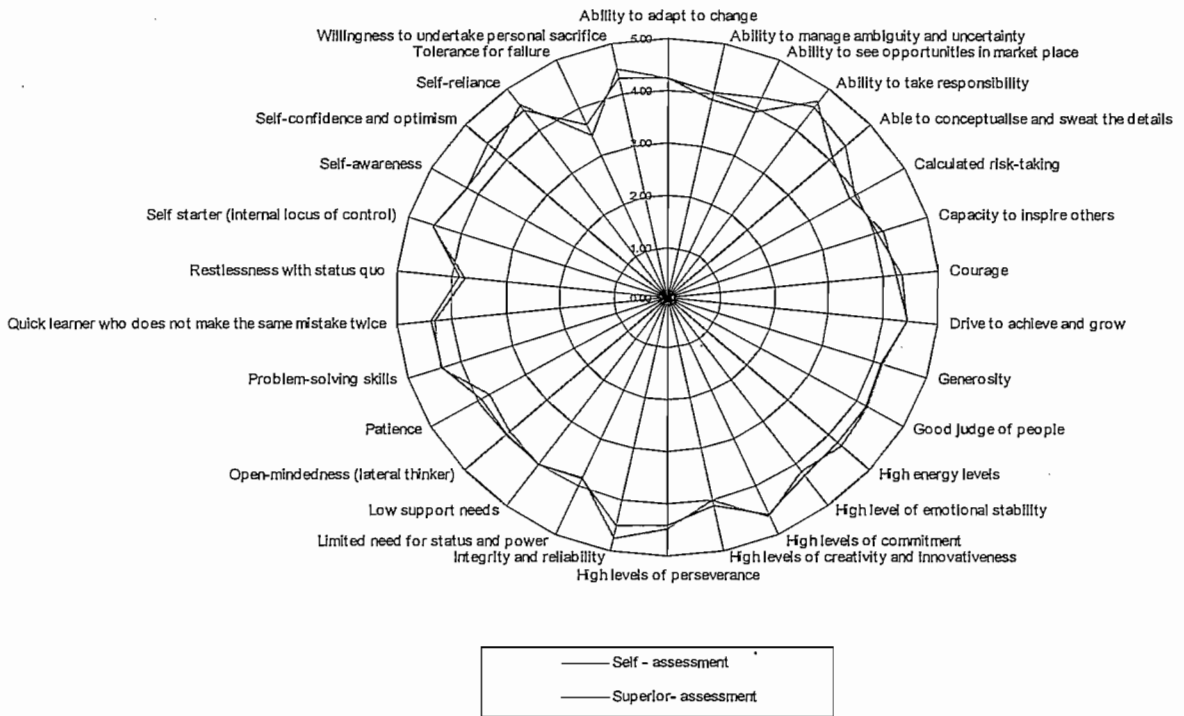
Table 7.20: Relationship between self- and superior assessment

No	Characteristic	Self assessment			Superior assessment			Comparison	
		n	Mean	s	n	Mean	s	p	d
1	High levels of commitment	513	4.62	0.55	513	4.58	0.63	0.268	0.05
2	High levels of creativity and innovativeness	511	4.03	0.68	511	4.14	0.77	0.004*	0.13
3	High energy levels	513	4.32	0.61	513	4.21	0.78	0.006*	0.12
4	Low support needs	505	3.99	0.73	505	4.00	0.85	0.922	0.00
5	Calculated risk-taking	512	3.87	0.81	512	3.97	0.87	0.018*	0.10
6	High levels of perseverance	512	4.48	0.58	512	4.42	0.69	0.079	0.08
7	Ability to take responsibility	512	4.69	0.52	512	4.56	0.72	0.000*	0.17
8	Problem-solving skills	513	4.36	0.62	513	4.35	0.83	0.814	0.01
9	Capacity to inspire others	513	4.18	0.70	513	4.05	0.98	0.011*	0.11
10	Self-reliance	511	4.59	0.52	511	4.49	0.64	0.852	0.01
11	Courage	506	4.22	0.66	506	4.34	0.66	0.000*	0.16
12	Self-confidence and optimism	508	4.27	0.70	508	4.46	0.71	0.000*	0.24
13	Ability to manage ambiguity and uncertainty	507	3.90	0.70	507	4.07	0.83	0.000*	0.21
14	Ability to see opportunities in market	506	3.91	0.80	506	4.22	0.79	0.000*	0.31
15	Generosity	506	4.15	0.76	506	4.12	0.88	0.502	0.03
16	Integrity and reliability	508	4.76	0.47	508	4.53	0.78	0.000*	0.30
17	Good judge of people	506	4.25	0.72	506	4.20	0.83	0.207	0.06
18	Patience	511	3.74	0.99	511	3.91	0.96	0.003*	0.13
19	Ability to adapt to change	509	4.23	0.71	509	4.22	0.82	0.763	0.01
20	High level of emotional stability	510	4.17	0.71	510	4.27	0.80	0.006*	0.12
21	Self-awareness	509	4.22	0.63	509	4.24	0.79	0.486	0.03
22	Quick learner who does not make the same mistake twice	508	4.29	0.67	508	4.37	0.74	0.028*	0.10
23	Able to conceptualise and sweat the details	507	4.07	0.73	507	4.38	0.74	0.000*	0.34
24	Willingness to undertake personal sacrifice	510	4.50	0.64	510	4.34	0.82	0.000*	0.18
25	Self starter (internal locus of control)	507	4.51	0.60	507	4.52	0.68	0.809	0.01
26	Limited need for status and power	502	3.83	0.83	502	3.87	0.92	0.388	0.04
27	Restlessness with status quo	499	3.74	0.79	499	3.87	0.83	0.001*	0.14
28	Drive to achieve and grow	510	4.46	0.61	510	4.46	0.72	0.867	0.01
29	Tolerance for failure	509	3.43	0.99	509	3.64	0.97	0.000*	0.20
30	Open-mindedness (lateral thinker)	507	3.90	0.73	507	3.97	0.93	0.097	0.07

* Statistical significant at the $p = 0.05$ level (2-tailed)

A visual presentation between the differences in means is also presented in figure 7.3 using a radar chart.

Figure 7.3: Comparison between self- and superior assessment



7.7 SUMMARY

This chapter presented the findings and interpretations of the empirical research.

Section C of the survey questionnaire consisted of demographic information where respondents had to indicate their age group, gender, race, highest academic qualification and the functional division they work in. The results indicated that managers in the participating agribusinesses were relatively young with the majority under the age of fifty, consisted mostly of white males and as expected were mostly lower and middle managers. Agribusiness managers were also well educated with the majority having a post matric qualification and mostly worked in the divisions marketing and corporate services.

The purpose of section A of the questionnaire was to assess the determinants of corporate entrepreneurship in agribusinesses and consisted of an entrepreneurial orientation survey, a corporate entrepreneurial climate survey and a perceived success survey.

Construct validity of the measuring instrument was assessed by means of a principle component exploratory factor analysis and by calculating Cronbach alpha coefficients.

Regarding the entrepreneurial orientation survey, five factors describing the theoretical dimensions of **proactiveness**, **autonomy**, **risk-taking**, **innovativeness** and **competitive aggressiveness** were extracted. The relationship between the five extracted factors was examined by means of Pearson's correlation coefficients (r). The results indicated that there are statistical significant correlations between all the variable combinations. Furthermore, practical significant correlations were calculated between the variable *proactiveness* and two other variables **innovativeness** and **competitive aggressiveness**. The differences in mean values between the demographic variables and the entrepreneurial orientation variables were examined by independent t-test (p -values) and effect sizes (d -values). The results indicated no practical significant difference for any of the variables.

Regarding the entrepreneurial climate survey, seven factors describing the theoretical dimensions of **management support/encouragement**, **customer orientation**, **rewards/incentives**, **strategic intent**, **idea generation**, **discretionary time** and **organisational learning** were extracted. The relationship between the seven extracted factors was examined by means of Pearson's correlation coefficients (r). The results showed practical significant correlations were calculated between the variable *management support/encouragement* and four other variables **customer orientation**, **rewards/incentives**, **strategic intent** and **idea generation**, between the variable combinations of *rewards/incentives* and **strategic intent** and **idea generation** and finally between the variable combination of *strategic intent* and **idea generation**. The differences in mean values between the demographic variables and the entrepreneurial climate variables were examined by independent t-test (p -values)

and effect sizes (*d*-values). The results indicated no practical significant difference for any of the variables.

As far as the perceived success survey is concerned, two factors describing the theoretical dimensions of **business development** and **improvement and business growth** were extracted. The relationship between the two extracted factors was examined by means of Pearson's correlation coefficients (*r*). The results showed practical significant correlations were calculated between the two variables. The differences in mean values between the demographic variables and the entrepreneurial climate variables were examined by independent t-test (*p*-values) and effect sizes (*d*-values). The results indicated no practical significant difference for any of the variables.

The purpose of section B of the questionnaire was to determine the extent to which managers at agribusinesses were inclined towards an entrepreneurial mindset and consisted of a self assessment and superior assessment of the entrepreneurial characteristics. The results indicated that in general respondents viewed themselves as well as their superiors as having the ability to behave in an entrepreneurial way. There were a number of important characteristics that pose some concern for entrepreneurial behaviour to manifest itself within the agribusinesses. In order to determine how respondents' perceptions of their relative entrepreneurial characteristics compare to those of their superiors, the mean scores are compared by means of a dependent or paired t-test (*p*-values) and effect sizes (*d*-values) in terms of the entrepreneurial characteristics measured. The results indicated that more than half of the entrepreneurial characteristics showed a statistical significant difference, however none were of practical significance.

The next chapter concludes the study by presenting the conclusions on the above findings and an integrated framework that could assist agribusinesses to establish and maintain corporate entrepreneurship within these businesses.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

Factors such as globalisation (Chitiga *et al.*, 2008:77), high rates of change in the market place and deregulation of the agricultural sector in South Africa (Sandrey & Vink, 2006:5) has brought about significant changes and uncertainty for agribusinesses. While conventional strategies may help agribusinesses survive (Harper *et al.*, 2008:13), long term competitiveness and success will demand that agribusinesses develop their capacity to innovate faster and better than their competitors (Teng, 2007:119).

The practice of corporate entrepreneurship has become the focus of increasing attention for managers as the ability to create innovation (McFadzean *et al.*, 2005:350) and has consequently assumed critical importance for businesses in today's competitive and ever-changing markets (Seshadri & Tripathy, 2006:17).

In view of the above, corporate entrepreneurship is presented and recommended to agribusinesses in South Africa in the form of a framework to assist agribusinesses to establish and maintain corporate entrepreneurship as a tool to create innovative products, services and processes which may lead to a sustained competitive advantage.

8.2 CONCLUSIONS ON CORPORATE ENTREPRENEURIAL SURVEY

The conclusions and recommendations on the corporate entrepreneurial survey are presented in this section and consist of the conclusions on the demographic profile of respondents, the entrepreneurial orientation, entrepreneurial climate, perceived success and entrepreneurial characteristics survey of the participating agribusinesses.

8.2.1 Conclusions regarding demographic profile of respondents

Section C of the questionnaire consisted of demographic information where respondents had to indicate their age group, gender, race, highest academic qualification and the functional division they work in. The following conclusions are made regarding the demographic profile of managers in the participating agribusinesses.

- The majority of respondent (66%) were under the age of fifty, indicating a relative young management corps. It would be tempting to argue that because of this relative young age of managers, agribusinesses should have a wealth of potential creative people. Age is however not a clear predictor of creative potential within the business environment. Considering that it takes a number of years to build up the necessary expertise that would enable an employee to perceive patterns of order or meaning in a specific task it is clear that creativity can be found in an adult of any age (Harvard Business Essentials, 2003:81).

Furthermore, the results also indicate that 34% of managers in agribusinesses are fifty years and older. These managers have a vast array of experience and knowledge collected over the years. This experience and knowledge must be shared with the younger generation (Slagter, 2007:84).

- Agribusinesses are characterised by a strong male managerial corps with 84% of the respondents being males.
- Whites represent the majority of respondents (92.4%) with Blacks, Coloureds and Indians accounting for only 7.7% of respondents. Taking into consideration the previous finding on gender it is clear that agribusinesses are still dominated by White males. This does not pose well for agribusinesses in terms of the agriBEE Charter. This implies that agribusinesses must develop and implement Broad-based Black Economic

Empowerment (BBBEE) strategies with a focus on black people, women, the disabled and on the youth of all races.

- As expected, the majority of respondents (53%) came from the lower management level. Middle management and top management represented thirty four percent and eleven percent of the respondents respectively.
- The majority of respondents (59.8%) indicated that they have a post matric qualification. Lower than matric were only represented by three and a half percent of the respondents. The results indicate that managers in agribusinesses are generally well educated and research suggests that highly creative people will generally have an above average intelligence. It must however be pointed out that intelligence only correlates with creativity to a point. Above a fairly modest threshold there is no correlation between intelligence and creativity (Harvard Business Essentials, 2003:80). This means that the managers with a matric and lower qualification (3.5%) may not be excluded from any creativity or entrepreneurial training and development since many successful entrepreneurial businesses originated from entrepreneurs with little education.
- The division marketing, handling, processing and packaging of produce represented the majority of respondents (34%) followed by corporate services (16%) and retail stores (14%).

8.2.2 Conclusions on the determinants of corporate entrepreneurship

This study reports some evidence of construct validity and reliability of a questionnaire to measure the determinants of a corporate entrepreneurial climate within agribusinesses.

8.2.2.1 Conclusions on entrepreneurial orientation survey

- **Factor analysis**

Five factors describing the theoretical dimensions of **proactiveness, autonomy, risk-taking, innovativeness and competitive aggressiveness** that measure the entrepreneurial orientation (see section 2.4) within agribusinesses were extracted. This study also supports the findings by Lumpkin and Dess (1996:139-140) adding the factors of autonomy and competitive aggressiveness to the initial factors of innovativeness, risk-taking and proactiveness.

- **Relationship between the variables (Pearson' r)**

Statistical significant bivariate correlations of 0.175 to 0.594 were determined between all the entrepreneurial orientation variables. Practical significant correlations were determined between the perceptions of managers in agribusinesses regarding the variables **proactiveness** and **competitive aggressiveness ($r = 0.594$)** as well as the variables **proactiveness** and **innovativeness ($r = 0.504$)**. These relationships imply that if agribusinesses continuously act on anticipated future needs and wants of the marketplace (proactiveness), it may lead to a more aggressive stance towards competitors which could result in a first mover advantage. Proactive behaviour could create opportunities for innovative products and services to satisfy these anticipated needs and wants in the marketplace that could lead to a competitive advantage.

A possible explanation for the medium effect ($r > 0.3$) and small effect ($r > 0.1$) determined for the variables **autonomy** and **risk-taking** respectively is that the entrepreneurial initiatives undertaken in agribusinesses are less risky by nature (such as incremental innovations) and are possibly driven from the top down requiring little autonomy.

Care should be taken when interpreting these findings since the five dimensions of an entrepreneurial orientation may occur in different combinations and may vary independently from each other depending on the type of entrepreneurial

opportunities a business pursues. For example, many entrepreneurial businesses are successful through imitation rather than proactiveness taking a different, less aggressive competitive stance (Lumpkin & Dess, 1996:151).

- **Comparing the mean values of the demographic variables with the entrepreneurial orientation variables**

The results of this study showed that no practical significant relationships could be found between the entrepreneurial orientation variables (**proactiveness, autonomy, risk-taking, innovativeness and competitive aggressiveness**) and the demographic variables **age** (under 40 years old and 40 and older), **gender** (male and female), **race** (according to the South African race classification) (whites and non-whites), **managerial levels** (senior and junior management levels) and **highest academic qualifications** (matric and lower and post matric qualifications) as perceived by agribusiness managers. The findings concerning the demographic variables **age, gender and highest academic qualifications** are supported by the literature where no correlations have been found between entrepreneurial behaviour and **age, highest academic qualifications** (Harvard Business Essentials, 2003:80-81) and **gender** (Mueller & Dato-On, 2008:16). No evidence in the corporate entrepreneurship literature could be found for the findings concerning the demographic variables **race and managerial level**.

Statistical significant differences were determined between the perception of **Non-white** and **White** managers ($p = 0.044$) regarding the variable **risk-taking**, between **senior management** and **junior management** ($p = 0.011$) regarding the variable **autonomy** and between respondents with a **post matric qualification** and respondents with a **lower than matric qualification** regarding the variable **innovativeness**. None of these differences were practical significant realising only small effect sizes.

The results indicate that, for instance, although the average scores for **Non-White** managers are higher than those for **White** managers, it could not be regarded as a practically significant difference between the perceptions of Non-White and White managers regarding the variable **risk-taking**.

8.2.2.2 Conclusions on the entrepreneurial climate survey

This study contributes to the literature on corporate entrepreneurship by documenting the existence of an underlying set of seven factors that should be recognised in promoting entrepreneurial activities within agribusinesses. The seven factors describing the theoretical dimensions of **management support/encouragement**, **customer orientation**, **rewards/incentives**, **strategic intent**, **idea generation**, **discretionary time** and **organisational learning** represent a description of the internal business factors that may assist in the establishment and maintaining of entrepreneurial activity within agribusinesses. These factors are confirmed by a number of previous studies such as Hornsby *et al.* (2008), Bhardwaj *et al.* (2007:140), Zampetakis and Moustakis (2007:31), Kuratko *et al.* (2005:709), Hornsby *et al.* (2002:269), Kuratko *et al.* (2001:11) and Kuratko, Montagno and Hornsby (1990:55).

Statistical significant bivariate correlations were determined between all the variables except for the variable combinations between **organisational learning** and **management support/encouragement**, **customer orientation**, **strategic intent** and **idea generation**. Practical significant correlations were determined between the perceptions of managers in agribusinesses regarding the variable combinations of *management support/encouragement* and **customer orientation** ($r = 0.512$), **rewards/incentives** ($r = 0.695$), **strategic intent** ($r = 0.672$) and **idea generation** ($r = 0.648$), between the variable combinations of *customer orientation* and **strategic intent** ($r = 0.530$), between the variable combinations of *rewards/incentives* and **strategic intent** ($r = 0.582$) and **idea generation** ($r = 0.533$) and finally between the variable combination of *strategic intent* and **idea generation** ($r = 0.587$). For agribusinesses this implies that corporate entrepreneurship should become the strategic way of thinking which means that entrepreneurship should drive the overall strategies, structure, culture, human resources practices and control mechanisms within agribusinesses (Burns, 2008:65). The focus should thus be on opportunity identification, discovery of new sources of value and process and product innovation that could lead to greater profitability (see section 4.2.1.1).

The results also show that providing appropriate rewards and incentives may greatly enhance the propensity of employees to seek new opportunities and generate new ideas. These opportunities and ideas may further be supported and encouraged by management by providing employees with the necessary resources such as time and money to develop these ideas (see section 3.2.3.3). Ultimately, the success of any idea is that it must satisfy the needs and wants of customers. This implies that all new ideas and/or innovations must take into consideration the needs and wants of customers. Not only may this lead to a competitive advantage in existing markets, but may also lead to new customers and new markets that have not been identified by competitors.

The findings of this study indicate that there were no practical significant differences in the perception (based on the mean values) between the demographic variables **age** (under 40 years old and 40 and older), **gender** (male and female), **race** (whites and non-whites), **managerial levels** (senior and junior management levels) and **qualifications** (matric and lower and post matric qualifications) with regard to the entrepreneurial climate variables. This means that in practice no difference could be determined between the perceptions of, for instance, male managers in direct comparison with female managers with regard to a specific variable measuring the entrepreneurial climate in the participating agribusinesses. The same conclusions are applicable to the other above mentioned relationships.

The findings concerning the demographic variables **age**, **gender** and **qualifications** are supported by the literature where no correlations have been found between entrepreneurial behaviour, **age**, **qualifications** (Harvard Business Essentials, 2003:80-81) and **gender** (Mueller & Dato-On, 2008:16). No evidence in the corporate entrepreneurship literature could be found for the findings concerning the demographic variables **race** and **managerial level**.

8.2.2.3 Conclusions on perceived success

This study contributes to the literature on corporate entrepreneurship by documenting the existence of an underlying set of two factors that could be used to measure the influence of corporate entrepreneurial activities on business performance. The results

show that during the factor analysis, the latent variable *perceived success* had split into two variables namely **business development and improvement** and **business growth**. Although no previous studies in the corporate entrepreneurial literature could be found to support these variables, two recent studies have found a positive relation between entrepreneurial behaviour and business performance. Covin *et al.* (2006:74-75) found a positive effect of entrepreneurial orientation on sales growth rate and Madsen (2007:201) found that a change in entrepreneurial orientation (increase or decrease) may be of importance for a business's performance, represented by performance compared to competitors and employment growth.

Statistical significant bivariate correlations were determined between the variables. The correlation is practical significant and a large effect ($r = 0.519$) was determined.

This study indicated that no practical significant differences could be found in the means values between the demographic variables **age** (under 40 years old and 40 and older), **gender** (male and female), **race** (whites and non-whites), **managerial levels** (senior and junior management levels) and **qualifications** (matric and lower and post matric qualifications) with regard to the perceived success variables as perceived by managers in the participating agribusinesses.

8.2.2.4 Conclusions on entrepreneurial characteristics

- **Conclusions on self- and superior assessment**

Managers in the participating agribusinesses generally viewed themselves and their superiors as having the ability to behave in an entrepreneurial way. Only nine characteristics were regarded as neither a strength nor weakness, leaning towards a moderate strength. None of the characteristics were regarded (based only on the mean scores calculated) as severe weaknesses. Respondents rated themselves and their superiors high ($\bar{x} > 4.5$) on entrepreneurial characteristics such as **integrity and reliability**, **ability to take responsibility**, **high levels of commitment** and **self starter** (internal locus of control).

The above high ratings pose well for the enhancement of entrepreneurial behaviour since integrity and reliability, according to Timmons and Spinelli (2009:54), are the glue and fibre that hold together successful personal and business relationships. It is thus positive that managers in agribusinesses have set themselves high personal standards. **Taking responsibility** for the success or failure of a venture is also important. Coinciding with having an **internal locus of control** (self starter), agribusiness managers believe that their own actions determine the rewards they obtain (Rauch & Frese, 2007:359). **High levels of commitment** were ranked number three and number one in terms of the self assessment and superior assessment respectively. Kuratko and Hodgetts (2001:99) view **high levels of commitment** as more important than the other characteristics and argue that entrepreneurs must overcome many obstacles and setbacks. A new venture will thus require total commitment from the entrepreneur's time, emotions and loyalty (Timmons & Spinelli, 2009:48).

There are a number of characteristics that pose some concern for entrepreneurial behaviour to manifest itself within the agri-businesses. Respondents rated both themselves and their superiors lowest on characteristics such as **tolerance for failure, low risk-taking, restlessness with the status quo** and **open-mindedness**. Respondents rated themselves low on characteristics such as **ability to manage ambiguity and uncertainty** and the **ability to see opportunities in the market**.

Furthermore, the participating agribusinesses portray a risk adverse culture. This is indicated by the **low risk-taking propensity**, a **low tolerance for failure** (ranked last by both self-and superior assessment) and a **low ability to manage ambiguity and uncertainty**. According to Loewe and Dominiquini (2006:28), these characteristics are the most frequent barriers to entrepreneurial behaviour and most businesses tell their employees in all kinds of implicit ways that they do not tolerate failure and risk takers are usually stigmatised.

Finally, because of the risk aversive culture of managers in agribusinesses it is highly unlikely that employees within these agribusinesses will be entrepreneurially inclined. Since the ultimate purpose of entrepreneurial behaviour within a business is to utilise the creative energies of all employees (not only managers) within the business (Amo

& Kolvereid, 2005:8) this does not pose well for the entrepreneurial behaviour of employees within these agribusinesses as the emotional displays of managers have a significant impact on the decision policies of employees (Brundin *et al.*, 2008:237).

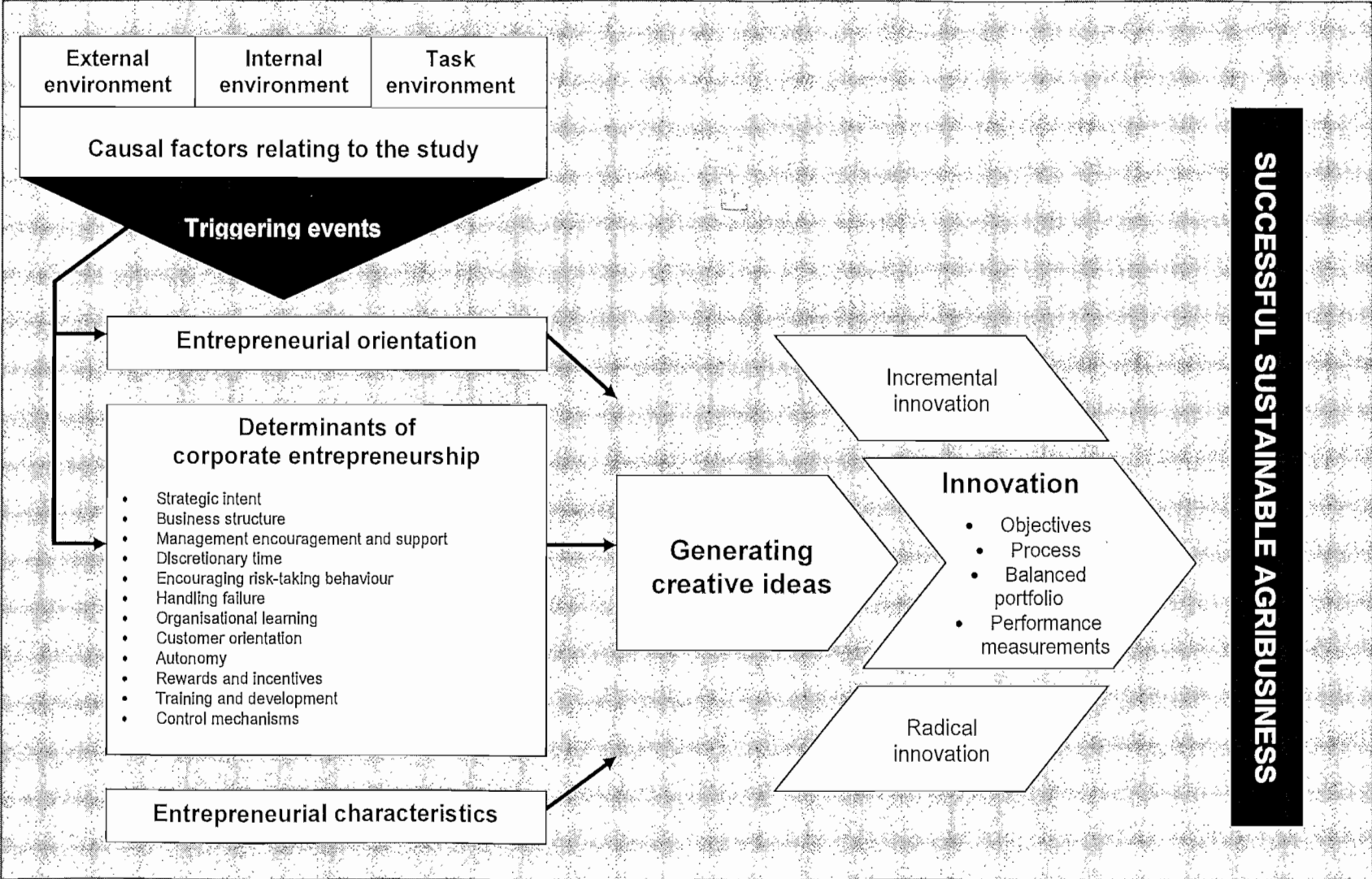
- **Comparison between self-and superior assessment**

The results of this study show a statistical significant difference in the mean values between the self assessment compared to the superior assessment for more than half (17 out of 30) of the entrepreneurial characteristics as perceived by managers in the participating agribusinesses. None of these difference were of practical significance and only six characteristics, **self-confidence and optimism, ability to manage ambiguity and uncertainty, ability to see opportunities in market, integrity and reliability, able to conceptualise and sweat the details** and **tolerance for failure** showed small to medium effects with d-values smaller than 0.5.

8.3 RECOMMENDATIONS

The recommendations are discussed by means of an integrated framework that agribusinesses can use to establish and enhance corporate entrepreneurship. The framework is presented in figure 8.1.

Figure 8.1: An integrated framework for corporate entrepreneurship



8.3.1 Triggering events

The decision to act entrepreneurially occurs as a result of the interactions between business characteristics, individual characteristics and some kind of precipitating event (Morris *et al.*, 2008:398). This precipitating event is called a “trigger” and provides the impetus to behave entrepreneurially when other conditions are conducive to such behaviour (Schindehutte, Morris & Kuratko, 2000:23). Although triggering events fall beyond the scope of this study, it remains important to understand what triggers entrepreneurial behaviour.

According to Morris *et al.* (2008:398), the principal triggers for corporate entrepreneurship are competitor moves, changes in industry or markets, regulatory threats and related external factors. More specifically, agribusinesses are faced with a number of triggering events (causal factors to this study – see section 5.4) that may be solved through innovative processes and ideas.

The policy changes (liberalisation and deregulation) in the agricultural sector have brought about many changes that agribusinesses must adapt to. The importance of the agricultural sector (see section 5.2.1) and the role that agribusiness play in this sector towards the economy and food security in South Africa will require innovative products/services and processes to face these challenges. Furthermore, South African agribusinesses are experiencing a decline in international competitiveness (see section 5.3.2.2), coupled with the unfair playing field (see section 5.4.2.3) in which they have to compete creates enormous challenges. In this regard corporate entrepreneurship can provide the tool to unlock the creative potential of all their employees by creating a climate within agribusinesses conducive to entrepreneurial behaviour.

It is recommended that agribusinesses constantly monitor the external environment by tasking a specific person to investigate new trends in the market, possible political and legal interventions or policies, new technologies, competitor moves, best practices of international agribusinesses and any other relevant information. This information must be passed on to all employees through for example, a monthly or bi-monthly report. This information should also be available on a central data base

(intranet) for access by all employees to encourage employees to create ideas on how to react to these opportunities or threats presented by the above information. Such a data base may also prove valuable for SWOT analysis during strategic planning sessions.

8.3.2 Establishing and maintaining a corporate entrepreneurial climate

To exploit opportunities identified by the various triggering events, a climate conducive to entrepreneurial behaviour needs to be developed within agribusinesses. The following recommendations are presented regarding the strategic intent, structure, culture, human resource practices and control mechanisms to develop such a climate.

- **Strategic intent**

Corporate entrepreneurship must become the strategic way of thinking (dominant logic) in agribusinesses. This is important since the strategic intent of agribusinesses will have a large effect (see table 7.12, paragraph 7.4.3 and paragraph 8.2.2.2) on factors such as the management support ($r = 0.672$) given to employees to encourage entrepreneurial behaviour, the customer orientation ($r = 0.530$) of agribusinesses which is essential to understand customer needs, the rewards and incentives ($r = 0.582$) provided to employees for entrepreneurial behaviour and the generation of new ideas ($r = 0.587$).

Greater emphasis must be placed on entrepreneurship as the strategic way of thinking in agribusinesses, especially in view of the fact that strategic intent was only ranked third in the entrepreneurial climate survey (see table 7.13). Ideally, strategic intent should be ranked first given its importance as explained in the previous paragraph above.

Top management must take the lead and the word “corporate entrepreneurship” must actually be included in the vision statement. Furthermore, the concept of constant change should also be build into the dominant logic so that the dominant logic becomes a dynamic dominant logic (Burns, 2008:65). This could be done by

including the concept of change into the managerial values that usually forms part of the mission statement. Entrepreneurship should also be built into the managerial values and aspects such as creativity, risk-taking, achievement and ownership, amongst others, must be included in the mission statement. Of importance is that the vision and mission statement be clearly articulated to all employees through scheduled management and personnel meetings. Reinforce the new vision and core values by spending ten minutes at each meeting on discussing a core value and how to integrate this core value into the everyday management of the agribusiness. Perhaps a slogan such as “leading through innovations” on internal documentation (memo pads) may also serve as a constant reminder to employees about the value placed on entrepreneurial behaviour.

By making corporate entrepreneurship the dominant logic in agribusinesses it should set the context for the overall direction of the business and provide a basis upon which resources are allocated. This emphasis on corporate entrepreneurship should then translate into the objectives, strategies, structure, culture, human resource management practices and the control systems of the business.

- **Business structure**

The underlying logic of traditional structures (mechanistic) is geared towards stability and a hierarchical process that direct work activities (Burns, 2008:141). In contrast corporate entrepreneurial efforts are about creating new things and moving in new directions and is therefore almost always in conflict with traditional structures (Morris *et al.*, 2008:248). It is not surprisingly that corporate entrepreneurship is most likely to foster under structures that resemble an organic structure (Burns, 2008:144).

An organic structure is characterised by fluid and broad task descriptions (Conway & Steward, 2008:248), is flat and uses cross-functional teams performing a variety of tasks (Kreitner & Kinicki, 2008:517), decentralised power and authority (Green *et al.*, 2008:361), has few bureaucratic rules or standard procedures, formalisation is low (Morris *et al.*, 2008:226), communication is lateral, upward and downward (Robbins *et al.*, 2009:429) and a comprehensive information system is in place for anticipating and monitoring the external environment (Morris *et al.*, 2008:226).

In practice though, most businesses show features of both structural forms (Conway & Steward, 2008:248), and it is not a matter of either/or. It is recommended that agribusinesses over time revisit their business structures and investigate which aspects of the structure inhibits entrepreneurial behaviour and design a structure that approximate wholly or in part move more closely to an organic structure.

In conclusion, to encourage entrepreneurial activities a business structure requires low levels of hierarchy, since flatter structures tend to promote entrepreneurial activities (Burns, 2008:138) and are more conducive to unstructured problem solving. Low levels of formalisation are required, as employees need to have a sense of empowerment and room in which to manoeuvre (Morris *et al.*, 2008:229). Businesses are also more likely to develop a higher level of entrepreneurial activities when the business exhibits a higher level of specialisation (Burns, 2008:143). Finally, the essence of corporate entrepreneurship is to encourage the whole business to act entrepreneurially and is thus more consistent with a decentralised structure.

What it very important is that agribusinesses should take note of the important role structure plays in fostering corporate entrepreneurship in the agribusinesses, and they should over time adapt the most suitable structure to foster entrepreneurial behaviour. For example, after an idea has passed through the first gate in the stage-gate innovation process, a cross-functional team can be appointed to provide support to the champion of the idea. The cross-functional team can also be involved in the allocation of funds and discretionary time and manage the idea through the stages and gates in the innovation process. Benchmarking their structure against leading businesses in corporate entrepreneurship and innovation can be a worthwhile exercise to highlight possible improvements that can be made to the current structure.

- **Management encouragement and support**

Management support is the willingness of managers to facilitate and promote entrepreneurial activity in the business. Some of the specific conditions reflecting management support are quick adoption of employee ideas and the recognition of people who bring forth creative ideas (this condition will be presented under the

recommendations concerning rewards and incentives). These conditions are also supported by the study indicating a strong relationship between management support and the generation of ideas ($r = 0.648$) as well as rewards and incentives ($r = 0.695$). Providing seed money to get initiatives off the ground is also another way in which management can support entrepreneurial initiatives (Kuratko & Hodgetts, 2004:65).

Since managers are usually busy and are under pressure for results, assuming that it is no different in agribusinesses, creative ideas are generally greeted with scepticism and often subjected to layers of screening. To solve this issue an “idea capturing and handling” process is proposed where all ideas are submitted to the first gate in the stage-gate innovation process (this process is presented under the recommendations for idea generation in more detail later in this chapter – also see figure 3.4).

One of the most significant (tangible) ways in which managers in agribusinesses can demonstrate their support for entrepreneurial behaviour is to avail resources in the form of money to employees to further develop and refine their ideas. This could seem difficult to implement in the typical South African agribusiness, but it is important that management think outside the box and investigate pro-actively ways to fund creative thinking and the generating of new ideas.

Finding a balance between providing too little funds and too much funds is also important since in both instance it may stifle creativity. A possible solution is setting up a seed money fund (Antoncic & Hisrich, 2004:526) outside the normal chain of command of a business which can give employees with creative ideas a small fund to begin testing their ideas. This method has been used with great success by many businesses for example, 3M (Harper *et al.*, 2008:15).

- **Discretionary time**

Granting employees discretionary time is important (Martins & Terblanche, 2003:71) since it often takes time to develop a creative idea (see creative process in section 3.2.2). Agribusinesses may for example, similar to companies such as 3M (15%) (Harper *et al.*, 2008:15), grant employees a percentage of their time to work on self-

defined innovations. This is especially important where an idea has passed the first gate in the stage-gate innovative process.

This recommendation could also seem difficult to implement in the agribusiness, but the freedom to sit back and think about new ways to do business is critical for creative thinking that can ultimately lead to innovation. Often management gets so bogged down in the day-to-day running of the business or other commitments that there is no time left to listen to, investigate and implement new ideas and innovations, discuss important matters or to build human relationships. This study underlines the fact that urgent attention should be given to grant employees discretionary time to be creative.

- **Encouraging risk-taking behaviour**

The agribusinesses that took part in the study portrayed a risk adverse culture. This is reflected in the fact that risk-taking was ranked last by agribusiness managers in the entrepreneurial orientation survey (see table 7.9). Agribusiness managers also ranked risk-taking fifth last as an entrepreneurial characteristic (see figure 7.1). The encouragement of risk-taking behaviour consequently requires attention.

Firstly, it is important that the concept of risk-taking be explained to agribusinesses. This risk-taking does not refer to extreme and uncontrollable risk but rather to moderate and calculated risk-taking. Furthermore, a misconception regarding risk-taking is that innovativeness and risk-taking are directly correlated, that is, doing more innovative things means taking higher risks (Morris *et al.*, 2008:62). Whilst not innovating presents a minimal risk in the short term, it does create a high risk in the long term. In essence, businesses that do not innovate are faced with a higher risk of not perceiving market and technology shifts that are capitalised on by competitors (Burns, 2008:291).

Risk-taking behaviour needs to be encouraged in agribusinesses by articulating to employees that risk-taking behaviour is acceptable. Naturally employees will be sceptical and it may be necessary to set boundaries for risk-taking behaviour by explaining the types of risk-taking behaviour that will be acceptable. Agribusinesses

must develop rules and procedures regarding risk-taking behaviour and identify areas where risk-taking would be acceptable as well as the level of risk that would be tolerated.

Ideally risk should be minimised as far as possible. The stage-gate process for managing innovation (see section 3.3.5.4 and figure 3.3) can provide a tool to minimise risk where ideas are screened according to various criteria at each gate in the innovation process. The stage-gate process is presented in more detail under the recommendations concerning the innovation process.

- **Handling of failure**

The way in which a business handles failure will determine whether employees feel comfortable to act entrepreneurially. Agribusiness managers did not fair well in this regard and ranked their tolerance for failure last (see figure 7.1). Agribusinesses must accept failure as part of the process while arguing that the generation of knowledge from disappointing outcomes is essential to the success of future entrepreneurial initiatives (Covin *et al.*, 2006:63). Managers will have to explicitly state that failure is acceptable. In similar fashion as with risk-taking, employees may be sceptical. One way to reinforce this concept is to also reward failures (Amabile, 1998:83) in the form of an acknowledgement for trying or perhaps a small bonus. What is very important is to set clear guidelines regarding the handling of failure and to embed a culture that is more tolerant. This should not be an excuse for making foolish mistakes.

- **Organisational learning**

Agribusinesses seem to be doing well in this regard and ranked organisational learning first in the entrepreneurial climate survey. The importance of organisational learning in the context of fostering corporate entrepreneurship lies in the capability to bring that knowledge to bear on problems and opportunities as well as to continually replenish it (Lemon & Sahota, 2004:484).

The underlying reasons of past successes and failures of entrepreneurial initiatives in the form of a formal report at the end of such initiatives must be stored on a central data base for future reference. The knowledge gained from these underlying reasons could be brought to bear on similar future initiatives which may assist in not making the same mistake twice.

Encourage employees to constantly develop and improve themselves by staying abreast of the latest technologies in the agricultural field. Employees should be encouraged and allowed, for example, to attend courses and seminars in their fields of expertise. More will be said on this under the recommendations for training and development.

Furthermore, the results of the demographic profile of managers in the participating agribusinesses showed, amongst others, that 34% of managers are older than fifty years old (see section 8.2.1). These managers have a wealth of knowledge and experience built up over the years. This knowledge and experience need to be shared with the younger generation by implementing mentoring programs where younger employees are assigned as protégés to more senior employees.

- **Customer orientation**

Agribusinesses seem to place a relative high premium on customer orientation and ranked customer orientation second in the entrepreneurial climate survey (see table 7.13). This poses well for agribusinesses since the ultimate success of any idea that leads to new innovative products or services is that it must satisfy the needs of customers to be successful. Agribusinesses must therefore continue their effort to determine the needs and wants of customers by building strong customer relationships. On a formal basis, field workers in agribusinesses are in constant contact with customers creating an opportunity to determine customer needs and wants and may also obtain insight into customer problems which may provide the basis for innovative ideas. Informally, agribusiness employees should, where possible, attend the variety of farmer days (boeredae) held throughout the year and mingle on an informal basis with customers. It is also important that agribusinesses profile their customers according to certain categories such as demographic factors

and the different types of produce farmers. For example, the needs, wants and problems of younger farmers may differ from those of older farmers.

- **Autonomy**

The granting of autonomy is often viewed as the key to entrepreneurial behaviour (Mumford *et al.*, 2002:724). This will involve that agribusiness managers will have to give up some of their control. A major concern of agribusinesses may be that employees will “run off” and create corporate anarchy. Perhaps Amabile (1998:81) provides the solution and argues that autonomy should be granted concerning the process and not the objectives. This means that the objectives of a task given to employees should be clear, but framed in such a way that it allows employees the freedom to pursue a number of different approaches to perform their tasks. It allows employees the freedom to approach problems in ways that make the most of their expertise and their creative thinking skills.

- **Rewards and incentives**

Rewards and incentives in agribusinesses pose a concern for entrepreneurial behaviour to flourish and were ranked last in the entrepreneurial climate survey (see table 7.13). It is recommended that agribusinesses develop a reward and incentive policy regarding entrepreneurial behaviour taking the following discussion into consideration.

Entrepreneurial behaviour calls for both intrinsic and extrinsic motivation (Mumford, 2000:35) and therefore agribusinesses’ compensation and reward systems should emphasize financial gains (extrinsic) as well as formal recognition (intrinsic) for entrepreneurial achievements.

Incentive programs, as a form of financial rewards, are increasingly used to encourage entrepreneurial behaviour (Laurson & Foss, 2003:256). Other financial rewards, which are more linked to product success, include offerings such as profit sharing, bonuses, stock options and sharing patent rights (Mumford, 2000:324).

Creating unique non-financial rewards are also important (Davenport *et al.*, 2003:63). Recognition rewards such as status, challenging work and autonomy could be offered as reward. A “best idea” award could, for example, be presented to the employee with the most promising ideas at a year end function.

The inherent risk involved in entrepreneurial behaviour means that many initiatives will fail. Provided that the risk-taking involved in the initiative conforms to the guidelines set for risk-taking behaviour (see recommendation under risk-taking) agribusinesses should also compensate and reward effort, even though the initiative was a failure (Martins & Terblanche, 2003:71).

Finally, providing rewards and incentives for entrepreneurial behaviour will send a message to employees that management supports entrepreneurial behaviour (large effect size between rewards/incentives and management support – $r = 0.695$). This may also have a positive influence on the generation of new ideas (large effect size between rewards/incentives, management support and idea generation – $r = 0.695$ and $r = 0.533$ respectively).

- **Training and development**

The need to keep abreast of the latest technologies and continuous learning in entrepreneurial businesses requires ongoing training and development. Training and development programs must be less structured or standardised and focussed on individual knowledge requirements (Ireland *et al.*, 2006:16). These programs usually consist of communication and team skills (Lau & Ngo, 2004:689), problem solving and lateral thinking skills (Searle & Ball, 2003:56) and must include attitudinal components wherein acceptance of change, a willingness to take risks and responsibility is enhanced (Morris *et al.*, 2008:172).

Furthermore, entrepreneurial behaviours can be learned and increased (Twomey & Harris, 2002:47) and training and development programs are an important tool that can be used to unlock and develop the entrepreneurial orientation of employees. The focus here can specifically be on those characteristics perceived to be found lacking as indicated in the self- and superior assessment of the entrepreneurial

characteristics. The fact that the six lowest ranked entrepreneurial characteristics were the same for the self-assessment and superior-assessment should make the areas of focus much easier.

- **Control mechanisms**

Formal control mechanisms are essential to corporate entrepreneurship since it specifies desirable patterns of behaviour. When these controls however become too excessive and intrude in the way employees perform their jobs it may inhibit entrepreneurial behaviour (Antoncic & Hisrich, 2004:527).

It is proposed that agribusinesses analyse and evaluate their control mechanisms based on the following questions:

- Do our control mechanisms create the feeling amongst employees of “they just don’t trust me”? This undoubtedly will undermine employee willingness to behave entrepreneurially.
- Do our control mechanisms require cumbersome documentation that takes up employee time and discourage them to try new initiatives?
- Have our controls become the end in itself rather than the means to an end?
- Do our controls over emphasize efficiency (doing things right) which introduces a high degree of discipline into the control process rather than an emphasis on strategic controls (effectiveness – doing the right thing)? Too much focus on efficiency is not conducive to entrepreneurial behaviour (Morris *et al.*, 2008:368) whilst effectiveness encourages employees to accept risks (Ireland *et al.*, 2006:15).

Developing an entrepreneurial climate within agribusinesses through the recommendations presented above not only provides the support, but actually encourages entrepreneurial behaviour from employees (Morris *et al.*, 136).

8.3.3 Entrepreneurial characteristics

The entrepreneurial characteristic survey (see section B of the questionnaire presented in Annexure A) conducted in this study provides an opportunity to further assist in unlocking the creative/entrepreneurial potential of employees by sensitising employees about these entrepreneurial characteristics. It is suggested that entrepreneurial characteristics be discussed on meetings and perhaps three to five characteristics can be discussed per meeting, deriving at suggestions how these characteristics can be made an integral part of the everyday workings of employees in agribusinesses. The results of such discussions can then be forwarded by means of e-mails or a news letter to those employees in outlying areas who are unable to attend such meetings. This will greatly assist when decisions are made about the business structure, controls, rewards, policies and other areas that define the work environment, so that these decisions are made in a manner that is compatible with the types of characteristics associated with entrepreneurship (Morris *et al.*, 2008:147).

Recommendations regarding the training and development of employees with regard to the entrepreneurial characteristics have been presented in section 8.2.3 under the heading training and development.

Having laid the foundation conducive to the generation of creative ideas by establishing a corporate entrepreneurial climate and unlocking the creative potential of employees many new creative ideas may emerge. The next section provides recommendations on the generation of creative ideas, and how these ideas could be managed.

8.3.4 Creative ideas

- **Generating ideas**

As previously mentioned in section 8.3.1, agribusinesses must constantly monitor the external environment. Many opportunities and new ideas may emerge from studying trends and changes.

There are a variety of techniques and methods available to unlock the creative potential of every employee to improve the quantity and quality of new creative ideas (see section 3.2.4). The principal intention is not to make employees generally more creative, but rather to provide them with a tool to be used in specific situations. Whilst the variety of techniques and methods as well as their application fell beyond the scope of this study, agribusinesses must acquaint themselves with these techniques and utilise them to enhance the creative potential of employees. This may be done by having workshops where familiar techniques such as brainstorming, role playing, mind mapping and overcoming negativity (“yes and” rather than “yes but”) are explained and exercised. Although the effectiveness of these techniques is the subject of considerable debate, many businesses have claimed considerable success in the creative performance of employees (King & Anderson, 2002:23-25).

Another way in which to encourage the generation of new ideas is to provide rewards and incentives to employees. This is also supported by this study where a strong relationship ($r = 0.533$) was found between the generation of new ideas and rewards/incentives

- **Managing creative ideas**

Whilst many ideas may emerge, which may not all be worthy of consideration, it is important how these ideas are managed (Amabile, 1998:83) to encourage employees to continuously submit new ideas. It is suggested the agribusinesses implement a formal idea capturing and handling process (see figure 3.4) and assign a specific person the responsibility to capture all new ideas on a central database which is accessible to all employees. All new ideas must be submitted to the first gate in the stage-gate innovation process (see figure 3.3) for screening and written feedback must be given to the submitter of the idea concerning its outcome.

The generation of creative ideas is however not enough. What is often lacking in businesses is innovation, namely to put these ideas into practise. The terms creativity and innovation are unfortunately sometimes used interchangeably, however there are fundamental differences (Von Stamm, 2008:1). Creativity deals with the generation of novel and appropriate ideas whilst innovation deals with the process of

implementation of these ideas turning them into business and market place realities. The following recommendations are therefore concerned with the process of innovation.

8.3.5 Innovation

Innovativeness was ranked the highest (see table 7.9) by agribusiness managers in the entrepreneurial orientation survey. This poses well for agribusinesses and a formal process to manage innovation is recommended for agribusinesses.

- **Goals and objectives for innovation**

Goals and objective for innovation must be set during the annual strategic planning process. This must include the type of innovation, the number of innovative products/services required on an annual basis and what level of risk the business is prepared to take. An integrative approach to the type of innovation is recommended and goals and objectives must be developed for both incremental innovations as well as radical innovations.

- **Implement a innovation process**

Successfully managing innovation requires designing a well defined, disciplined innovation process (often referred to as new product development) for moving innovation projects from needs and ideas to concepts and launches. In this regard the stage-gate process is proposed. The term “stage-gate process” is used to describe an innovation process with a predetermined set of stages, each with well defined, cross-functional and concurrent activities. Each of the stages in the system is then followed by an approval point, or gate, which serves as a go/no-go point (see section 3.3.5.4 and figure 3.3). With its various gates and screening criteria, the stage-gate process can greatly minimise risks.

- **Innovation portfolio**

As an effective risk management strategy, it is suggested that agribusinesses create and manage a portfolio of innovations (Burns, 2008:198), whereby the list of active projects is constantly updated and revised (Morris *et al.*, 2008:199). New projects that are added must be evaluated, selected and prioritised, whilst existing projects may be accelerated, killed or reprioritised and resources are allocated and reallocated to the active projects (Cooper *et al.*, 2001a:362).

- **Measuring innovation**

Measuring the effectiveness of a business's innovation effort is of paramount importance, not only in terms of performance improvement, but it is also useful for analysis of the past that may serve as input to decision-making in the future (Kuczarski *et al.*, 2001:224-227). It is recommended that agribusinesses develop and implement two categories of metrics, namely performance metrics and programme metrics, which provide useful insights for measuring innovation.

Performance metrics include metrics such as return on innovative investment, cumulative profits, cumulative revenue, innovation's contribution to business growth, number of new products commercialised over a certain period and the number of new products that have remained in the market for a certain period of time (Von Stamm, 2008:395).

Programme metrics are concerned with measuring the innovation process and include metrics such as speed to market (time from idea generation to commercialisation), cumulative expenditure on innovation, balanced portfolio mix, number of new concepts in pipeline and innovation revenue divided by number of employees solely devoted to innovation to measure the effectiveness of additional resource allocations (Kuczarski, 2000:24).

- Also, it is important that the findings of this study be made available to agribusinesses as this may provide valuable insight into those factors required to establish and foster corporate entrepreneurship.

8.3.6 Successful agribusiness

Establishing and maintaining corporate entrepreneurship in agribusinesses may lead to two principle types of outcomes namely capability development and strategic repositioning (Ireland *et al.*, 2009:34).

Corporate entrepreneurial activities create new knowledge that can improve a business's ability to respond to changes in its markets by enhancing the business's competencies and its capacity to create and sustain economically viable industry positions.

The very act of implementing corporate entrepreneurship through entrepreneurial behaviour can place agribusinesses in a new position within its existing product-market domain and furthermore, may alter the attributes of this domain or position the business within a new product-market domain.

Finally, in today's dynamic and uncertain competitive environment which agribusinesses face, successful agribusinesses will be those in which entrepreneurial behaviour will be used to explore opportunities to build a foundation for future success (Ireland & Webb, 2007:59).

8.4 CRITICAL EVALUATION OF THE STUDY

The success of this study is determined by the extent to which the primary and secondary objectives were achieved as presented in chapter one (see section 1.3).

8.4.1 Primary objective

The primary objective of this study was twofold: Firstly, to investigate the determinants of corporate entrepreneurship in agribusinesses in South Africa.

Secondly, to propose an integrated framework to facilitate the process of establishing and maintaining corporate entrepreneurship within agribusinesses in South Africa.

8.4.2 Secondary objectives

The following secondary objectives were devised as a means to address the primary objective and are listed below together with an evaluation of its achievement:

- Define corporate entrepreneurship.
Evaluation: A variety of definitions were presented and corporate entrepreneurship was defined in section 2.3.
- Obtain an understanding of the phenomena of corporate entrepreneurship by means of a literature study.
Evaluation: The phenomena, process and dimensions of corporate entrepreneurship were discussed in chapter 2.
- Investigate creativity and innovation as key dimensions of corporate entrepreneurship.
Evaluation: To be successful corporate entrepreneurs must generate useful and novel ideas. Creativity is therefore the soul of corporate entrepreneurship whilst innovation is the specific tool of entrepreneurs to bring these ideas to fruition. The process of creativity and innovation were discussed in chapter 3.
- Determining the internal business factors that have an influence on the corporate entrepreneurial climate within a business.
Evaluation: The determinants to create a corporate entrepreneurial climate within a business were presented in chapter 4.
- Obtain an understanding of agribusinesses within the agricultural industry in South Africa.
Evaluation: A brief overview of the South African agricultural sector and its contribution to the economy is presented. Secondly, the evolution of

agribusinesses which includes the restructuring and deregulation of the agricultural sector as well as the competitiveness of South African agribusinesses are briefly discussed. Finally, the reasons for this study are outlined.

- Assess the determinants of corporate entrepreneurship within agribusinesses.

Evaluation: The results of the corporate entrepreneurial survey is discussed and interpreted in chapter 7. The conclusions and recommendations are presented in chapter 8.

- To investigate the correlations between the corporate entrepreneurship variables.

Evaluation: The results of the correlations between the corporate entrepreneurship variables are discussed and interpreted in chapter 7. The conclusions and recommendations in this regard are presented in chapter 8.

- To compare the mean differences between the demographic variables with regard to the corporate entrepreneurship variables.

Evaluation: The results regarding the comparison of the mean differences between the demographic variables with regard to the corporate entrepreneurship variables are discussed in chapter 7. The conclusions and recommendations are presented in chapter 8.

- To assess the entrepreneurial characteristics of managers and their superiors in agribusinesses.

Evaluation: The results of the empirical findings concerning the entrepreneurial characteristics survey are presented and discussed in chapter 7. The conclusions and recommendations are presented in chapter 8.

- Propose an integrated framework to assist in establishing and maintaining corporate entrepreneurship in agribusinesses.

Evaluation: An integrated framework was developed and is depicted in figure 8.1.

8.5 FUTURE RESEARCH

The focus of this study was on the determinants of corporate entrepreneurship and more specifically those determinants necessary to establish and maintain corporate entrepreneurship within agribusinesses in South Africa. This study excluded those determinants in the external environment that provide the impetus or trigger for corporate entrepreneurship to manifest in businesses. Subsequently this provides an area for future research.

In this study the exploratory factor analysis of the measuring instrument assessing the determinants of corporate entrepreneurship in agribusinesses provided some evidence of construct validity, but further research is required to refine the research instrument before it can be utilised to diagnose corporate entrepreneurship in other businesses.

The results of research into international agribusinesses could be compared with this study. This would enable similarities and differences to be identified.

8.6 SUMMARY

This chapter provided the conclusions and recommendations of the empirical research for this study.

Conclusions were presented regarding the demographic profile of the respondents, the entrepreneurial orientation survey, the entrepreneurial climate survey, perceived success and the entrepreneurial characteristics survey.

The recommendations of the study were presented by means of an integrated framework that agribusinesses can use as a guide to establish and maintain corporate entrepreneurship within their businesses. To implement the framework the following recommendations were made:

- Agribusinesses must constantly monitor the external environment by tasking a specific person to investigate new trends in the market, possible political and legal interventions or policies, new technologies, competitor moves, best practices of international agribusinesses and any other relevant information. This information is to be made available to all employees.
- Corporate entrepreneurship must become the strategic way of thinking in agribusinesses by including corporate entrepreneurship in the vision statement and incorporating entrepreneurial values into the mission statement.
- Revisit the business structure and over time adapt the most suitable structure to foster entrepreneurial behaviour.
- Provide seed money to develop and refine entrepreneurial initiatives.
- Grant discretionary time to employees to develop creative ideas.
- Develop a risk-taking policy and identify areas where risk-taking would be acceptable as well as the level of risk that would be tolerated.
- Develop a system of formal reporting on the success and failures of entrepreneurial initiatives. Encourage employees to constantly develop and improve themselves by staying abreast of the latest technologies in their field of expertise. Implement a mentoring program where younger employees are assigned as protégés to more senior employees.
- Continue efforts to determine the needs and wants of customers by building strong customer relationships.
- Grant autonomy to employees by framing objectives in such a way that it allows employees the freedom to pursue a number of different approaches to achieve the objectives.

- Develop a reward and incentive policy regarding entrepreneurial behaviour.
- Training and development programs should focus on individual knowledge requirements and aimed at developing communication, team, problem solving and lateral thinking skills. Training and development programs can also be used to unlock and develop the entrepreneurial orientation of employees and the focus must be on those entrepreneurial characters perceived to be found lacking.
- Analyse and evaluate the control mechanisms within agribusinesses based on a number of questions that is to be asked.
- Employ a number of techniques to enhance the creative potential of employees.
- Implement a formal idea capturing and handling process to manage creative ideas.
- Implement a formal innovation process. This process must include setting goals and objectives for innovation, a discipline innovation process and in this regard the stage-gate innovation process is proposed, create and manage a portfolio of innovations and finally setting up performance and program metric to measure the effectiveness of innovations.
- Finally, the findings of this study are to be made available to agribusinesses.

The last two sections in this chapter presented a critical evaluation of this study showing the achievement of the primary and secondary objectives and recommendations concerning future research were also proposed.

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ANNEXURE A

Code number:	
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Corporate Entrepreneurial Questionnaire

Contact Details:

Henry Lotz

Tel: 018 – 299 1635

Fax: 018 – 299 1416

E-mail: henry.lotz@nwu.ac.za

CORPORATE ENTREPRENEURIAL CLIMATE QUESTIONNAIRE

Dear respondent

Thank you for your time and participation in this survey.

South African agri-businesses are facing major challenges as they come under increasing pressure from global competitors in a playing field that is anything but even. Competing under such conditions is difficult and South African agri-businesses are involved in a race of catch up with competitors.

In this competitive environment, corporate entrepreneurship (where the whole business acts in an entrepreneurial manner) can be the vehicle for business survival and competitiveness, and many businesses and scholars now recognise corporate entrepreneurship as a critical factor in business success.

By means of this survey an attempt is made to measure the corporate entrepreneurial climate in your agri-business. Your honest opinion regarding the various statements will be valued.

The survey is divided into three sections:

Part A is the 'Entrepreneurial Climate Questionnaire'.

Part B is a self assessment and an assessment of your immediate supervisor of various entrepreneurial characteristics

Part C consists of biographical information.

Please complete every statement/question to ensure the validity and reliability of the study.

GENERAL INSTRUCTIONS

All questions/statements can be answered by marking the relevant block with an X

Use the following key to indicate your preference

GRADE	TERM USED
5	Strongly agree
4	Agree
3	Uncertain
2	Disagree
1	Strongly disagree

Please select the number which best describes your opinion about a specific question or statement. In the example below, the respondent agreed to the statement listed.

	Statement	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
A06	The vision and strategies of our business often help me in setting priorities.	1	2	3	<input checked="" type="checkbox"/>	5

SECTION A: CORPORATE ENTREPRENEURIAL CLIMATE

The questionnaire consists of 90 statements. Please indicate the extent to which you agree or disagree with each statement. Please mark the applicable block with an X

	Statement	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
A01	Our business' efficiency (doing things right) has improved over the past few years.	1	2	3	4	5
A02	Teams or groups are characterised by diversity based on the project's skills requirement.	1	2	3	4	5
A03	Our leaders seek to maximise value from opportunities without constraint to existing models, structures or resources.	1	2	3	4	5
A04	Our business knows when it is in danger of acting overly aggressively (this could lead to erosion of our business's reputation or to retaliation by competitors).	1	2	3	4	5
A05	Our business has increased the number of services/products offered during the past two years.	1	2	3	4	5
A06	The vision and strategies of our business often help me in setting priorities.	1	2	3	4	5
A07	Previously submitted ideas are available and accessible to all employees.	1	2	3	4	5
A08	Our business regularly introduces new services/products/processes.	1	2	3	4	5
A09	There is continual recruitment of individual entrepreneurs into our business.	1	2	3	4	5
A10	Entrepreneurial failure (an idea that was developed, but ultimately failed) is generally accepted in our business.	1	2	3	4	5
A11	There are few written rules and procedures for performing my major tasks.	1	2	3	4	5
A12	During the past three months I had sufficient time to spend on the development of new ideas.	1	2	3	4	5
A13	Our business has flexible job descriptions rather than formal job descriptions.	1	2	3	4	5
A14	Employees championing successful innovative projects are rewarded beyond the standard rewarding system and receive additional compensation for their ideas and efforts.	1	2	3	4	5
A15	Our business typically initiates actions which competitors respond to.	1	2	3	4	5
A16	There are several options within our business for employees to get financial support for developing their innovative projects and ideas.	1	2	3	4	5
A17	Our business has a widely held belief that innovation is an absolute necessity for the business's future.	1	2	3	4	5
A18	Our business is characterised by few managerial levels (flat structure).	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
A19	Employees with unsuccessful innovative projects (projects that failed) are still rewarded beyond the standard rewarding system and receive additional compensation for their ideas and efforts.	1	2	3	4	5
A20	Our business has experienced growth in turnover over the past few years.	1	2	3	4	5
A21	When confronted with uncertain decisions, our business typically adopts a bold posture in order to maximise the probability of exploiting opportunities.	1	2	3	4	5
A22	There is an extensive employee orientation programme for new employees to ensure that employees share the corporate vision and mission.	1	2	3	4	5
A23	Money is usually available to get new ideas (products, processes) off the ground.	1	2	3	4	5
A24	Our business has experienced growth in profits over the past few years.	1	2	3	4	5
A25	Our business develops product/services with customers in mind.	1	2	3	4	5
A26	Our business is continually pursuing new opportunities.	1	2	3	4	5
A27	In our business, employees are viewed as the business' most valuable asset.	1	2	3	4	5
A28	Those employees who come up with innovative ideas often receive management encouragement for their activities/initiatives.	1	2	3	4	5
A29	Our business has a high customer retention rate.	1	2	3	4	5
A30	Top management makes all the important decisions in our business with little or no input from lower level employees.	1	2	3	4	5
A31	Owing to the environment, our business believes that bold, wide-ranging acts are necessary to achieve the business's objectives.	1	2	3	4	5
A32	My job description clearly specifies the standards of performance on which my job is evaluated.	1	2	3	4	5
A33	Our business is very often the first to introduce new products/services/processes.	1	2	3	4	5
A34	There is eagerness among employees in our business for generating new ideas.	1	2	3	4	5
A35	Our business places a strong emphasis on getting things done even if this means disregarding formal procedures.	1	2	3	4	5
A36	Our business places a strong emphasis on new and innovative products/services/processes.	1	2	3	4	5
A37	Employees in our business understand the needs of our customers.	1	2	3	4	5
A38	In dealing with competitors our business typically adopts a very competitive "undo-the-competitor" posture.	1	2	3	4	5
A39	Our leaders take a long-term view of our business and articulate their vision to all levels in the business.	1	2	3	4	5
A40	Our business supports many small and experimental projects, knowing that some will ultimately fail.	1	2	3	4	5
A41	Our business's vision and strategies are clear to me.	1	2	3	4	5
A42	Over the past few years, changes in our processes, services and product lines have been quite dramatic.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
A43	Our business has systems that offer both financial and non-financial rewards for entrepreneurial behaviour.	1	2	3	4	5
A44	Managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track.	1	2	3	4	5
A45	My expertise and skills are closely matched to the task I have to perform.	1	2	3	4	5
A46	Our business provides ample opportunities for learning.	1	2	3	4	5
A47	Employees in our business are encouraged to manage their own work and have flexibility to resolve problems.	1	2	3	4	5
A48	Our employees are very committed to our business.	1	2	3	4	5
A49	In our business there is a strong relationship between the number of new ideas generated and the number of new ideas successfully implemented.	1	2	3	4	5
A50	Employees in our business are continuously encouraged to expand their capacities and skills.	1	2	3	4	5
A51	Our business has experienced growth in market share over the past few years.	1	2	3	4	5
A52	Our business is very aggressive and intensely competitive.	1	2	3	4	5
A53	An employee with a good idea is often given free time to develop that idea.	1	2	3	4	5
A54	Our business' competitive position has improved over the past few years.	1	2	3	4	5
A55	Employees in our business are allowed to make decisions without going through elaborate justification and approval procedures.	1	2	3	4	5
A56	I have enough autonomy in my job without continual supervision to do my work.	1	2	3	4	5
A57	In general, our business has a strong inclination towards high-risk projects.	1	2	3	4	5
A58	Our business places little emphasis on adherence to formal job descriptions.	1	2	3	4	5
A59	Change is managed effectively in our business.	1	2	3	4	5
A60	In our business mistakes are regarded as learning experiences.	1	2	3	4	5
A61	In our business, employees have to follow lines of authority and following the correct channels are strongly encouraged.	1	2	3	4	5
A62	Our business' effectiveness (doing the right things) has improved over the past few years.	1	2	3	4	5
A63	Our business continuously monitors market trends and identifies future needs of customers.	1	2	3	4	5
A64	Our business continuously seeks out new products/processes/services.	1	2	3	4	5
A65	Employees are encouraged to discuss ideas for new initiatives with employees in other departments.	1	2	3	4	5
A66	Our business places a strong emphasis on continuous improvement in products/service delivery/processes.	1	2	3	4	5
A67	My co-workers and I always find time to think about broader (more extensive) business problems.	1	2	3	4	5

	Statement	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
A68	Training and development in our business focuses on the individual knowledge requirements of employees.	1	2	3	4	5
A69	Employees are often encouraged to take calculated risks concerning new ideas.	1	2	3	4	5
A70	Our customers are loyal to our business.	1	2	3	4	5
A71	During difficult economic periods, investments in research and development/innovative projects continue and no significant financial cuts are made.	1	2	3	4	5
A72	Our business encourages employees who have different views to those of the business, to stimulate innovation.	1	2	3	4	5
A73	The morale (job satisfaction) of our employees has improved over the past few years.	1	2	3	4	5
A74	Our business effectively assumes an aggressive posture to combat industry trends that may threaten our survival or competitive position.	1	2	3	4	5
A75	The image (stature) of our business, relative to our competitors, has grown over the past few years.	1	2	3	4	5
A76	Employees are encouraged to stay abreast of developments in their functional fields.	1	2	3	4	5
A77	Taking care of customers is our business' top priority.	1	2	3	4	5
A78	Our customers are satisfied with our business' product/service offerings.	1	2	3	4	5
A79	Our business sets and regularly evaluates goals related to innovative, risk-taking and pro-active behaviour.	1	2	3	4	5
A80	In our business employees understand that change is necessary for growth.	1	2	3	4	5
A81	Groups or teams are often used to solve problems and/or develop and implement innovative projects.	1	2	3	4	5
A82	New ideas may be submitted for approval in our business and a formal idea capturing and idea handling process exists.	1	2	3	4	5
A83	Our business allows me to be creative and try different methods to do my job.	1	2	3	4	5
A84	I seldom have to follow the same work methods or steps while performing my major tasks from day to day.	1	2	3	4	5
A85	Employees are encouraged to continually look at things in new ways.	1	2	3	4	5
A86	Our business's vision/mission encourages creative and innovative behaviour.	1	2	3	4	5
A87	Our business is characterised by low levels of red tape/bureaucracy.	1	2	3	4	5
A88	Our business has clear goals, which have been mutually agreed upon by employees and managers.	1	2	3	4	5
A89	Our business is characterised by open channels of communication with important financial and operating information flowing quite freely throughout the business.	1	2	3	4	5
A90	The term "risk-taker" is considered a positive attribute for employees in our business.	1	2	3	4	5

SECTION B: CORE ATTRIBUTES OF ENTREPRENEURS

Self assessment and Superior assessment

Successful entrepreneurs have certain characteristics in common. Section B of this questionnaire is aimed at determining the extent to which employees at Agri-businesses are inclined towards an entrepreneurial mind. In section **B1** you are requested to **evaluate yourself** on a 1 to 5 scale in terms of how well each of the characteristics applies to you. Similarly, in section **B2** **evaluate your supervisor/manager** (superior). Section B2 is thus an evaluation of how **you** view **your superior** in terms of the specific entrepreneurial characteristic. Mark the appropriate block with an **X**.

GRADE	TERM USED
5	Definite strength
4	Moderate strength
3	Neither strength nor weakness
2	Moderate weakness
1	Definite weakness

	B1 Self assessment					Characteristics	B2 Superior assessment					
	Definite weakness	Moderate weakness	Not strength or weakness	Moderate strength	Definite strength		Definite weakness	Moderate weakness	Not strength or weakness	Moderate strength	Definite strength	
(B1/01)	1	2	3	4	5	High levels of commitment	1	2	3	4	5	(B2/01)
(B1/02)	1	2	3	4	5	High levels of creativity and innovativeness	1	2	3	4	5	(B2/02)
(B1/03)	1	2	3	4	5	High energy levels	1	2	3	4	5	(B2/03)
(B1/04)	1	2	3	4	5	Low support needs	1	2	3	4	5	(B2/04)
(B1/05)	1	2	3	4	5	Calculated risk-taking	1	2	3	4	5	(B2/05)
(B1/06)	1	2	3	4	5	High levels of perseverance	1	2	3	4	5	(B2/06)
(B1/07)	1	2	3	4	5	Ability to take responsibility	1	2	3	4	5	(B2/07)
(B1/08)	1	2	3	4	5	Problem solving skills	1	2	3	4	5	(B2/08)
(B1/09)	1	2	3	4	5	Capacity to inspire others	1	2	3	4	5	(B2/09)

	B1 Self assessment					Characteristics	B2 Superior assessment					
	Definite weakness	Moderate weakness	Not strength or weakness	Moderate strength	Definite strength		Definite weakness	Moderate weakness	Not strength or weakness	Moderate strength	Definite strength	
(B1/10)	1	2	3	4	5	Self-reliance	1	2	3	4	5	(B2/10)
(B1/11)	1	2	3	4	5	Courage	1	2	3	4	5	(B2/11)
(B1/12)	1	2	3	4	5	Self-confidence and optimism	1	2	3	4	5	(B2/12)
(B1/13)	1	2	3	4	5	Ability to manage ambiguity and uncertainty	1	2	3	4	5	(B2/13)
(B1/14)	1	2	3	4	5	Ability to see opportunities in the market place	1	2	3	4	5	(B2/14)
(B1/15)	1	2	3	4	5	Generosity	1	2	3	4	5	(B2/15)
(B1/16)	1	2	3	4	5	Integrity and reliability	1	2	3	4	5	(B2/16)
(B1/17)	1	2	3	4	5	Good judge of people	1	2	3	4	5	(B2/17)
(B1/18)	1	2	3	4	5	Patience	1	2	3	4	5	(B2/18)
(B1/19)	1	2	3	4	5	Ability to adapt to change	1	2	3	4	5	(B2/19)
(B1/20)	1	2	3	4	5	High level of emotional stability	1	2	3	4	5	(B2/20)
(B1/21)	1	2	3	4	5	Self-awareness (personal strengths and weaknesses)	1	2	3	4	5	(B2/21)
(B1/22)	1	2	3	4	5	Quick learner who does not make the same mistake twice	1	2	3	4	5	(B2/22)
(B1/23)	1	2	3	4	5	Able to conceptualise and sweat the details	1	2	3	4	5	(B2/23)
(B1/24)	1	2	3	4	5	Willingness to undertake personal sacrifice	1	2	3	4	5	(B2/24)
(B1/25)	1	2	3	4	5	Self-starter (Internal locus of control)	1	2	3	4	5	(B2/25)
(B1/26)	1	2	3	4	5	Limited need for status and power	1	2	3	4	5	(B2/26)
(B1/27)	1	2	3	4	5	Restlessness with status quo	1	2	3	4	5	(B2/27)
(B1/28)	1	2	3	4	5	Drive to achieve and grow	1	2	3	4	5	(B2/28)
(B1/29)	1	2	3	4	5	Tolerance for failure	1	2	3	4	5	(B2/29)
(B1/30)	1	2	3	4	5	Open-mindedness (lateral thinker)	1	2	3	4	5	(B2/30)

SECTION C: BIOGRAPHICAL INFORMATION

The following information is required to assist with the statistical analysis of data for comparison amongst different interest groups. Responses will be treated confidentially. Your assistance in providing this important information will be highly appreciated. Mark the applicable block with an X.

C01	Indicate your age group	≤ 29	30 - 39	40 - 49	50 - 59	60+
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C02	Indicate your gender	Male	Female
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C03	Indicate your race	Black	White	Coloured	Indian
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C04	Indicate your management level	
	Top management	
	Middle management	
	Junior management	

C05	Indicate your highest academic qualification	
	Lower than matric	
	Matric	
	Certificate	
	Diploma (Technical College or Technicon)	
	Degree	
	Post graduate degree	

C06	Indicate your division	
	Executive management	
	Marketing, handling, processing & packaging of produce	
	Supply of production inputs (seed, crop care, animal feeds & management services)	
	Retail stores	
	Equipment (marketing, maintenance & manufacture of agriculture equipment)	
	Financial services & insurance	
	Corporate services	
	Other (commodity trading & subsidiaries)	

THANK YOU VERY MUCH FOR YOUR VALUED INPUT

ANNEXURE B

Kode nommer	
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KORPORATIEWE ENTREPRENEURSKAP VRAELYS

KONTAKBESONDERHEDE:

Henry Lotz

Tel: 018-2991635

Faks: 018-2991416

E-pos: henry.lotz@nwu.ac.za

KORPORATIEWE ENTREPRENEURSKLIAMAAT VRAELYS

Geagte respondent

Dankie vir u tyd en deelname

Suid-Afrikaanse agri-besighede staan belangrike uitdagings in die gesig met die toetreding van internasionale rolspelers in 'n mark waar daar nie sprake is van gelyke mededinging nie. Om in so 'n mark mee te ding is vol struikelblokke, en die Suid-Afrikaanse agri-besighede is gewikkel in 'n wedren om agterstande in te haal, relatief tot die mededingers in die mark.

In hierdie mededingende omgewing tree korporatiewe entrepreneurskap (die besigheid as geheel tree entrepreneurs op) sterk na vore as 'n moontlike voertuig wat besighede kan inspan in hul strewe na mededingendheid en oorlewing. Gevolglik tree korporatiewe entrepreneurskap sterk na vore as 'n kritiese suksesfaktor van besigheidsukses.

Deur gebruik te maak van 'n vraelys word daar beoog om die korporatiewe entrepreneurskapsklimaat te meet in agri-besighede. U eerlike mening word verlang wanneer u die onderskeie kriteria evalueer.

Die vraelys bestaan uit drie afdelings.

Afdeling A is die "Korporatiewe Entrepreneursklimaat Vraelys".

Afdeling B bestaan uit 'n self-evaluering en 'n evaluering van u toesighouer/bestuurder volgens verskeie entrepreneurseienskappe.

Afdeling C bestaan uit biografiese inligting

Voltooi asseblief AL die stellings om geldigheid en betroubaarheid te verseker.

ALGEMENE INSTRUKSIES

Al die vrae/stellings kan beantwoord word deur 'n kruis in die toepaslike blok te trek.

Gebruik die volgende sleutel

GRAAD	BESKRYWING
5	Stem beslis saam
4	Stem saam
3	Onseker
2	Stem nie saam nie
1	Stem glad nie saam nie

U moet die nommer kies wat die beste beskryf hoe u oor die stelling voel. In die voorbeeld hieronder het die respondente saam gestem met die stelling.

	Stelling	Stem glad nie saam nie	Stem nie saam nie	Onseker	Stem saam	Stem beslis saam
A06	Die visie en strategieë van ons onderneming help my dikwels om prioriteite te bepaal.	1	2	3	4	5

AFDELING A: KORPORATIEWE ENTREPRENEURSKLIAMAAT

Die vraelys bestaan uit 90 stellings. Dui asseblief aan in watter mate u met elke stelling saamstem of nie saamstem nie. Merk asseblief die toepaslike blokkie met 'n X.

	Stelling	Stem glad nie saam	Stem nie saam nie	Onseker	Stem saam	Stem beslis saam
A01	Die doelmatigheid van ons onderneming (deur dinge reg te doen) het oor die afgelope paar jaar verbeter.	1	2	3	4	5
A02	In ons onderneming pas die samestelling van spanne of groepe by die vaardighede wat die projek/probleem vereis.	1	2	3	4	5
A03	Ons leiers probeer waarde uit geleenthede maksimeer sonder om bestaande modelle, strukture of hulpbronne te beperk.	1	2	3	4	5
A04	Ons onderneming weet wanneer dit gevaar loop om te aggressief op te tree (dit kan die naam van ons onderneming skade berokken of tot weerwraak deur mededingers lei).	1	2	3	4	5
A05	Ons onderneming het die getal dienste/produkte wat aangebied word gedurende die afgelope twee jaar uitgebrei.	1	2	3	4	5
A06	Die visie en strategieë van ons onderneming help my dikwels om prioriteite te bepaal.	1	2	3	4	5
A07	Idees wat voorheen voorgelê is, is beskikbaar en toeganklik vir alle werknemers.	1	2	3	4	5
A08	Ons onderneming stel gereeld nuwe dienste/produkte/prosesse bekend.	1	2	3	4	5
A09	Daar word deurentyd werknemers met 'n entrepreneursgees (innoverende denkers) vir ons onderneming gewerf.	1	2	3	4	5
A10	Onsuksesvolle entrepreneurspogings ('n idee wat ontwikkel is, maar misluk het) word oor die algemeen in ons onderneming aanvaar.	1	2	3	4	5
A11	Daar is min skriftelike reëls en prosedures om my belangrikste take uit te voer.	1	2	3	4	5
A12	Ek het die afgelope drie maande genoeg tyd gehad om aan die ontwikkeling van nuwe idees te bestee.	1	2	3	4	5
A13	Ons onderneming het eerder aanpasbare posbeskrywings as formele posbeskrywings.	1	2	3	4	5
A14	Werknemers wat suksesvolle innoverende projekte deurvoer, word bo die standaardbeloningstelsel beloon, en kry ekstra vergoeding vir hul idees en pogings.	1	2	3	4	5
A15	Ons onderneming insieer gewoonlik stappe waarop mededingers reageer.	1	2	3	4	5
A16	Daar is in ons onderneming verskeie opsies vir werknemers om finansiële steun vir die ontwikkeling van hul innoverende projekte en idees te kry.	1	2	3	4	5
A17	Ons onderneming het 'n algemene siening dat innovering absoluut noodsaaklik is vir die toekoms van die onderneming.	1	2	3	4	5
A18	Ons onderneming word gekenmerk deur 'n plat struktuur (min bestuursvlakke).	1	2	3	4	5
A19	Werknemers met onsuksesvolle innoverende projekte (projekte wat misluk het) word nog steeds bo die standaardbeloningstelsel beloon, en kry ekstra vergoeding vir hul idees en pogings.	1	2	3	4	5

	Stelling	Stem glad nie saam	Stem nie saam nie	Onseker	Stem saam	Stem beslis saam
A20	Ons onderneming het oor die afgelope paar jaar omsetgroei ondervind.	1	2	3	4	5
A21	Ons onderneming benader onseker besluite gewoonlik onbeskroemd, met die doel om moontlike geleenthede ten beste te benut.	1	2	3	4	5
A22	Daar is 'n omvattende werknemer-oriëntasieprogram vir nuwe werknemers om seker te maak dat werknemers die korporatiewe visie en missie hul eie maak.	1	2	3	4	5
A23	Geld is gewoonlik beskikbaar om nuwe idees (produkte, prosesse) op dreuf te kry.	1	2	3	4	5
A24	Ons onderneming het oor die afgelope paar jaar winsgroei ondervind.	1	2	3	4	5
A25	Ons onderneming ontwikkel produkte/dienste met inagneming van kliënte se behoeftes.	1	2	3	4	5
A26	Ons onderneming ontgin gedurig nuwe geleenthede.	1	2	3	4	5
A27	In ons onderneming word werknemers as die waardevolste bate van die onderneming beskou.	1	2	3	4	5
A28	Werknemers wat met innoverende idees vorendag kom, kry dikwels aanmoediging van bestuur vir hul bedrywighede/inisiatiewe.	1	2	3	4	5
A29	Ons onderneming het 'n hoë behoudsyfer t.o.v. kliënte.	1	2	3	4	5
A30	Topbestuur in ons onderneming betrek werknemers op laer vlakke wanneer belangrike besluite geneem word.	1	2	3	4	5
A31	As gevolg van die omgewing glo ons onderneming dat sterk en omvattende optrede nodig is om die onderneming se doelwitte te bereik.	1	2	3	4	5
A32	My posbeskrywing spesifiseer duidelik die prestasiestandaarde waarvolgens my pos beoordeel word.	1	2	3	4	5
A33	Ons onderneming is dikwels eerste met die bekendstelling van nuwe produkte/dienste/prosesse.	1	2	3	4	5
A34	Werknemers in ons onderneming is gretig om nuwe idees te skep.	1	2	3	4	5
A35	Ons onderneming plaas sterk klem daarop om dinge gedoen te kry, selfs al beteken dit dat formele prosedures geïgnoreer word.	1	2	3	4	5
A36	Ons onderneming plaas sterk klem op nuwe en innoverende produkte/dienste/prosesse.	1	2	3	4	5
A37	Werknemers in ons onderneming verstaan die behoeftes van ons kliënte.	1	2	3	4	5
A38	In die hantering van mededingers neem ons onderneming gewoonlik 'n baie mededingende "skakel-die-mededinger-uit"-houding in.	1	2	3	4	5
A39	Ons leiers het 'n langtermynbeskouing van ons onderneming en kommunikeer hul visie op alle vlakke van die onderneming.	1	2	3	4	5
A40	Ons onderneming ondersteun talle klein en eksperimentele projekte, met die wete dat sommige uiteindelik sal misluk.	1	2	3	4	5
A41	Ons onderneming se visie en strategieë is vir my duidelik.	1	2	3	4	5
A42	Ons prosesse, dienste en produkreekses het oor die afgelope paar jaar nogal beduidend verander.	1	2	3	4	5
A43	Ons onderneming het stelsels wat beide finansiële en nie-finansiële belonings vir entrepreneurspogings bied.	1	2	3	4	5

	Stelling	Stem glad nie saam	Stem nie saam nie	Onseker	Stem saam	Stem beslis saam
A44	Bestuurders moedig innoveerders aan om reëls en streng prosedures aan te pas om belowende idees op koers te hou.	1	2	3	4	5
A45	My kundigheid en vaardighede is sterk van toepassing op die taak wat ek moet verrig.	1	2	3	4	5
A46	Ons onderneming bied oorgenoeg leergeleenthede.	1	2	3	4	5
A47	Werknemers in ons onderneming word aangemoedig om hul eie werk te bestuur en het die buigsamheid om probleme op te los.	1	2	3	4	5
A48	Ons werknemers is baie toegewy aan ons onderneming.	1	2	3	4	5
A49	In ons onderneming is daar 'n sterk verwantskap tussen die getal nuwe idees wat geskep word en die getal nuwe idees wat suksesvol toegepas word.	1	2	3	4	5
A50	Werknemers in ons onderneming word deurentyd aangemoedig om hul vermoëns en vaardighede uit te brei.	1	2	3	4	5
A51	Ons onderneming het oor die afgelope paar jaar groei in markaandeel ondervind.	1	2	3	4	5
A52	Ons onderneming is baie aggressief en uiters mededingend.	1	2	3	4	5
A53	'n Werknemer met 'n goeie idee word dikwels tyd vry gegee om daardie idee te ontwikkel.	1	2	3	4	5
A54	Die mededingende posisie van ons onderneming het oor die afgelope paar jaar verbeter.	1	2	3	4	5
A55	Werknemers in ons onderneming word toegelaat om besluite te neem sonder om omslagtige regverdigings- en goedkeuringsprosedures te moet volg.	1	2	3	4	5
A56	Ek het genoeg outonomie in my werk, sonder gedurige toesighouding.	1	2	3	4	5
A57	Ons onderneming is oor die algemeen sterk op hoërisiko-projekte ingestel.	1	2	3	4	5
A58	Ons onderneming plaas min klem op nougesette navolging van formele posbeskrywings.	1	2	3	4	5
A59	Verandering word in ons onderneming doeltreffend bestuur.	1	2	3	4	5
A60	In ons onderneming word foute as leerervarings beskou.	1	2	3	4	5
A61	Om die regte kanale (gesagstrukture) te volg, is nie 'n voorvereiste om dinge in ons onderneming gedoen te kry nie.	1	2	3	4	5
A62	Die doeltreffendheid van ons onderneming (deur die regte dinge te doen) het oor die afgelope paar jaar verbeter.	1	2	3	4	5
A63	Ons onderneming hou gedurig markdensense dop en identifiseer toekomstige behoeftes van kliënte.	1	2	3	4	5
A64	Ons onderneming streef gedurig nuwe produkte/prosesse/dienste na.	1	2	3	4	5
A65	Werknemers word aangemoedig om idees vir nuwe inisiatiewe met werknemers in ander afdelings te bespreek.	1	2	3	4	5
A66	Ons onderneming plaas sterk klem op die deurlopende verbetering van produkte/dienslewering/prosesse.	1	2	3	4	5
A67	Ek en my medewerkers kry altyd tyd om aan breër (meer omvattende) sakeprobleme te dink.	1	2	3	4	5
A68	Opleiding en ontwikkeling in ons onderneming fokus op die individuele kennisvereistes van werknemers.	1	2	3	4	5

	Stelling	Stem glad nie saam	Stem nie saam nie	Onseker	Stem saam	Stem beslis saam
A69	Werknemers word dikwels aangemoedig om berekende risiko's aan te gaan ten opsigte van nuwe idees.	1	2	3	4	5
A70	Ons kliënte is lojaal teenoor ons onderneming.	1	2	3	4	5
A71	Selfs gedurende moeilike ekonomiese tye word finansiële beleggings in navorsing en ontwikkeling/innoverende projekte in ons onderneming voortgesit.	1	2	3	4	5
A72	Ons onderneming moedig werknemers wie se sienings van die onderneming s'n verskil, aan om innovering te stimuleer.	1	2	3	4	5
A73	Die moreel (werkbevrediging) van ons werknemers het oor die afgelope paar jaar verbeter.	1	2	3	4	5
A74	Ons onderneming neem 'n aggressiewe houding in om bedryfstendense wat 'n bedreiging vir ons oorlewing of mededingende posisie inhou, te bestry.	1	2	3	4	5
A75	Die beeld (aansien) van ons onderneming, in vergelyking met ons mededingers, het oor die afgelope paar jaar gegroei.	1	2	3	4	5
A76	Werknemers word aangemoedig om op hoogte te bly van ontwikkelinge op hul werkgebied.	1	2	3	4	5
A77	Om na kliënte om te sien is ons onderneming se hoogste prioriteit.	1	2	3	4	5
A78	Ons kliënte is tevrede met ons onderneming se produkreeks/dienste.	1	2	3	4	5
A79	Ons onderneming stel en evalueer gereeld doelwitte met betrekking tot innoverende, waagmoedige (risikonemende) en proaktiewe optrede.	1	2	3	4	5
A80	In ons onderneming verstaan werknemers dat verandering nodig is om te kan groei.	1	2	3	4	5
A81	Multidissiplinêre (van verskillende afdelings) groepe of spanne word dikwels ingespan om probleme op te los en/of innoverende projekte te ontwikkel en te implementeer.	1	2	3	4	5
A82	Nuwe idees kan vir goedkeuring voorgelê word en daar is 'n formele vasleggings- en hanteringsproses vir idees.	1	2	3	4	5
A83	Ons onderneming laat my toe om kreatief te wees en verskillende maniere te beproef om my werk te doen.	1	2	3	4	5
A84	Ek hoef selde dieselfde werkwyses of stappe te volg om my belangrikste take van dag tot dag uit te voer.	1	2	3	4	5
A85	Werknemers word aangemoedig om altyd alles uit nuwe hoeke te beskou.	1	2	3	4	5
A86	Ons onderneming se visie/missie moedig skeppende en innoverende gedrag aan.	1	2	3	4	5
A87	Ons onderneming word gekenmerk deur min administratiewe rompslomp/burokrasie.	1	2	3	4	5
A88	Ons onderneming het duidelike doelwitte, waarop werknemers en bestuurders onderling ooreengekom het.	1	2	3	4	5
A89	Ons onderneming word gekenmerk deur oop kommunikasiekanale en belangrike finansiële en bedryfsinligting vloei vrylik deur die hele onderneming.	1	2	3	4	5
A90	Die term "risikonemer" word as 'n positiewe eienskap vir werknemers in ons onderneming beskou.	1	2	3	4	5

AFDELING B: KERNEIENSKAPPE VAN ENTREPRENEURS

Selfbeoordeling en beoordeling van Senior

Suksesvolle entrepreneurs het sekere eienskappe gemeen. Afdeling B van hierdie vraelys is daarop gemik om te bepaal in watter mate werknemers by Agri-ondernemings geneig is om 'n entrepreneursgees te openbaar. In afdeling B1 word u versoek om u self op 'n skaal van 1 tot 5 te evalueer volgens hoe sterk elk van die eienskappe op u van toepassing is. In afdeling B2 moet u asseblief ook u direkte toesighouer/bestuurder (senior) evalueer. Afdeling B2 is dus 'n evaluering van hoe u u senior volgens die betrokke entrepreneurseienskap sal beoordeel. Merk asseblief die toepaslike blokkie met 'n X.

Deleted: scale

GRAAD	BESKRYWING
5	Beslis sterk eienskap
4	Redelik sterk
3	Nie sterk of swak nie
2	Redelik swak
1	Beslis 'n swakheid

	B1 Selfbeoordeling					Eienskappe	B2 Beoordeling van Senior					
	Beslis 'n swakheid	Redelik swak	Nie sterk of swak nie	Redelik sterk	Beslis sterk eienskap		Beslis 'n swakheid	Redelik swak	Nie sterk of swak nie	Redelik sterk	Beslis sterk eienskap	
(B1/01)	1	2	3	4	5	Hoë toewyding	1	2	3	4	5	(B2/01)
(B1/02)	1	2	3	4	5	Hoë vlakke van kreatiwiteit en vindingrykheid	1	2	3	4	5	(B2/02)
(B1/03)	1	2	3	4	5	Hoë energievlakke	1	2	3	4	5	(B2/03)
(B1/04)	1	2	3	4	5	Min ondersteuningsbehoefes	1	2	3	4	5	(B2/04)
(B1/05)	1	2	3	4	5	Neem berekende risiko's	1	2	3	4	5	(B2/05)
(B1/06)	1	2	3	4	5	Hoë deursettingsvermoë	1	2	3	4	5	(B2/06)
(B1/07)	1	2	3	4	5	Vermoë om verantwoordelikheid te aanvaar	1	2	3	4	5	(B2/07)
(B1/08)	1	2	3	4	5	Probleemoplossingsvaardighede	1	2	3	4	5	(B2/08)
(B1/09)	1	2	3	4	5	Vermoë om ander te inspireer	1	2	3	4	5	(B2/09)

	B1 Selfbeoordeling					Eienskappe	B2 Beoordeling van Senior					
	Beslis 'n swakheid	Redelik swak	Nie sterk of swak nie	Redelik sterk	Beslis sterk eienskap		Beslis 'n swakheid	Redelik swak	Nie sterk of swak nie	Redelik sterk	Beslis sterk eienskap	
(B1/10)	1	2	3	4	5	Selfstandigheid	1	2	3	4	5	(B2/10)
(B1/11)	1	2	3	4	5	Moed	1	2	3	4	5	(B2/11)
(B1/12)	1	2	3	4	5	Selfvertroue en optimisme	1	2	3	4	5	(B2/12)
(B1/13)	1	2	3	4	5	Vermoë om dubbelsinnigheid en onsekerheid te bestuur	1	2	3	4	5	(B2/13)
(B1/14)	1	2	3	4	5	Vermoë om geleenthede in die mark raak te sien	1	2	3	4	5	(B2/14)
(B1/15)	1	2	3	4	5	Ruimhartigheid	1	2	3	4	5	(B2/15)
(B1/16)	1	2	3	4	5	Integriteit en betroubaarheid	1	2	3	4	5	(B2/16)
(B1/17)	1	2	3	4	5	Vermoë om mense op te som	1	2	3	4	5	(B2/17)
(B1/18)	1	2	3	4	5	Geduld	1	2	3	4	5	(B2/18)
(B1/19)	1	2	3	4	5	Vermoë om by verandering aan te pas	1	2	3	4	5	(B2/19)
(B1/20)	1	2	3	4	5	Hoë emosionele stabiliteit	1	2	3	4	5	(B2/20)
(B1/21)	1	2	3	4	5	Selfkennis (persoonlike sterk en swak punte)	1	2	3	4	5	(B2/21)
(B1/22)	1	2	3	4	5	Vinnige leerder wat nie twee keer dieselfde fout begaan nie	1	2	3	4	5	(B2/22)
(B1/23)	1	2	3	4	5	Vermoë om te konseptualiseer en detail te ontleed	1	2	3	4	5	(B2/23)
(B1/24)	1	2	3	4	5	Bereidheid om persoonlike opofferings te maak	1	2	3	4	5	(B2/24)
(B1/25)	1	2	3	4	5	Selfgemotiveerd (innerlike selfdiscipline)	1	2	3	4	5	(B2/25)
(B1/26)	1	2	3	4	5	Beperkte behoefte aan status en mag	1	2	3	4	5	(B2/26)
(B1/27)	1	2	3	4	5	Bevraagteken status quo	1	2	3	4	5	(B2/27)
(B1/28)	1	2	3	4	5	Dryfkrag om te presteer en te groei	1	2	3	4	5	(B2/28)
(B1/29)	1	2	3	4	5	Verdraagsaamheid teenoor mislukking	1	2	3	4	5	(B2/29)
(B1/30)	1	2	3	4	5	Onbevooroordeeld (laterale denker)	1	2	3	4	5	(B2/30)

AFDELING C: BIOGRAFIESE INLIGTING

Die volgende inligting word benodig om behulpsaam te wees met die statistiese ontleding van die data om vergelykings te kan tref tussen belangegroep. Al u antwoorde sal as vertroulik hanteer word. U samewerking in die verband sal baie waardeer word. Merk die toepaslike blok met 'n X.

C01	In watter ouderdomsgroep val u?	≤ 29	30 - 39	40 - 49	50 - 59	60+
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C02	Wat is u geslag?	Manlik	Vroulik
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C03	Dui u ras aan	Swart	Blank	Kleurling	Indiër
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C04	Dui u posgraad aan	
	Topbestuur	
	Middelbestuur	
	Juniorbestuur	

C05	Dui u hoogste akademiese kwalifikasie aan	
	Laer as matriek	
	Matriek	
	Sertifikaat	
	Diploma (Tegniese kollege of Technicon)	
	Graad	
	Nagraadse graad	

C06	Dui u divisie aan	
	Uitvoerende bestuur	
	Bemarking, hantering, prosessering en verpakking van produk	
	Verskaffing van produksie insette (saad; oessorg; veevoer; landboubestuurdienste)	
	Kleinhandel (handelstakke)	
	Toerusting (bemarking; onderhoud; en vervaardiging van landbou toerusting)	
	Finansiering & versekering	
	Korporatiewe dienste (tesourie; interne oudit; menslike hulpbronne ens)	
	Ander (kommoditeit verhandeling & filiale)	

BAIE DANKIE. U INSETTE WORD WAARDEER

APPENDIX 1

Items measuring entrepreneurial orientation the latent variables

AUTONOMY	
Item	Statement
Autonomy 01	I have enough autonomy in my job without continual supervision to do my work.
Autonomy 02	Our business allows me to be creative and try different methods to do my job.
Autonomy 03	Employees in our business are allowed to make decisions without going through elaborate justification and approval procedures.
Autonomy 04	Employees in our business are encouraged to manage their own work and have flexibility to resolve problems.
Autonomy 05	I seldom have to follow the same work methods or steps while performing my major tasks from day to day.
INNOVATIVENESS	
Innovativeness 01	Our business regularly introduces new services/products/processes.
Innovativeness 02	Our business places a strong emphasis on new and innovative products/services/processes.
Innovativeness 03	Our business has increased the number of services/products offered during the past two years.
Innovativeness 04	Our business is continually pursuing new opportunities.
Innovativeness 05	Over the past few years, changes in our processes, services and product lines have been quite dramatic.
Innovativeness 06	In our business there is a strong relationship between the number of new ideas generated and the number of new ideas successfully implemented.
Innovativeness 07	Our business places a strong emphasis on continuous improvement in products/service delivery/processes.
Innovativeness 08	Our business has a widely held belief that innovation is an absolute necessity for the business's future.
Innovativeness 09	Our leaders seek to maximise value from opportunities without constraint to existing models, structures or resources.
RISK TAKING	
Risk-taking 01	When confronted with uncertain decisions, our business typically adopts a bold posture in order to maximise the probability of exploiting opportunities.
Risk-taking 02	In general, our business has a strong inclination towards high-risk projects.
Risk-taking 03	Owing to the environment, our business believes that bold, wide-ranging acts are necessary to achieve the business's objectives.
Risk-taking 04	Employees are often encouraged to take calculated risks concerning new ideas.
Risk-taking 05	The term "risk-taker" is considered a positive attribute for employees in our business.
PROACTIVENESS	
Proactiveness 01	Our business is very often the first to introduce new products/services/processes.
Proactiveness 02	Our business typically initiates actions which competitors respond to.
Proactiveness 03	Our business continuously seeks out new products/processes/services.
Proactiveness 04	Our business continuously monitors market trends and identifies future needs of customers.

COMPETITIVE AGGRESSIVENESS

Competitive aggressiveness 01	In dealing with competitors our business typically adopts a very competitive "undo-the-competitor" posture.
Competitive aggressiveness 02	Our business is very aggressive and intensely competitive.
Competitive aggressiveness 03	Our business effectively assumes an aggressive posture to combat industry trends that may threaten our survival or competitive position.
Competitive aggressiveness 04	Our business knows when it is in danger of acting overly aggressively (this could lead to erosion of our business's reputation or to retaliation by competitors).

APPENDIX 2

Items measuring the entrepreneurial climate latent variables

VISION	
Vision 01	Our business's vision/mission encourages creative and innovative behaviour.
Vision 02	Our business's vision and strategies are clear to me.
Vision 03	The vision and strategies of our business often help me in setting priorities.
Vision 04	Our leaders take a long-term view of our business and articulate their vision to all levels in the business.
STRUCTURE	
Structure 01	Our business is characterised by open channels of communication with important financial and operating information flowing quite freely throughout the business.
Structure 02	In our business, employees have to follow lines of authority and following the correct channels are strongly encouraged.
Structure 03	Our business places a strong emphasis on getting things done even if this means disregarding formal procedures.
Structure 04	Top management makes all the important decisions in our business with little or no input from lower level employees.
Structure 05	Groups or teams are often used to solve problems and/or develop and implement innovative projects.
Structure 06	Teams or groups are characterised by diversity based on the project's skills requirement.
Structure 07	Our business is characterised by few managerial levels (flat structure).
Structure 08	Our business is characterised by low levels of red tape/bureaucracy.

CULTURE

Culture 01	Those employees who come up with innovative ideas often receive management encouragement for their activities/initiatives.
Culture 02	Managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track.
Culture 03	Entrepreneurial failure (an idea that was developed, but ultimately failed) is generally accepted in our business.
Culture 04	Employees are encouraged to continually look at things in new ways.
Culture 05	Our business encourages employees who have different views to those of the business, to stimulate innovation.
Culture 06	During the past three months I had sufficient time to spend on the development of new ideas.
Culture 07	My co-workers and I always find time to think about broader (more extensive) business problems.
Culture 08	An employee with a good idea is often given free time to develop that idea.
Culture 09	Money is usually available to get new ideas (products, processes) off the ground.
Culture 10	There are several options within our business for employees to get financial support for developing their innovative projects and ideas.
Culture 11	Our business supports many small and experimental projects, knowing that some will ultimately fail.
Culture 12	Employees are encouraged to discuss ideas for new initiatives with employees in other departments.
Culture 13	There is eagerness among employees in our business for generating new ideas.
Culture 14	New ideas may be submitted for approval in our business and a formal idea capturing and idea handling process exists.
Culture 15	Previously submitted ideas are available and accessible to all employees.
Culture 16	Employees are encouraged to stay abreast of developments in their functional fields.
Culture 17	Our business provides ample opportunities for learning.
Culture 18	Employees in our business are continuously encouraged to expand their capacities and skills.
Culture 19	In our business mistakes are regarded as learning experiences.
Culture 20	In our business employees understand that change is necessary for growth.
Culture 21	Change is managed effectively in our business.

HUMAN RESOURCE MANAGEMENT	
Human resource management 01	My job description clearly specifies the standards of performance on which my job is evaluated.
Human resource management 02	There are few written rules and procedures for performing my major tasks.
Human resource management 03	Our business has clear goals, which have been mutually agreed upon by employees and managers.
Human resource management 04	Our business has flexible job descriptions rather than formal job descriptions.
Human resource management 05	My expertise and skills are closely matched to the task I have to perform.
Human resource management 01	There is continual recruitment of individual entrepreneurs into our business.
Human resource management 06	There is an extensive employee orientation programme for new employees to ensure that employees share the corporate vision and mission.
Human resource management 07	Our business sets and regularly evaluates goals related to innovative, risk-taking and pro-active behaviour.
Human resource management 08	Our business places little emphasis on adherence to formal job descriptions.
Human resource management 09	Our business has systems that offer both financial and non-financial rewards for entrepreneurial behaviour.
Human resource management 10	Employees championing successful innovative projects are rewarded beyond the standard rewarding system and receive additional compensation for their ideas and efforts.
Human resource management 11	Employees with unsuccessful innovative projects (projects that failed) are still rewarded beyond the standard rewarding system and receive additional compensation for their ideas and efforts.
Human resource management 12	Training and development in our business focuses on the individual knowledge requirements of employees.
CUSTOMER ORIENTATION	
Customer orientation 01	Taking care of customers is our business' top priority.
Customer orientation 02	Our business has a high customer retention rate.
Customer orientation 03	Our business develops product/services with customers in mind.
Customer orientation 04	Our customers are satisfied with our business' product/service offerings.
Customer orientation 05	Employees in our business understand the needs of our customers.
Customer orientation 06	Our customers are loyal to our business.

APPENDIX 3

Items measuring the latent variables perceived success

FINANCIAL MEASURES	
Financial measures 01	Our business has experienced growth in turnover over the past few years.
Financial measures 02	Our business has experienced growth in profits over the past few years.
Financial measures 03	Our business has experienced growth in market share over the past few years.
PROCESS MEASURES	
Process measures 01	The competitive position of our business has improved over the past few years.
Process measures 02	The effectiveness (doing the right things) of our business has improved over the past few years.
Process measures 03	The efficiency (doing things right) of our business has improved over the past few years.
PEOPLE DEVELOPMENT	
People development 01	In our business, employees are viewed as the most valuable asset of the business.
People development 02	Our employees are highly committed to our business.
People development 03	The morale (job satisfaction) of our employees has improved over the past few years.
FUTURE (LONG-TERM) SUCCESS	
Future success 01	The image (stature) of our business, relative to our competitors, has grown over the past few years.
Future success 02	During difficult economic periods, investments in research and development/innovative projects continue and no significant financial cuts are made.