

An assessment of corporate entrepreneurship in the alloy mining environment

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ABSTRACT

This study highlighted the influence of the 13 corporate entrepreneurial constructs on the entrepreneurial climate in corporate organisations. The primary objective of this study was to assess the level of corporate entrepreneurship in the South African alloy mining environment, with specific reference to Xstrata Alloys and to make recommendations on the encouragement and promoting of a climate conducive to corporate entrepreneurship in Xstrata South Africa (Pty) Ltd - Alloys.

The empirical study was conducted by means of a self-completion questionnaire administered to middle managers in Xstrata South Africa (Pty) Ltd – Alloys. The questionnaire was distributed to 252 middle managers by e-mail or in hard copy format. 103 usable questionnaires were gathered from middle managers in Xstrata South Africa (Pty) Ltd - Alloys.

Cronbach's alpha coefficient values were used to determine the internal consistency amongst items in the research instrument. In only three of the constructs' alpha values of less than 0.80 were calculated, indicating a relatively high level of internal reliability of the research instrument.

The 13 constructs of an entrepreneurial climate in an organisation, as well as five factors evaluating the perceived success of an organisation were investigated. The relationships between the demographic variables (being male and female; and black and white) were discussed for the 13 constructs as well as for the factors measuring the perceived organisational success in order to identify statistically significant variances in perceptions.

An assessment of the corporate entrepreneurial climate in Xstrata SA (Pty) Ltd – Alloys was conducted and the average mean for the study calculated. The means of six constructs were lower than the average mean ($\bar{x} = 3.556$) while seven constructs were ranked higher. The two constructs with the highest mean were **Vision and strategic intent** ($\bar{x} = 3.882$) and **Entrepreneurial leadership** ($\bar{x} = 4.066$).

Recommendations and practical ways in which a corporate entrepreneurial climate could be enhanced and maintained in Xstrata SA (Pty) Ltd – Alloys was discussed. It was recommended that systems and processes should be revisited and adapted to ensure adherence to the requirements of a corporate entrepreneurial climate. Procedures must be simplified to facilitate the rapid implementation of new processes.

An action plan to facilitate the fostering of corporate entrepreneurial constructs in the organisation was proposed. The action plan included actions such as:

- Give feedback to top management on findings of study and recommendations made.
- Revisit corporate values and get buy-in from employees.
- Develop a strategic plan to ensure incorporation of corporate entrepreneurial constructs.
- Develop a procedure and process outlines for allocation of resources.
- Revisit rewarding system to recognise and reward entrepreneurial behaviour.
- Recognition for corporate entrepreneurs.
- Develop procedures and processes regarding tolerance for risks, mistakes and failures.
- Revisit the organisational structure of the organisation.
- Establish a communication strategy.
- Implement the mentoring process in all departments, focussing on departments with entrepreneurial potential.
- Build strong multidiscipline teams.
- Ensure rapid implementation of new processes.
- Align the following goals to each other as well as to the organisational strategy.
- Staff development.
- Assessment and evaluation system revisited to incorporate corporate entrepreneurial behaviour patterns.

The report concluded by addressing the achievement of all the objectives, and by recommending possible future research that could be undertaken based on this study.

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CHAPTER 1

NATURE AND SCOPE OF THE STUDY

1.1 INTRODUCTION

The mining sector in South Africa is facing fundamental challenges currently which entail productivity of labour and capital, rising input costs pressures, volatility of the rand, logistical constraints and various other human resources concerns (Chamber of Mines of South Africa, 2005:14). This could be linked to an entrepreneurial climate and must be addressed in order to remain competitive and to be financially strong.

While in recent years the mining industry saw commodity prices rise, and profits follow, the global economic downturn changed things over a period of months. Mineral deposits and mine developments are often in remote areas and host governments and other stakeholders often have stringent requirements for mining companies. These requirements on top of normal business challenges, such as commodity price movements, efficiency of operations, optimising taxes, environmental needs, health and safety challenges, and community needs, ensure that mining is challenging for all industry participants (Price Waterhouse and Coopers, 2008:1). Mining companies around the world are responding to these challenges through innovative strategies.

Research has been conducted in the mining environment regarding corporate entrepreneurship (Oosthuizen, 2006:1). However, the study conducted by Oosthuizen was conducted during 2006 while the mining economy was on a high. Further research is needed during a mining economy downswing. Oosthuizen's research also excluded Xstrata SA (Pty) Ltd.

Companies can no longer rely on the same leadership styles they have used in the past. A new entrepreneurial leadership style is required to ensure flexibility, change, innovation and responsiveness (Oosthuizen, 2006:1). Today's managers are faced with highly competitive environments which are continuously rapidly changing.

Managers also need to manage an interdependent global economy, heightened volatility, hyper competition, demographic changes such as the decrease of some sectors accompanied by enormous growth in others (Dess, Lumpkin & Covin, 1997:677).

Middle managers are important as the research population since the middle management level is where entrepreneurial activities are most likely to experience the actual implementation of strategies. Middle managers conduct information and actions such as those associated with entrepreneurship between top management and operating level managers (Morris, Kuratko & Covin, 2008:309-311).

According to Burns (2005:9), entrepreneurship is something that organisations of all sizes and forms wish to encourage and promote. It is about promoting change and managing rapid growth. During economic downturn periods it is important to identify opportunities and minimize failures and mistakes (Cornwall & Perlman, 1990:189).

1.2 PROBLEM STATEMENT

The mining industry by nature is a very competitive industry. The mining industry, however, experienced a violent downward tailspin in the last three months of 2008 (Price Waterhouse and Coopers, 2008:1). In the light of the current economic downturn the mining industry is even more competitive.

External turbulence is forcing companies into fundamental internal transformation. Companies need to ensure sustainable competitive advantage through adaptability, flexibility, speed, aggressiveness and innovativeness. All of these are distinctive of an entrepreneurial climate in a company (Morris & Kuratko, 2002:15).

According to Cornwall and Perlman (1990:29), entrepreneurial organisations are much more equipped to be competitive than any other traditional organisations. Entrepreneurial organisations are able to quickly and effectively respond to changes in the external environment.

In today's competitive corporate environment, organisations are striving to outwit, outsmart and outplay their competitors. New methods of managing and leading the companies are required to have the competitive edge. Entrepreneurial leadership is reckoned as a role-playing factor in companies that is moving ahead today. Xstrata SA (Pty) Ltd is a fast growing company with a very flat (decentralised) management philosophy. If the entrepreneurial climate of Xstrata is evaluated, the company could build on what they are doing right, and change what they are doing wrong.

1.3 RESEARCH OBJECTIVES

The research objectives are divided into primary and secondary objectives.

1.3.1 Primary objective

The primary objective of this study is to assess the level of corporate entrepreneurship in the South African alloy mining environment, with specific reference to Xstrata Alloys and to make recommendations on the encouragement and promoting of an entrepreneurial climate.

1.3.2 Secondary objectives

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

- To define corporate entrepreneurship and entrepreneurial climate.
- To obtain insight into the dynamics of corporate entrepreneurship and entrepreneurial climate by means of a literature review.
- To gain insight into the business environment of Xstrata PLC as a company focussing on Xstrata Alloys as part of the South African mining sector.
- To assess the current corporate entrepreneurial climate in Xstrata Alloys by means of a questionnaire.
- To propose recommendations to ensure and promote an entrepreneurial climate in Xstrata Alloys.

1.4 SCOPE OF THE STUDY

1.4.1 Field and sector of study

The field of study falls within the subject discipline of entrepreneurship with special reference to corporate entrepreneurship.

1.4.2 Organisation under investigation

The study is carried out in the private sector and more specifically the business environment of the mining company Xstrata South Africa (Pty) Ltd – Alloys. The nine operational units within Xstrata South Africa (Pty) Ltd – Alloys are situated in the Northwest and Mpumalanga provinces of South Africa. Refer to chapter 2 for a detailed description of Xstrata South Africa (Pty) Ltd. The geographical location of the operational units under investigation within the boundaries of South Africa is indicated in figure 1.1 below.

Figure 1.1: Map of South Africa with Xstrata's operational units



Source: Xstrata Web (2008)

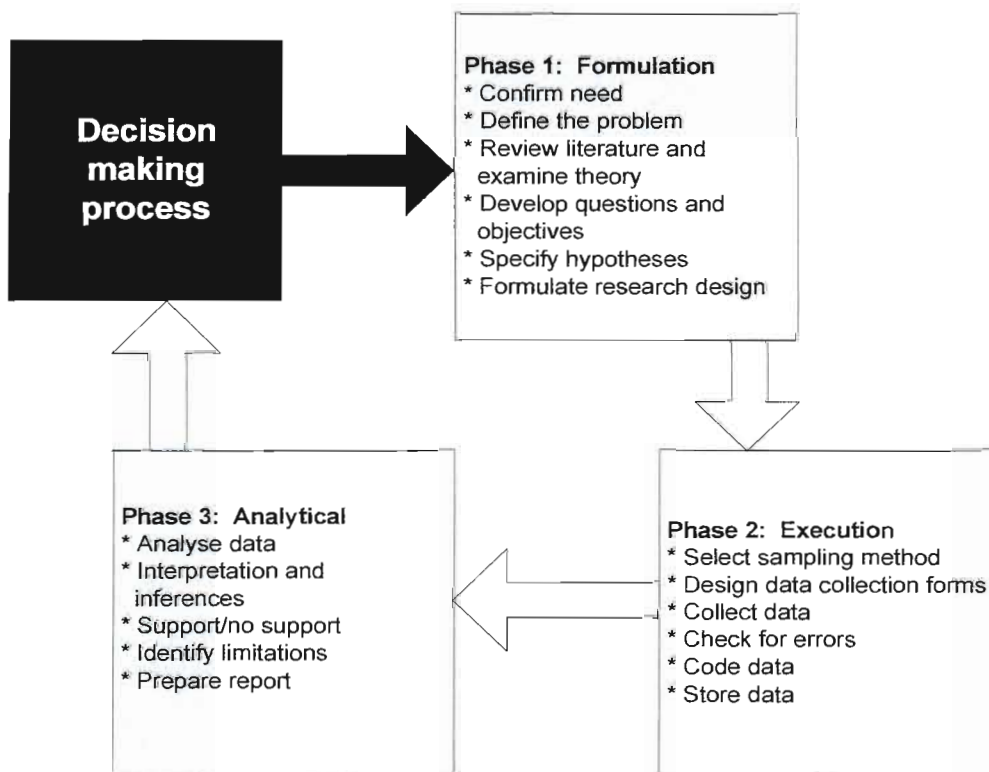
1.5 RESEARCH METHODOLOGY

Although many different research processes or research steps are identified by different authors, most of the processes have the same basic principles or steps. The systematic flow of the research process assists the researcher to proceed from an identified problem to proposing meaningful solutions or providing recommendations for improvement.

Welman, Kruger and Mitchell (2005:12-13) propose a six step research process, including the determination of the research topic, defining the research problem, planning the research, collecting data, interpreting data and writing a report.

Hair, Money, Samouel and Page (2007:32) provide a road map with directions for conducting a business research project. An example of their research process flow could be found in Figure 1.2.

Figure 1.2: The basic business research process



Source: Hair *et al.* (2007: 32)

For the purpose of this study, the seven steps as proposed by Brynard en Hanekom (2006:10-12) are applied and will be discussed below. The seven steps include:

- Phase 1: Select a researchable topic.
- Phase 2: Formulate a research question/problem.
- Phase 3: Plan the research.
- Phase 4: Implement the methods decided upon.
- Phase 5: Collect the data.
- Phase 6: Analyse and interpret the data.
- Phase 7: Write a research report.

The seven phases will now be discussed in more detail.

1.5.1 Phase 1: Select a researchable topic

According to Bak (2004:8-9), some areas in which a research topic can be found are:

- Interesting coursework or assignments.
- Literature.
- An existing research project.
- Find out what other students are working on.
- Suggestions from academics in the field of interest of the researcher.
- Official documents such as departmental files and reports of committees.
- Curiosity regarding a field of interest of the researcher.
- Personal experience.

Previous research done by Oosthuizen (2006:1) was utilised as a source for this study's research topic.

Hair *et al.* (2007:88) state that quality research topics are topics that address gaps in previously researched or existing knowledge that currently inhibit informed decision making.

The topic of this study, i.e. the entrepreneurial climate in a mining company was selected with this aim in mind. A previous study conducted on the entrepreneurial climate in the mining industry by Oosthuizen (2006:1) mainly focused on mining companies in the platinum, diamond, gold, coal and uranium commodities. This study will be conducted on a mining company in the Chrome and Vanadium commodities.

1.5.2 Phase 2: Formulate a research question/problem

The problem statement acts as a guide and focuses the planning of the research and the research itself. It requires an exact description as concise as possible of the research topic, which will convey as much information on the problem as possible (Bak, 2004:16). The problem statement for this study is discussed in section 1.2.

1.5.3 Phase 3: Plan the research

Two forms of studies will be conducted in order to gather information, namely a literature study and empirical study.

1.5.3.1 Literature review

The literature review will be discussed in chapter 2, chapter 3 and chapter 4. The following will be investigated in each of the chapters:

Chapter 2

In chapter 2 an overview of Xstrata PLC will be given, with special focus on Xstrata Alloys. The history and diverse commodities within Xstrata Alloys will be discussed.

The Xstrata PLC and Xstrata Alloys structure will be discussed to give understanding of the diverse commodities, and the flat organisational structure of Xstrata.

The causal factors which gave rise to this study will be examined.

Chapter 3

Chapter 3 will focus on a discussion of entrepreneurship within existing organisations; it will identify specific individual characteristics that promote the entrepreneurial climate in an organisation; and it will give attention to the activities of the entrepreneur (individual and in the corporate environment). Entrepreneurship and corporate entrepreneurship will be defined.

The five basic dimensions of corporate climate will be identified. In order to foster a corporate entrepreneurial climate within an organisation, the role of corporate culture and climate should be considered.

Chapter 4

In chapter 4 the entrepreneurial climate and culture will be defined and the thirteen constructs of the corporate entrepreneurial climate in an organisation will be discussed in detail.

The sources that will be consulted include:

- Journals such as *Harvard Business Review*, *Journal of Business Venturing*, *Journal of Small Business and Enterprise Development*, *Journal of Management*, *IIMB Management Review*, *Strategic Management Journal*, *Entrepreneurship Theory and Practice*.
- Various text books (see the reference list at the end of the proposal).
- Internet articles.
- Dissertations of previous doctorate and magister students.
- Annual reports of Xstrata and the Chamber of mines.

1.5.3.2 Empirical study

The empirical study consists of the research design, the measuring instrument, the study population and the statistical analysis.

Measuring Instrument

An existing questionnaire developed by Oosthuizen (2006) and adapted by Jordaan (2008) will be used to conduct the empirical study. The questionnaire will further be adapted for use in Xstrata SA (Pty) Ltd – Alloys. The questionnaire consists of three parts, namely:

Section A: Assessment of the entrepreneurial climate

This section consists of 65 items, based on the constructs of corporate entrepreneurship which evaluates the existing level of corporate entrepreneurship within the organisation.

Oosthuizen (2006:130-146) originally identified the thirteen constructs that seem necessary for an entrepreneurial climate in corporate organisations, i.e. visionary or entrepreneurial leadership, management support, the presence of a champion or sponsors, tolerance for risks, mistakes and failure, innovation and creativity - new ideas encouraged, appropriate rewards and reinforcement, vision and strategic intent, discretionary time and work, empowered teams, multi-disciplined teamwork and diversity, resource availability and accessibility, continuous- and cross-functional learning, strong customer orientation, and a flat organisational structure with open communication and strong sense of belonging.

Section B: Perceived organisational success

A total of 17 items were identified to measure the perceived success of the organisation in terms of financial, customer or market, process, people development and long term success. In respect of each item, subjects have to indicate the degree to which they agree or disagree with a certain statement.

Section A and B are completed by means of a Likert scale (also referred to as a summated scale). According to Huysamen (1994:125), a Likert scale comprises of a collection of statements and respondents are required to indicate a degree of agreement/disagreement with statements on a scale. A five point Likert scale is

incorporated in the questionnaire developed by Oosthuizen (2006) and adopted by Jordaan (2008).

Section C: Demographical information

Respondents have to indicate their age group, gender, race, highest academic qualification and the functional department in which they work.

Study population

Xstrata Alloys with specific focus on the chrome division was identified as the corporate entity to be held under the magnifying glass. The reason for choosing Xstrata Alloys is that it goes hand in hand with previous studies which also focused on the mining sector (Oosthuizen, 2006). Nine different operational units within Xstrata Alloys will be included in this evaluation, namely Head Office, Shared Service Centre, Rustenburg, Boshhoek, Lydenburg, Eastern Mines, Western Mines, Lion and Wonderkop. Xstrata Alloys defines middle management as managers in D level positions as graded by the Patterson grading system. This means in Xstrata, middle management incorporates engineers, superintendents, head of departments, human resource managers and departmental managers. (Lower management will thus be on supervisory level, and top or senior management will be executive/directorial management level).

The Patterson (1972) job grading system is used in Xstrata Alloys to categorise jobs according to the level of decision making involved in the execution of tasks. The questionnaires will be distributed by hand or e-mailed to all employees on the D band (Patterson grading) within the nine Xstrata Alloys operational units as summarised in table 1.1.

Although the majority of employees on the D band are middle managers, the researcher might find that some of the employees on the D band are actually either junior- or senior managers. For the purpose of this study, these employees will be included in the population. The geographical distribution of the population is summarised in table 1.1.

Table 1.1: Geographical data of the study population

OPERATIONAL UNIT	NUMBER OF EMPLOYEES
Head Office (including Shared Services)	68
Lion Ferrochrome	24
Lydenburg	25
Wonderkop	30
Rustenburg	19
Boshoek	20
Eastern Mines	27
Western Mines	39
Total Xstrata Alloys	252

The study population of this study will thus include all the D band managers in the nine chrome operational units (as indicated above) within Xstrata Alloys. The questionnaires would not only be distributed to a sample of the population, but to all the middle managers.

1.5.4 Phase 4: Implement the methods decided upon

The permission of Xstrata's Managing Director for Chrome and the General Manager for Human Resources were obtained to conduct the study before the questionnaire was distributed to the respondents.

A name list of all employees within the population was obtained from the Xstrata human resources department and the information was verified on the Xstrata electronic information system (SAP).

1.5.5 Phase 5: Collect the data

Brynard and Hanekom (2006:11) state that during the data collection phase, the researcher must ensure that all the facts collected during the main investigation are relevant to the research problem/question.

The techniques to distribute and complete the questionnaires included: e-mail or facsimile and personal delivery of questionnaires. Confidentiality was ensured for each participant, and although names were known due to most of the questionnaires being sent back via e-mail, the names were used strictly for the purpose of capturing the relevant demographical data or to follow-up uncompleted questionnaires.

1.5.6 Phase 6: Analyse and interpret the data

The data collected will be statistically analysed, using Statistica (Statsoft, 2008) and SPSS (SPSS, 2005).

Internal consistency reliability: The reliability of the questionnaire will be assessed by means of calculating the Cronbach alpha coefficients.

Measures of central tendency: The arithmetic mean is the statistical measure most commonly used to determine central tendency. The arithmetic mean is the sum of the total values, divided by the number of values measured (Levine, Stephan, Krehbiel & Berenson, 2005:105). Other measures of central tendency include the median and the mode, but in this study the mean will be used to analyse data.

Measures of dispersion: Measures of dispersion indicate the spread of data (Levine *et al.*, 2005:112). Standard deviation is based on the mean and gives an average distance between all the scores and the mean. In this study the standard deviation will be used to indicate the dispersion of data around the mean.

Frequency distribution: Frequency distributions are the grouping of data into mutually exclusive classes showing the number of observations in each (Levine *et al.*, 2005:55). One of the most common ways to portray a frequency distribution is a histogram (Levine *et al.*, 2002:35). Percentages as well as numbers will be used, depending on the nature of data, to draft the frequency distributions.

The data interpretation section includes a discussion of the demographic information, the construct validity and reliability of the questionnaire and the relationship between the variables.

1.5.7 Phase 7: Write a research report/conclusions

It is important to take into consideration that the quality of the research report is not only judged by the conformity to the basic research requirements and by the quality of its contents, but also by the correctness of all the technical aspects such as referencing, use of figures, numbers in the text, headings and the list of sources (Brynard & Hanekom, 2006: 79-85). For the purpose of this study, a detailed research report will not be written, but the conclusions drawn from the empirical study will be discussed in detail.

1.6 LIMITATIONS/ANTICIPATED PROBLEMS

The sample frame was limited to a single organisation which ultimately provided data representative of the particular organisations' internal culture. The purpose of the research was not to extrapolate the data or results in order to make deductions but rather to learn about the entrepreneurial climate in the mining industry.

The possible impact of the current international economic situation on the research results should be taken into consideration.

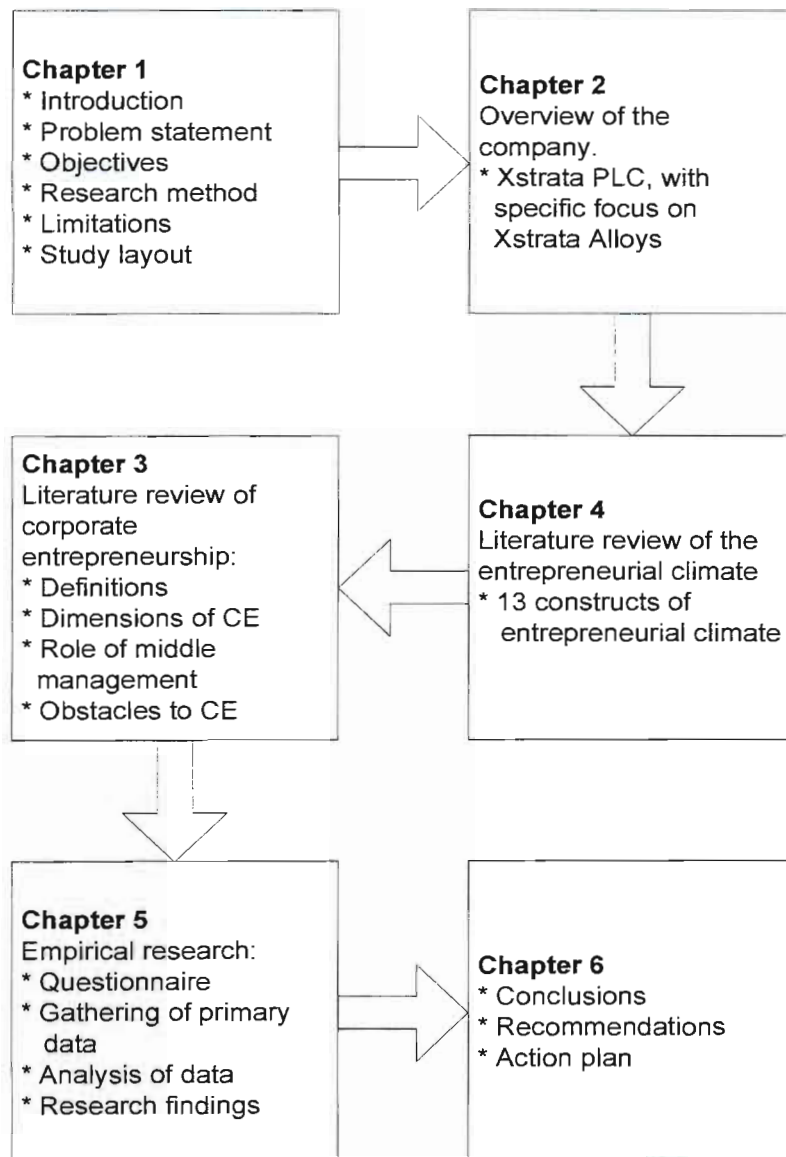
The scope of the study is limited to employees assumed to be on middle management level. The results of the study could not be generalised to the entire Xstrata Alloys population. The researcher recommends that future studies on this topic should include employees on supervisory and top management level.

The population identified is small (252), it might therefore be difficult to obtain enough responses to obtain a statistically valid sample, and it does limit the use of advanced statistical techniques such as scale validation or structural equation modelling.

1.7 THE LAYOUT OF THE STUDY

Figure 1.3 gives a graphical representation of the layout of the study per chapter.

Figure 1.3: Layout of the study



The chapters (2 to 6) in this mini-dissertation are presented as follows:

Chapter 2 comprises of a short overview and history of the company under investigation. In this instance the company is Xstrata PLC with specific focus on Xstrata SA (Pty) Ltd – Alloys, the South African based section of Xstrata PLC.

Chapter 3 covers a literature review on corporate entrepreneurship, conducted to investigate the definitions of entrepreneurship and corporate entrepreneurship, the characteristics of an entrepreneur, the dimensions of corporate entrepreneurship, the role of middle managers in an entrepreneurial organisation, concluding with the obstacles to corporate entrepreneurship.

Chapter 4 investigates corporate entrepreneurial climate in the format of a literature review. The thirteen constructs of corporate entrepreneurship as identified by Van der Merwe and Oosthuizen (2008) are reviewed. The organisational climate and the perceived success of the organisation will also be investigated.

Chapter 5 discusses the empirical study and its findings. The study consists of an approved survey. The objective of the survey is to determine the current level of entrepreneurship within Xstrata SA (Pty) Ltd – Alloys. Chapter 5 includes the process of data gathering, the presentation of the empirical research results and a discussion of the research results.

The conclusions and recommendations are covered in Chapter 6. This chapter draws a conclusion on the current state of entrepreneurship in Xstrata SA (Pty) Ltd – Alloys, and discusses recommendations for creating an entrepreneurial climate including entrepreneurial leadership and behaviour. The evaluation of the achievement of objectives and suggestions for further research will conclude this chapter.

CHAPTER 2

OVERVIEW OF XSTRATA SOUTH AFRICA (PTY) LTD - ALLOYS

2.1 INTRODUCTION

An overview of Xstrata PLC will be given in order to understand the strategy, history, group structure, and commodity businesses and extend of diversification of the organisation. During this overview, the place of Xstrata SA (Pty) Ltd – Alloys in Xstrata PLC will be identified.

This will be followed by an overview of Xstrata SA (Pty) Ltd – Alloys in order to understand the specific environment and to try and understand the status quo and how this potentially relates to the theory based literature study which will be conducted in chapters three and four.

The strategy, history and developments within Xstrata Alloys will be discussed in detail including a discussion on the commodity products mined and processed within Xstrata Alloys.

The chapter will conclude by addressing specific causal factors to the study which highlights the need and potential benefit of corporate entrepreneurship within Xstrata Alloys. These factors will be addressed under the following headings:

- Internal structures.
- Mergers and acquisitions.
- Competition.

2.2 OVERVIEW OF XSTRATA PLC

Xstrata is a global diversified mining group, listed on the London and Swiss Stock exchanges, with its headquarters in Zug, Switzerland. Xstrata's businesses maintain

a meaningful position in seven major international commodity markets: copper, coking coal, thermal coal, ferrochrome, nickel, vanadium and zinc. Xstrata also has a growing platinum group metals business as well as additional exposures to gold, cobalt, lead and silver, recycling facilities and a suite of global technology products, many of which are industry leaders. The Group's operations and projects span 19 countries (Xstrata, 2008a:i).

2.2.1 Mission statement

Xstrata's mission statement is: "We will grow and manage a diversified portfolio of metals and mining businesses with the single aim of delivering industry-leading returns for our shareholders."

Xstrata believe they can achieve this only through genuine partnerships with employees, customers, shareholders, local communities and other stakeholders, which are based on integrity, co-operation, transparency and mutual value-creation (Xstrata, 2008b:i).

2.2.2 Group overview and strategy

Xstrata PLC was created through an initial public offering on the London Stock Exchange in March 2002. Since that time, the Group's scale, scope, geographic spread and commodity diversification have been transformed through a combination of incremental acquisitions, organic growth projects, operational improvements and value accretive, company-transforming acquisitions. Xstrata is now the fifth largest diversified metals and mining company in the world, with operations and projects in 19 countries and top five market positions in each of its major commodities.

Xstrata's primary strategic aim is to create superior shareholder value by growing and managing a diversified portfolio of mining and metals businesses. Their mission statement recognises that to continue to grow and create value over the long term, they must operate in an ethical and transparent way, forming mutually beneficial partnerships with their stakeholders.

Xstrata PLC strategic objectives are:

- To manage an attractive portfolio of assets diversified by commodity, geography and currency.
- To uphold a rigorous and unwavering focus on value and growth, identifying and securing opportunities for value creation.
- To maintain and enhance their financial strength and discipline.
- To create further value through ongoing portfolio optimisation, delivery of capital and operational efficiencies and real cost reductions.
- To achieve and maintain the highest standards of health, safety and environmental performance at their operations and to work in partnership with local communities for mutual benefits, supporting the principles of sustainable development.
- To foster a high performance and entrepreneurial culture through a highly devolved structure, empowering management teams and minimising overheads.
- To conduct their business activities ethically and with the maximum transparency commercially possible.

2.2.3 History of Xstrata PLC

Xstrata was established in 1926 as Südelektra AG, a Swiss company with investments in infrastructure and electricity projects in Latin America. A number of disposals and acquisitions had transformed the company into a diversified natural resources group when Südelektra renamed itself Xstrata in 1999.

Throughout 1999 and 2000 Xstrata AG continued to dispose of non-core businesses such as aluminium, oil and gas and to focus on low-cost production in its key markets. In May 2001 Xstrata acquired Asturiana de Zinc, a Spanish listed zinc group.

The take over of Xstrata took place in October 2001, when it was a small, Swiss-listed mining company with a market capitalisation of around \$500 million and largely

reliant on ferroalloys and zinc operations in South Africa and Europe. Mick Davis, formerly Billiton's Chief Financial Officer and an architect of the BHP Billiton merger, was appointed as Chief Executive Officer. Trevor Reid was appointed as Chief Financial Officer, joining from Standard Bank in London where he was Global Head of Resource Banking.

Xstrata PLC was created five months later through an initial public offering on the London Stock Exchange in March 2002, which raised just under £1 billion and was oversubscribed in excess of seven times at the offer price. Simultaneously, Xstrata acquired Glencore's Australian (Enex) and South African (Duiker) coal assets for \$2.5 billion becoming the world's largest exporter of thermal coal and entered the FTSE100 index as the 100th largest company.

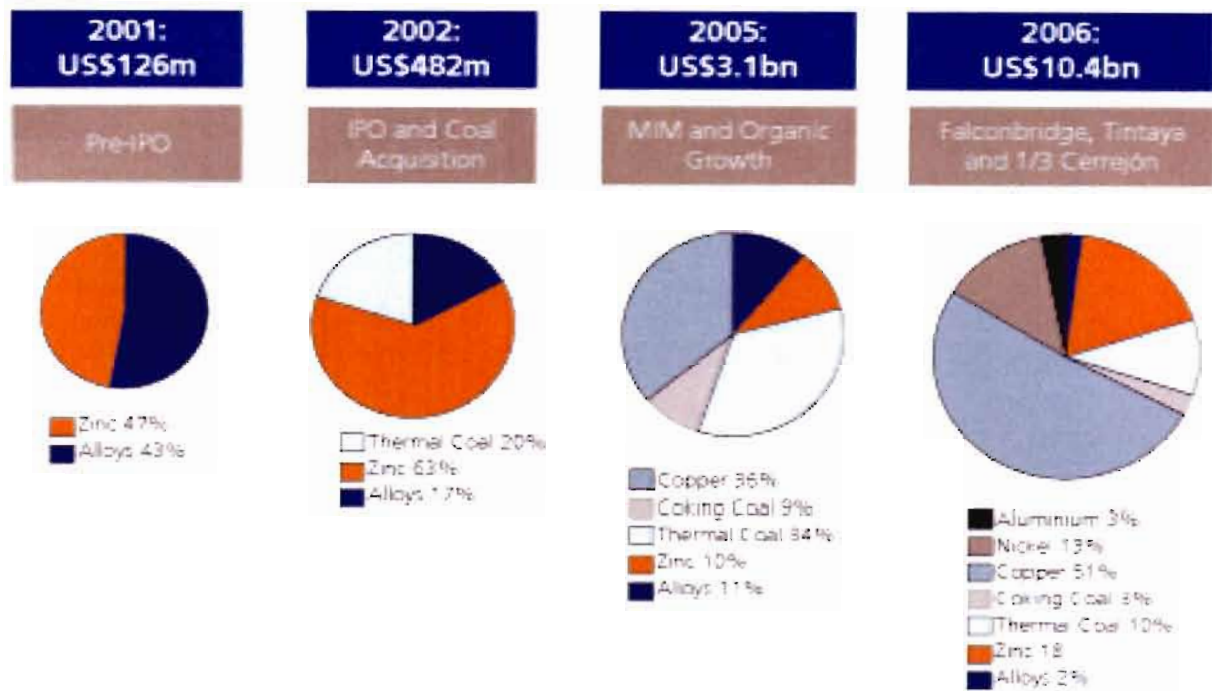
Since its listing on the LSE in 2002, key events include:

- January 2003: The German Nordenham zinc smelter purchased from Metaleurop for \$100 million.
- June 2003: Xstrata completed the acquisition of MIM Holdings, an Australian metals and mining group (coking coal, copper, zinc, lead, silver and gold assets) for \$2.9 billion. The acquisition provided additional geographic diversification, critical mass and entry into two new commodities: copper and coking coal.
- December 2003: Xstrata approved the construction of a new ferrochrome smelter in South Africa, the "Lion project", which has raised Xstrata's annual ferrochrome production capacity to one-third of current global capacity.
- February 2004: Xstrata PLC established a shared venture with SA Chrome & Alloys, which introduced meaningful and sustainable black empowerment participation in Xstrata's South African ferrochrome business.
- February 2004: The Rolleston project was approved, creating a long-life, open-cut thermal coal mine in Queensland, Australia.
- April 2004: Xstrata purchases a further 45% of the Cook Colliery for US\$6.35 million, increasing its stake in the Queensland-based coking coal mine to 95%.

- August 2005: Xstrata purchased 19.9% of Falconbridge Limited and acquired the remaining 80% the following October, the total cost of Falconbridge was \$18.8 billion. This acquisition brought a unique portfolio of organic growth opportunities, diversification into nickel, exposure to North America and a significantly enhanced South American copper business, together with additional scale for the zinc business, now the largest listed global producer.
- March 2006: A one-third stake in the Colombian coal operation, Cerrejón, was acquired from Glencore International, for \$1.7 billion.
- June 2006: The Peruvian Tintaya copper operation was bought from BHP Billiton for \$811 million.
- April 2007: The disposal of Xstrata Aluminum to Apollo Management LP for a total cash consideration of \$1.15 billion was announced. Xstrata Aluminum was created from the former Falconbridge Group's aluminum assets, known as Noranda Aluminum.
- August 2007: Xstrata announced a \$1 billion for Eland Platinum Holdings.
- August 2007: Xstrata announces its intention to purchase Iluka Resources Limited's 50% interest in the Narama thermal coal mine, located in the Hunter Valley of New South Wales, further consolidating Xstrata's interests in the Hunter Valley.

The pie charts below in Figure 2.1 show the impact of Xstrata's acquisitions, diversification and growth on its EBITDA (earnings before interest, tax, depreciation and amortisation).

Figure 2.1: Impact of Xstrata's acquisitions, diversification and growth on its EBITDA



Source: Xstrata Web (2008)

Today, Xstrata is the world's largest producer of export thermal coal, the largest producer of ferrochrome, the largest exporter of thermal coal, one of the top five producers of coking or metallurgical coal, the fourth largest global copper producers, the fourth largest global nickel producers and one of the world's largest miners and producers of zinc.

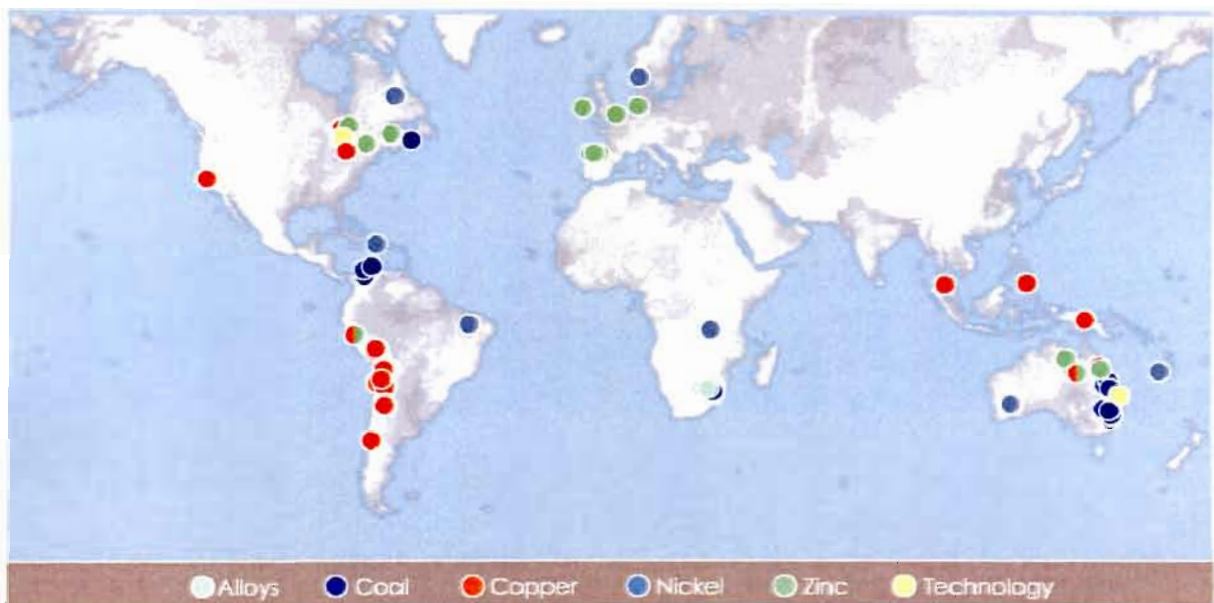
2.2.4 Group structure

Xstrata's activities are organised into five global commodity businesses and a technology business, each of which operates with a high level of autonomy. Xstrata differentiates itself from industry peers by devolving maximum responsibility and authority to its commodity business units. They believe this directly benefits their operations by creating a strong sense of local ownership, where entrepreneurial managers are empowered and incentivised to address site-specific challenges and seize opportunities (Xstrata Web, 2008).

Xstrata's devolved management structure provides a critical competitive advantage in this area. Operational management teams are incentivised and have the authority to implement innovative, localised initiatives to enhance efficiency that together amount to significant, cumulative savings, without the burden of centralised decrees and programmes that ignore the realities of individual operations (Xstrata, 2008a:14).

Xstrata's commodity businesses (as indicated in Figure 2.2) are supported by a small corporate centre, split between the head office in Zug, Switzerland and a corporate office in London, United Kingdom. Figure 2.2 indicates the logistical distribution of the Xstrata PLC commodity businesses and operational units.

Figure 2.2: Global view of Xstrata commodity businesses



Source: Adapted from Xstrata (2008a:4)

The six commodity businesses are now discussed in more detail.

2.2.5 Commodity businesses

Xstrata PLC's activities are organised into five global commodity businesses and a technology business, each of which operates with a high level of autonomy.

The businesses are as follows:

Xstrata Alloys is the world's largest producer of ferrochrome and a leading producer of primary vanadium. Xstrata Alloys also owns carbon and anthracite operations which supply key raw materials to its ferrochrome smelters and an interest in a joint venture platinum group metals mine and concentrator. Xstrata Alloys' headquarter is in Rustenburg, South Africa.

Xstrata Coal is the world's largest exporter of thermal coal and a significant producer of premium quality hard coking coal and semi-soft coal. Headquartered in Sydney, Australia, Xstrata Coal has interests in over 30 operating coal mines in Australia, South Africa and Colombia and an exploration project in Nova Scotia, Canada.

Xstrata Copper is the fourth largest global copper producer, with mining and processing facilities located in Australia, Chile, Peru, Argentina and Canada. It also manages a recycling business (Noranda Recycling) with plants in the USA and Asia. Xstrata Copper's world-leading portfolio of growth projects includes Las Bambas in Peru, Tampakan in the Philippines, El Morro in Chile, El Pachòn in Argentina and Frieda River in Papua New Guinea.

Xstrata Nickel, headquartered in Toronto, Canada, is the fourth largest global nickel producer and one of the world's largest producers of cobalt. Xstrata Nickel's operations include five mines and processing facilities in Canada, a ferronickel mine and processing facility in the Dominican Republic and a refinery in Norway. Xstrata Nickel's promising portfolio of growth projects includes Nickel Rim South in Canada, Kabanga in Tanzania, and Koniambo in New Caledonia.

Xstrata Zinc is one of the world's largest miners and producers of zinc. Xstrata Zinc's operations span Spain, Germany, Australia, the UK and Canada, with an interest in the Antamina copper-zinc mine in Peru. Xstrata Zinc's growth projects include interests in the Lady Loretta deposit in Queensland, Australia, and the Perseverance zinc deposit in Quebec, Canada.

Xstrata Technology Services provides proprietary technologies and specialist services in the areas of mining, mineral processing and metals extraction to major mining companies worldwide and to Xstrata's own operations to improve efficiency and reduce operating costs.

For the purpose of this research project, the focus of the study will be on Xstrata Alloys.

2.3 XSTRATA ALLOYS

2.3.1 Overview of Xstrata Alloys

Xstrata Alloys is currently the world's largest and amongst the lowest cost integrated ferrochrome producers in the world (through the Xstrata-Merafe Chrome Venture), one of the world's largest producers of primary vanadium and a growing producer of platinum group metals (Xstrata, 2008a:19).

Xstrata Alloys' operations are located across the mineral-rich Bushveld Complex of South Africa's North West and Mpumalanga provinces, where it employs over 12 300 people including contractors. In line with South Africa's Mining Industry Charter, Xstrata Alloys has fulfilled all Black Economic Empowerment obligations in respect of ownership, which is crucial for security of tenure. Merafe Resources, Kagiso Trust Investments and the Bakwena Ba Mogopa Community all have ownership participation in respect of chrome, PGM and vanadium assets respectively (Xstrata Web, 2008).

2.3.2 Strategy

Xstrata Alloys' strategy is to (Xstrata, 2008a:4):

- Maintain a market leadership position in the ferrochrome industry by leveraging their distinctive scale of operations and position in South Africa. Xstrata Alloys

will maintain its unique access to a combination of raw materials and expertise across a wide range of mining and process technologies.

- Enhance their competitive cost position through; the use of proprietary Premus Technology and other initiatives that minimise the use of high-cost inputs.
- Utilise Xstrata Alloys' capabilities and technologies as a springboard to building a diversified production base and continued quality growth.
- Continue the progress made in the Xstrata Merafe Chrome Venture towards full compliance with the spirit of the MPRDA across chrome and vanadium.
- Position the vanadium division optimally to benefit from price spikes and ensure resilience in the downturns.
- Leverage the technical flexibility of their Rhovan operation to develop high-value vanadium alloy products for specific international markets.
- Eliminate fatalities and achieve a step-change in safety performance through intensive training and knowledge-sharing programmes.
- Continue to work on compliance of the MPRDA Viking.

2.3.3 Products

Ferrochrome

Ferrochrome is a corrosion-resistant alloy of chrome and iron containing between 50% and 55% chrome. Over 80% of the world's ferrochrome is utilized in the production of stainless steel. The average chrome content in stainless steel is approximately 18%.

Xstrata, together with its 'Pooling and Sharing Venture' ("PSV") partner, Merafe Resources Limited, have a combined capacity in excess of 1.76 million tonnes of ferrochrome per annum. Xstrata is currently the world's largest and amongst the lowest cost integrated ferrochrome producers in the world.

All of the group's chrome mines are shallow, underground mines. The gently dipping reefs of chromite are accessed by decline shafts. Mining is of a board and pillar nature and is currently conducted at depths ranging from 50 to 350 metres below surface. All development is on reef, thereby minimizing waste dilution. In addition to

ore from its own mines, ore is purchased from nearby platinum producers, where chrome-rich finds are discarded as a waste product.

Vanadium

The principal end-use of vanadium is as an alloying agent in steel and other alloys that accounts for 95% of world consumption of vanadium - more than 200 million pounds per annum. Just over a third of the world's vanadium is produced as a primary product; the balance is produced as by-products of the iron and steel, oil refining, power generation and uranium enrichment industries. The vanadium content per tonne of steel has increased significantly over the last 10 years as new applications for vanadium have been found to improve steel's strength-to-weight ratio and steel consumption has ramped up substantially over this timeframe.

Xstrata produces vanadium pentoxide and ferrovanadium from an integrated production facility at Rhovan, South Africa. Vanadium pentoxide and ferrovanadium are sold to a diversified international customer base. An intermediate product, vanadium trioxide, is also produced and sold as a feedstock to other ferrovanadium producers.

Platinum Group Metals

Platinum Group Metals (PGMs) are made up of platinum, palladium, rhodium, iridium, ruthenium and osmium. PGMs have outstanding catalytic properties and are used in auto catalysts and fuel cells, providing cleaner energy. Platinum's strength and resistance to tarnish make it ideal for fine jewellery and it is more precious than gold. PGMs are also used in a number of industrial and consumer products such as in electrolysis, computer hard disk drives, anti-cancer drugs, spectacles and paint.

Xstrata produces PGMs at its Elandsfontein mine and concentrator and at Mototolo, a joint venture with Anglo Platinum.

2.4 CAUSAL FACTORS TO THE STUDY

To survive in a turbulent market place while at the same time deliver on their mandate, management teams in Xstrata Alloys would have to focus on fostering a climate of corporate entrepreneurship at all the Xstrata Alloys operational units. In order to succeed in this goal, certain prerequisites must be in place. Following are a number of causal factors that highlight the importance of a study on corporate entrepreneurship in Xstrata Alloys.

2.4.1 Internal structures

According to Jarna and Jouko (2007:168), managers at all levels are very important when establishing entrepreneurial behaviour, which supports the autonomy given to managers in Xstrata Alloys.

Xstrata's management model is highly devolved and comprises a very lean corporate centre and fully resourced, standalone global commodity businesses. The role of the corporate centre is well defined, to minimise bureaucracy and rational risk-taking is sponsored to stimulate innovation. We believe this model is a significant competitive advantage and enables Xstrata to be more opportunistic, and less bureaucratic than other companies of a similar scale and geographic reach (Xstrata, 2008a:20). The status quo of the entrepreneurial climate in Xstrata Alloys needs to be evaluated.

2.4.2 Mergers and acquisitions

Xstrata's directors and top management team are more and more in the news regarding mergers and acquisitions. As is discussed in this chapter, various acquisitions took place during the history of Xstrata. Other news worthy proposed mergers and/or acquisitions are the Xstrata-Anglo proposed merger (Creamer, 2009), and the Lonmin bid that was dumped due to the down turn in the economy (Macalister, 2008).

According to Merlo (1998:16), there are certain benefits that can be derived from merging and acquiring a company. First off, mergers and acquisitions require a lot less energy and time in getting a company set up as opposed to building a company from the ground up. Secondly, it is very expensive to build a company from the ground up so mergers and acquisitions would be less expensive than starting a new company. Thirdly, there are transfers of talents and resources when a company is acquired by another.

The effect and impact of the mergers and acquisitions is a risk to the corporate entrepreneurial climate within the organisation. The effect of the mergers and acquisitions on the entrepreneurial climate of Xstrata SA (Pty) Ltd – Alloys need to be evaluated.

2.4.3 Competition

Kuratko, Ireland and Hornsby (2001:60) are of the opinion that entrepreneurial actions are a medium through which the competitive environment can be changed for the better and to the organisation's advantage. In this context entrepreneurial actions can be viewed as a new behaviour to exploit opportunities which might not be noticed or pursued by the other players in the market (De Villiers, 2008:28). It can also mean identifying new resources, customers, markets or a combination thereof. Given the increased competition Xstrata Alloys is facing, this will help shape Xstrata Alloys' environment to a corporate entrepreneurial environment.

As a FTSE 100 diversified mining company, Xstrata's key competitors are Anglo American plc, BHP Billiton plc and Rio Tinto plc, all of which are listed on the London Stock Exchange, and Vale, a Brazilian mining company (Xstrata, 2008a:18).

The effect of the competition on the entrepreneurial climate of Xstrata SA (Pty) Ltd – Alloys need to be evaluated.

2.4.4 Changing technological environment

Hayton (2005:137) views corporate entrepreneurship to be extremely beneficial to organisations operating in fast changing and highly competitive environments. Based on this view, the technological changes taking place in Xstrata Alloys makes them suitable as a candidate to benefit from the incorporation of corporate entrepreneurship.

Examples of recent technological changes in Xstrata Alloys:

- Implementation of SAP as a business information system in 2006.
- The centralisation of invoice processing and salary payments to a shared services department utilising automatic invoice processing through the KoFax system in 2007.
- Mechanised mining processes implemented.
- Implementation of new mineral processing technology at the Lion smelting operation.

This study aims to determine the current status of the corporate entrepreneurial climate within Xstrata Alloys, upon which recommendations would be made to assist Xstrata Alloys in fostering a corporate entrepreneurial climate imperative for increased responsiveness, innovation and sustainability.

2.5 SUMMARY

In this chapter an overview of Xstrata PLC has been given, with special focus on Xstrata Alloys. The history and diverse commodities within Xstrata Alloys was discussed.

The Xstrata PLC and Xstrata Alloys structure was discussed to give understanding of the diverse commodities, and the flat organisational structure of Xstrata.

The causal factors which gave rise to this study were examined in section 2.4.

These factors are:

- Internal structures: These structures are important in understanding the way Xstrata Alloys operate.
- Competition: Fierce competition is experienced by various big mining companies, but also by new market entrants.
- Changing technological environment: Xstrata is operating in a rapidly changing environment.

This study can contribute significantly in creating a better understanding of what corporate entrepreneurship entails, focussing on Xstrata Alloys, it can provide guidelines to Xstrata Alloys on how to increase corporate entrepreneurship which will benefit all stakeholders in the organisation.

CHAPTER 3

A LITERATURE REVIEW OF CORPORATE ENTREPRENEURSHIP

3.1 INTRODUCTION

The most important benefit for an organisation with an entrepreneurial climate is the fact that such an organisation is better able to adapt and survive. This benefit is critical in today's volatile and fast-changing world (Cornwall & Perlman, 1990:29). This was true in 1990 as discussed by Cornwall and Perlman, but is even more applicable in 2009 since entrepreneurship is viewed as a primary driving force of productivity and growth (Federal Planning Bureau, 2008). Factors such as the global economic downswing result in a rapid changing world. The adaptability and survival is currently a very important benefit for entrepreneurial organisations.

Intensifying global competition, corporate downsizing and de-layering, rapid technological progress, and many other factors have heightened the need for organisations to become more entrepreneurial in order to survive and prosper (Dess *et al.*, 1999:85).

Entrepreneurship is regarded as the engine of economic progress, job creation and social adjustment (Gurol & Atsan, 2006:25). Corporate organisations are currently largely dependant on the entrepreneurs within the organisation to keep their competitive edge (Antoncic & Hisrich, 2003:7).

Hornsby, Kuratko and Zahra (2002:254) are of the viewpoint that organisations would venture into corporate entrepreneurship mainly to increase their profitability. Hornsby *et al.* (2002:254) add secondary advantages to this main advantage such as strategic renewal, increased innovation, gaining knowledge of potential revenue streams and international success.

This chapter will focus on a discussion of entrepreneurship within existing organisations; it will identify specific individual characteristics that promote the

entrepreneurial climate in an organisation; and it will give attention to the activities of the entrepreneur (individual and in the corporate environment). Entrepreneurship and corporate entrepreneurship will be defined. The five basic dimensions of corporate climate will be discussed.

3.2 DEFINING CORPORATE ENTREPRENEURSHIP

The terminology for an individual entrepreneur, entrepreneurship and corporate entrepreneurship will be defined in the rest of this section.

3.2.1 Individual entrepreneur defined

The first concept to define is the individual entrepreneur. Derived from the French verb "*entreprendre*", meaning "to undertake something, to seek opportunities, to fulfil needs by being innovative and starting a business", there is today still a lot of discrepancies regarding the meaning of the word entrepreneur (Kuratko & Hodgetts, 2004:28). In 1984 Carland, Hoy, Boulton and Carland (1984:358) laid the foundation on which most of the other researchers' definitions of an entrepreneur as discussed below is based. They defined the entrepreneur as a person who establishes and manages a business with the goal to make profit and have the potential to expand his/her business activities. Independent entrepreneurship refers to an individual or a group of individuals striking out on their own to start a new business (Sathe, 2003:1).

Rwigame and Venter (2004:6) define the entrepreneur as the person who conceptualises, organises, launches and nurtures a business opportunity through innovation and into a potentially high growth venture amid complex and unstable circumstances.

The combined views of Drucker (2006:25), Hisrich and Peters (2002:9) and Cornwall and Perlman (1990:4), amongst others, define the entrepreneur as an individual with the potential to create a vision from the minimum resources through using his own creativity. The entrepreneur will invest his energy, time, actions and willingness to take on a calculated risk. A distinguishing feature of the entrepreneur is that he will

be able to identify the opportunity where the “normal” person might only see chaos and confusion.

The entrepreneur is thus the person who is the innovator and developer who recognises and seizes these opportunities, converts them into workable and marketable ideas, adds value through time, effort, money and skills; and assumes the risk of the competitive marketplace to implement these ideas, and realise the rewards from those efforts (Shelton & Darling, 2001:45).

3.2.2 Entrepreneurship defined

The second concept to define is entrepreneurship. Timmons and Spinelli (2007:79) describe entrepreneurship as a way of thinking, reasoning and acting that is opportunity obsessed, holistic in approach, and leadership balanced. Deakins and Freel (2002:7) also portray entrepreneurship as the process of creating something different with value by devoting the necessary time and effort, assuming the accompanying financial, psychological, and social risks; and receiving the resulting rewards of monetary and personal satisfaction.

Hisrich, Peters and Shepherd (2005:520) define entrepreneurship as the process of allocating time and effort to create something new with value, taking into account the accompanying financial, psychic and social risks and receiving the resulting rewards of monetary and personal satisfaction and independence.

Bygrave and Hofer (1991:14) define entrepreneurship as actions associated with the perceiving of opportunities and the creation of organisations to pursue them. For Nieman, Hough and Nieuwenhuizen (2003:9) entrepreneurship is about the actions of people who perceive opportunities in the market, take risks, gather or combine resources, and establish and grow the organisation to meet such market needs for a profit as a reward.

Coulter (2003:6) defines entrepreneurship as “the process whereby an individual or group of individuals use organised efforts to pursue opportunities to create value and

grow by fulfilling wants and needs through innovation and uniqueness, no matter what resources the entrepreneur currently has.” Bruyat and Julien (2000:173) confirm that entrepreneurship “is concerned with the process of change, emergence and creation, creation of new value but also change and creation of the individual”.

Cornwall and Perlman (1990:29) believe that attention should be shifted away from whom entrepreneurs are to what they do, the definition of entrepreneurship then becomes much clearer.

People have very different views on who is an entrepreneur, what an entrepreneurial venture looks like, and the nature of the activities that constitute entrepreneurial behaviour. Morris and Kuratko (2002:23) identified seven main perspectives from the literally hundreds of perspectives that have been presented. The seven perspectives of an entrepreneur are discussed below (Morris & Kuratko, 2002:23).

Creation of wealth: Entrepreneurship involves assuming the risks associated with the facilitation of production in exchange for profit.

Creation of enterprise: Entrepreneurship entails the founding of a new business venture where none existed before.

Creation of innovation: Entrepreneurship is concerned with unique combinations of resources that make existing methods or products obsolete.

Creation of change: Entrepreneurship 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: Entrepreneurship is concerned with employing, managing and developing the factors of production including the labour force.

Creation of value: Entrepreneurship is a process of creating value for customers by exploiting untapped opportunities.

Creation of growth: Entrepreneurship is defined as a strong and positive orientation towards growth in sale, income, assets, and employment.

Of the available perspectives, one definition captures the essence of entrepreneurship by integrating the core perspectives. Most definitions have four key elements. First, entrepreneurship involves a process. It is thus manageable, can be broken into steps or stages, and is ongoing. Being a process, it can be applied in any context within the organisation. Second, entrepreneurs create value (in the organisation and the marketplace). Third, entrepreneurs combine resources in a unique way. Fourth, they are opportunity driven. They recognise new opportunities in the environment, evaluate and prioritise these opportunities, and then turn the opportunities into viable business concepts (Morris *et al.*, 2008:11).

3.2.3 Corporate entrepreneurship/ intrapreneurship defined

Intrapreneurs are individuals who often engage in entrepreneurial actions in large to very big organisations with the support of their organisations (Cornwall & Perlman, 1990:7). We could also refer to the intrapreneurs in the organisation as the entrepreneurial managers or corporate entrepreneurs.

Sharma and Chrisman (1999:11) and Geisler (1993:53) define corporate entrepreneurship as the process whereby an individual or group of individuals in association with an established organisation creates a new organisation, or initiate renewal or innovation within the current organisation.

Research from previous studies (Ireland, Kuratko & Morris, 2006:24; Burns, 2005:12; Wickham, 2004:574; Sharma & Chrisman, 1999:11) concluded that corporate entrepreneurship improves organisational performance by making the organisation more pro-active and more willing to take risks and by pioneering the development of new products, processes and services.

According to Cornwall and Perlman (1990:7), the individual intrapreneur must have an organisation which supports, encourages, and fosters entrepreneurship for them to succeed as an intrapreneur in the long run.

Regardless of the current obstacles, intensifying global competition, corporate downsizing, rapid technological progress and various other factors over the last decade or two have contributed to the need for organisations to become more entrepreneurial in order to have a competitive advantage and growth (Dess *et al.*, 1999:85).

Corporate entrepreneurship in essence thus reflects on the entrepreneurial behaviour inside established organisations which include organisational entrepreneurship, intrapreneurship and corporate venturing (Antoncic & Hisrich, 2003:9). Burns (2005:11) and Morris *et al.* (2008:11), furthermore define corporate entrepreneurship as the term used to describe entrepreneurial behaviour in an established, mid-sized and larger organisation.

Corporate entrepreneurship refers to the efforts of corporations to generate new business (Sathe, 2003:1), but also refers to other innovative activities such as development of products, services, technologies, administrative techniques, strategies and competitive initiatives (Bhardwaj & Momaya, 2006:39).

Even although many authors (Antoncic & Hisrich, 2003:9; Cornwall & Perlman, 1990:7), amongst others, used the same term differently or used different terms to describe the same aspect, when looking at all the different definitions of corporate entrepreneurship, common concepts can be identified such as (Adonisi, 2003:12):

- The development of new businesses within existing businesses.
- The transformation or rebirth of organisations through renewal of key areas of business.
- Creation, innovation and renewal within and existing organisation.

For the purpose of this study corporate entrepreneurship is defined as the entrepreneurial behaviour inside established organisations which include organisational entrepreneurship, intrapreneurship and corporate venturing (Morris & Kuratko, 2002:31).

3.2.4 Characteristics of entrepreneurs

Wickham (2004:3) is of the opinion that “entrepreneurs are just managers who make entrepreneurial decisions”. This implies that entrepreneurs are made and not born. If we agree with this definition, we could encourage managers to learn to be more creative and less risk averse in their daily decision making (Lowe & Marriott, 2006:11).

Whether entrepreneurial tendencies exist at birth or developed as a person matures, certain traits are usually evident in those who enjoy success. Several characteristics are exhibited by people who are successful in their entrepreneurial expectations. All of these characteristics are not of equal importance, and there is some overlap amongst them (Oosthuizen, 2003:10).

Some of the entrepreneurial characteristics exhibited by successful entrepreneurs are:

- **Internal locus of control**

Internal locus of control is the view that a person has a significant ability to influence the outcome of events in life. People with an internal locus of control tend to believe that they can overcome obstacles in life and are able to influence outcomes and their chances for success (Rabbior, Lang, Cranson & Smith, 1996:9). Entrepreneurs have a strong internal locus of control, they are change agents. They believe that with enough time and effort (and their own involvement), they can change their workplace, markets and industries (Morris *et al.*, 2008:146). The internal locus of control increases alertness and is essential in the process of recognising opportunities. The entrepreneur with an external locus of control is less proactive because of his/her view that external forces influence events (Kalantadiris, 2004:58). People,

who believe that external factors (such as the economy) determine their success, are not likely to succeed as an entrepreneur (Lambing & Kuehl, 2003:27).

- **Calculated risk takers**

Entrepreneurs tend to be calculated risk takers. They would pursue a course of action that has a reasonable chance of failure (significant negative difference between anticipated and actual results) (Morris *et al.*, 2008:146). Entrepreneurs risk money and their reputation but they are not gamblers. They take calculated risks, and do everything to get the odds in their favour (Timmons & Spinelli, 2007:12). The planning or preparation phase of new businesses and/or ventures is crucial to entrepreneurs, and it will help them to analyse the viability of a new business and to make a reasonable calculation of its chances for success (Rabbior *et al.*, 1996:9).

Entrepreneurs are continuously looking for change and transform resources in order to create something while simultaneously being aware of the risk factor (Kirzner, 1997:72).

- **Commitment and determination**

Total commitment and dedication to success is the main driving factor for an entrepreneur to overcome obstacles and setbacks. Commitment and determination often compensate for personal shortcomings (Timmons & Spinelli, 2007:13; Kuratko & Hodgetts, 2004:116; Rwigema & Venter, 2004:60; Bolton & Thompson, 2003:63).

- **Demonstrate a high tolerance of ambiguity**

Structure and certainty are seldom found in the entrepreneurial world, things do not normally fit a pre-cast mould or follow an exact pattern (Morris *et al.*, 2008:146; Lambing & Kuehl, 2003:27). True entrepreneurs thrive on ambiguous situations; this presents great opportunities for exploitation (Timmons & Spinelli, 2007:12; Lambing & Kuehl, 2003:27). Entrepreneurs find that their final implemented successful concept ends up looking very different than the concept they started with, this is the nature of the entrepreneurial game (Morris *et al.*, 2008:146).

- **Self motivated, self-reliant and prefer a degree of autonomy**

Entrepreneurs are driven and motivated by achievement rather than by status and power (Morris *et al.*, 2008:146). Their drive for achievement ensures that they are well prepared for any condition (Timmons & Spinelli, 2007:13; McClelland, 1961:205). Entrepreneurs are self-starters who appear driven internally by a strong desire to successfully reach their own self imposed standards and attain challenging goals (Timmons & Spinelli, 2007:13).

Successful entrepreneurs believe in themselves. They believe their accomplishments lie within their own control, and that they can influence the outcome of their activities (Timmons & Spinelli, 2007:13).

- **High energy levels**

Energy levels vary amongst people. Sometimes it is a matter of health, but sometimes energy seems to be more a matter of temperament. Some people are just “laid back”; they don’t care to exert themselves more than necessary. Such people will not make it as entrepreneurs. High energy levels are very common amongst successful entrepreneurs (Timmons, 1999:225).

- **They passionately seek opportunities (opportunity orientation)**

Successful entrepreneurs are driven by opportunity. They are constantly thinking of new ideas for business (Timmons & Spinelli, 2007:11). Entrepreneurs are always willing to look for change in a positive way by actively using possibilities presented by change rather than resisting them (Wickham, 2004:152).

Successful entrepreneurs have the ability to focus on opportunity rather than on resources, structure or strategy. They start with the opportunity and then give attention to the other important factors (Kuratko & Hodgetts, 2004:117).

- **Optimistic and self-confident**

Entrepreneurs have the belief that they are right based on the unique information they possess. Their success therefore depends on optimism and self-confidence (Casson, 1998:17). Entrepreneurs are not afraid of difficult situations. Their self-

confidence and optimism translate into a view that the impossible just takes a little longer (Kuratko & Hodgetts, 2004:117).

If people aren't confident of their abilities, they aren't likely to go into their own business. Most entrepreneurs radiate self-confidence, they believe in themselves and have confidence that somehow they will manage whatever problems arise (Lambing & Kuehl, 2003:26).

- **Willing to learn/ Quick learners**

Effective entrepreneurs are described as quick learners. They have as strong desire to know how they are doing and how they can improve their performance. The entrepreneur has the view that failure, mistakes and setbacks are learning experiences (Kuratko & Hodgetts, 2004:117). Rabbior *et al.* (1996:16) agree that entrepreneurs are quick learners who learn from their mistakes. Kirzner (1997:72) confirms that and entrepreneurs' ability to learn from mistakes, together with their willingness and readiness to learn is crucial for entrepreneurial success.

The above mentioned characteristics have important implications for corporate entrepreneurship. Although entrepreneurs have vastly different characteristics, managers need to recognise these characteristics to be able to identify gaps in individuals' entrepreneurial potential. Although it is not possible to teach people to be entrepreneurs, it is possible to develop for example their tolerance of ambiguity, or their appreciation for calculated risk taking (Morris *et al.*, 2008:147).

In addition to the above listed characteristics of an entrepreneur, McGrath and Macmillan (2000:3) add the following characteristics and traits of entrepreneurs.

- Opportunity driven.
- They are continuously scanning the market environment.
- They are disciplined in pursuing opportunities.
- They display pro-active behaviour patterns.
- They invest when it is the opportune time.
- They are selective when implementing opportunities.

- They think strategically.
- They are team players and adept at forming networks.

Drucker (1985:170) argues that almost anyone can be an entrepreneur if the organisation is structured to encourage entrepreneurship. Conversely, almost any entrepreneur can turn into a bureaucrat if the organisation is structured to encourage bureaucratic behaviour.

3.3 DIMENSIONS OF CORPORATE ENTREPRENEURSHIP

According to previous scholars (Bhardwaj & Momaya, 2006:39; Adonisi, 2003:13), corporate entrepreneurship can be classified on five dimensions namely new business venturing, innovativeness, self-renewal, risk-taking and pro-activeness.

The five dimensions of corporate entrepreneurship will be discussed below.

3.3.1 New business venturing

Block and MacMillan (1993:2) define venturing as similar to traditional entrepreneurship, but it takes place within a corporate organisation. Adonisi (2003:13) expands on this definition by stating that new business venturing is “the creation of business within an existing organisation by redefining the organisation’s products or services or by developing new markets”. This definition confirms Zahra’s (1993:321) definition which states that business venturing means creating new business through market developments or by undertaking product, process, technological and administrative innovations. Eliasson and Davidson (2003:1) agree that new business venturing can expand a venture’s business by creating new products and entering new markets. Antoncic and Hisrich (2001:498) are of the perception that the emphasis is on the pursuit and entering new businesses within the existing organisation that are related to the firm’s current products and markets.

Corporate venturing is the internally generated new businesses (Block & MacMillan, 1995:13). Block and MacMillan (1995:14) identify any projects as venturing when it:

Involves an activity new to the organisation; is initiated or conducted internally; involves a significantly high risk of failure or large losses; is characterised by uncertainty; will be managed separately at some time; and is undertaken to increase sales, profits, productivity or quality.

3.3.2 Innovativeness/Creativity

Entrepreneurship is associated with innovation, and corporate entrepreneurship is associated with innovation by established firms (Baden-Fuller, 1995:S12). The need for innovation by organisations is nowadays more than what it was in the past. The pressure to innovate is due to external forces, including new and improved technologies, the globalisation of markets, the fragmentation of markets, government regulations, social change and financial markets (Morris *et al.*, 2008:54).

Dess and Lumpkin (2005:148) define innovativeness as a willingness to introduce newness and novelty through experimentation and creative processes aimed at developing new products and services, as well as new processes. Antoncic and Hisrich (2001:498) agree and add the creation of technologies. Later work of Antoncic and Hisrich (2003:9) also include other innovative activities and orientations such as development of new administrative techniques, strategies and competitive postures.

Creativity is most likely to flourish under a trusting management style (Burns, 2005:282). The degree of freedom given to individuals plays a major role in the creativity of people. To encourage creativity, management need to tolerate the unconventional and to encourage people to challenge the conventional way things are done. Management need to provide support for creativity by providing training and resources. They should expect and tolerate mistakes (Burns, 2005:282).

3.3.3 Self-renewal

The dimension self-renewal is the transformation of organisations through the renewal, re-formulation and re-organisation of their business concepts including its

scope of business and the strategic approach it follows (thus organisational change) (Teng, 2007:135; Antoncic & Hisrich, 2001:498). Self-renewal involves entrepreneurial efforts that might result in significant changes to the organisation's business and/or structure. Self-renewal can involve using existing resources in a new way, but it can also mean introducing new elements to the way business is conducted. The resources needed for self-renewal includes both tangible and intangible resources such as access to finance, but also access to the necessary knowledge (Teng, 2007:135).

3.3.4 Pro-activeness

Pro-activeness refers to the aggressive positioning of an organisation relative to its competitors (Adonisi, 2003:14; Antoncic & Hisrich, 2001:498). Pro-active firms are experimenting and thus have more risks, they also takes initiatives and is aggressive in pursuing opportunities. They prefer to lead rather than follow competitors (Adonisi, 2003:14).

According to Hitt, Ireland, Camp and Sexton (2002:7), pro-activeness refers to a business's response to market opportunities while competitive aggressiveness is a business's response to competitive threats. Pro-active businesses have the ability to anticipate change or new requirements in the market-place and be the first to act on them (Cooper, Alvarez, Carrera, Mesquita & Vassolo, 2006:89). Pro-active businesses have the desire to be pioneers, thereby capitalising on emerging opportunities (Lowe & Marriott, 2006:288-289; Hitt *et al.*, 2002:7).

According to Kaya (2006:2077), as well as Lumpkin and Dess (2001:433), pro-activeness is "a forward-looking perspective characteristic of a marketplace leader who has the foresight to act in anticipation of future demand and shape the environment." The authors also suggest that pro-activeness is a response to opportunities, whereas competitiveness is a response to threats.

3.3.5 Risk-taking

Risk-taking means that the entrepreneur will take on calculated risks in order to maximise potential profits, this means that he/she takes on risks, uncertainty and the possibility of failure in the decision making process about ventures, products or processes (Bhardwaj & Momaya 2007:134; Vesala, Peura & McElwee, 2007:52; Cornwall & Perlman, 1990:29).

Morris and Kuratko (2002:41) hold a very narrow view of risk, in that they perceive any new direction taken to involve some degree of risk. They see risk as the likelihood that the actual results will differ negatively from the expected results. Sathe (2003:67) agrees that people are motivated to undertake new initiatives if they believe there is limited personal risk involved them.

3.4 ROLE OF MIDDLE MANAGERS WITHIN THE ENTREPRENEURIAL ORGANISATION

Today in this increasingly turbulent and competitive environment, business firms and organisations require managers who are “entrepreneurial” leaders. It is these organisations with such managers that surface with new inventions, brake through strategies and who stand out above the rest (Burgelman, 1983:1353). Entrepreneurial management is all about creating, mobilising and managing an entrepreneurial framework in order to meet the entrepreneurial challenge (Gupta, Macmillan & Surie, 2004:246).

Entrepreneurial middle managers within a corporate environment, have the same focus as independent entrepreneurs. They focus on identifying opportunities, secure resources and manage the establishment of a new business. Middle management act in an environment designed to optimise existing operations as opposed to an environment designed to foster entrepreneurship and innovation (Kuratko, Ireland, Covin & Hornsby, 2005:701).

The role of middle management is to effectively serve as a conduit between top management and the employees at operational level (Kuratko *et al.*, 2005:701). Middle management is thus the enablers of entrepreneurial actions. After all managerial parties committed to a certain set of actions, middle management is responsible to facilitate information flow between management and operational employees in ways that support the development of the project and the implementation thereof (Morris *et al.*, 2008:310).

Kanter (2004:152) argues that middle-managers can make a pivotal contribution to innovation and change in large organisations. Top leaders' general directives to open for example a new market, improve quality, or cut costs mean nothing without efficient middle-managers able to design the systems, carry out the plans, and redirect their staffs' activities accordingly. Furthermore, because middle-managers have their fingers on the pulse of operations, they can also conceive, suggest, and set in motion new ideas that top managers may not have thought of (Kanter, 2004:152).

Wickham (2004:8) says that entrepreneurial managers could be identified by looking at what they do, and the kind of tasks they undertake. They are managers who manage everything they do in an entrepreneurial way (Lowe & Marriott, 2006:47).

3.4.1 Characteristics of entrepreneurial managers

Several characteristics are exhibited by people who are successful in their entrepreneurial expectations (Kauffman Centre for Entrepreneurial Leadership, 1999:1). A discussion of some of the characteristics of entrepreneurial leadership follows.

3.4.1.1 Entrepreneurial managers' primary motives – feelings, desire and passion

Successful entrepreneurs must have the desire to be an entrepreneur since it takes passion and tremendous energy to refine an opportunity and to nurse it to the end

(Rwigema & Venter, 2004:60; Dollinger 2003:44). An entrepreneurial manager is driven by emotions, and they spend a vast amount of time and energy to take an idea from the develop-and-define phase through all the different phases up to a product, new business or new process phase. Entrepreneurial managers' curiosity and drive are superior to what we experience from any other individual in the organisation. The emotional focus is the key, entrepreneurial managers feel very deeply about their ideas and products (Cornwall & Perlman, 1990:182).

3.4.1.2 Serving self and organisation

An employee with a new idea may not be allowed to pursue his/her passion to implement the idea. This inability to pursue an idea might create tension between the employee and the organisation in big companies (Cornwall & Perlman, 1990:184). However if the organisation is an entrepreneurial organisation, there will be less conflict, and friction is tolerated. Entrepreneurial managers need the organisation's resources including technology, people and knowledge to maximise product development (Cornwall & Perlman, 1990:184).

Entrepreneurs must be able to force themselves to do what must be done (Timmons & Spinelli, 2007:9); entrepreneurial managers focus on execution (Kaplan, 2003:13).

3.4.1.3 Relationship with others – Team builder

Entrepreneurial managers need the support from management and their co-workers, and also assistance from all levels in the organisation. They work well with people inside and outside the organisation. Entrepreneurs engage the energies of everyone in their domain including suppliers, vendors and co-workers (Rwigema & Venter, 2004:63; Bolton & Thompson, 2003:63; Kaplan, 2003:12). Hisrich and Peters (2002:51) identify the encouraging of teamwork as one of the entrepreneurial leadership characteristics. Fernald, Solomon and Tarabishy (2005:4) add vision, problem solving, decision-making and risk taking as additional characteristics of an entrepreneurial manager. Although Cornwall and Perlman (1990:185) agree with

these authors, they add that managers usually have good relationships with others and try to maintain that, but they are sometimes abrasive.

Most successful entrepreneurs have highly qualified, well-motivated teams that help handle the venture's growth and development (Kuratko & Hodgetts, 2004:121).

3.4.1.4 Leadership

Turner (2002:33) described entrepreneurial leadership as instilling the confidence to *think, behave and act* with entrepreneurship in the interest of fully realising the intended purpose of the organisation to the beneficial growth of all the stakeholders involved. Entrepreneurial managers are thought to be leaders who manage in order to be successful (Kreitner & Kinicki, 2004:596).

Turner (2002:23) furthermore states that the role of the entrepreneur is not necessarily to be an entrepreneur thus to seek opportunities or new innovations, it is to encourage all in the organisation to act in an entrepreneurial way.

3.4.1.5 Time orientation

Since entrepreneurial managers know that an organisation may not respond immediately to their ideas, the timeframe, in which entrepreneurial managers operate, is normally three years (Cornwall & Perlman, 1990:186). Entrepreneurial managers must keep their finger on the pulse of projects; this involves constructive monitoring and control of the developing opportunity (Morris & Kuratko, 2002:98). It takes time to find all the necessary resources, or finding a market or clients, or to fully develop an idea. Although managers focus on long term goals, they still need the drive and urgency to meet their own short term objectives and timetables to enable them to reach their goals. Entrepreneurial managers realise there will be many delays along the way (Cornwall & Perlman, 1990:186).

3.4.1.6 Problem solving

Entrepreneurial managers are problem solvers (Bates, 2002:3), and are not intimidated by difficult situations. Entrepreneurial managers expect problems to occur, and they get their hands dirty trying to resolve problems. For entrepreneurial managers the question is how many and how difficult the problems will be (Cornwall & Perlman, 1990:187). Entrepreneurial managers know how to delegate, but also how to empower others. In fact their self-confidence and general optimism seem to translate into a view that the impossible just takes a little longer (Rwigema & Venter, 2004:62; Hodgetts, 2004:117).

Since they are working on long time frames, it is necessary for them to break down the project into smaller manageable “chunks” and solve the smaller problems one by one (Cornwall & Perlman, 1990:187).

3.4.1.7 Communication

Communication skills are the ability to speak and write in order to express information in such a way that the actions of other employees are influenced (Wickham, 2004:154). The entrepreneurial manager must communicate clearly and efficiently to internal and external parties (Rwigema & Venter, 2004:50). Entrepreneurial managers communicate with people across the organisation regardless of their hierarchy, and are willing to alter their individual views (Timmons & Spinelli, 2007:542). Entrepreneurial managers communicate effectively, productively and often informally. They have the ability to speak the language of accounting, finance, marketing and production (Cornwall & Perlman, 1990:188).

Entrepreneurial managers ensure that people are communicating across nearly every boundary of the organisation, i.e. across borders, across divisions, and across functions (Kanter, 2004:7).

3.4.1.8 Risk taking, reducing failures and mistakes

Entrepreneurial managers only take calculated risks (Timmons & Spinelli, 2007:12). Entrepreneurial managers take risks by devoting so much of their time and commitment to their ideas. The real risk for the entrepreneurial manager is a personal risk; entrepreneurship requires a total investment of self (Cornwall & Perlman, 1990:189).

Entrepreneurial managers need to be relatively far with the development of their ideas before going public with the ideas in the organisation. Organisations (even entrepreneurial ones), resists change. It is there for necessary to avoid “going public” with their ideas for as long as possible (Cornwall & Perlman, 1990:189).

Entrepreneurs do everything possible to reduce the possibility of failure to its maximum. Strategies to do this include getting others to share inherent financial and business risks with them (Timmons & Spinelli, 2007:12; Kuratko & Hodgetts, 2004:119). Entrepreneurial organisations take risks in supporting their entrapreneurs. If they buy into the ideas, they devote resources including money, people or time to the idea (Cornwall & Perlman, 1990:189).

3.4.1.9 Market research

Entrepreneurs are aware of what is going on in the market, more so for entrepreneurial managers. Entrepreneurial managers are sensitive to market opportunities and take their directions from the market (Kaplan, 2003:12).

Market research is one facet of the entrepreneurial process which can not be delegated. The entrapreneur test their idea with real customers and in real situations (Cornwall & Perlman, 1990:189).

3.4.1.10 Decision making

Entrepreneurial managers solve problems, meet deadlines, provide leadership, and survive in an entrepreneurial organisation through decision making. They can not wait for sufficient data, and base their decisions on the data they have. They are very analytical but base a lot of their decisions on intuition (Cornwall & Perlman, 1990:190).

Kuratko *et al.* (2001:5) state that the perception of middle-managers on different aspects of the firm's corporate organisation as well as the formal strategy that the organisation develops is important to the facilitation of internal entrepreneurship. Certain critical organisational factors must also exist and be perceived by middle-managers to develop entrepreneurial behaviours and pursue entrepreneurial activities. Entrepreneurial management is a group activity linked to systems, processes and structures rather than an individual activity (Burns, 2005:14).

3.5 OBSTACLES TO CORPORATE ENTREPRENEURSHIP

Businesses, their strategies, structures and management teams, are becoming more complex and businesses need to know where they are, where they are going and how to manage (Desai, 2000:685). The complexities noted by Desai and the constraints summarised in Table 3.1 need to be well understood and managed delicately if a business has to be entrepreneurial and succeed.

The pursuit of entrepreneurship creates new and potentially complex sets of challenges on both theoretical and practical levels. This is because most of the current management practice styles do not include entrepreneurship theory. On a practical level managers find themselves in uncharted territory. They lack guidelines on how to direct entrepreneurship and the business infrastructure in terms of systems, policies and procedures, and structures are based on traditional management which often does not apply (Morris & Kuratko, 2002:264). This leads to business constraints on corporate entrepreneurship as shown in Table 3.1.

Table 3.1: Categories of organisational constraints on corporate entrepreneurship

Systems	Structures	Strategic Direction	Policies and Procedures	People	Culture
Misdirected reward and evaluation systems.	Too many hierarchical levels.	Absence of innovation goals.	Long, complex approval cycles.	Fear of failure.	Ill-defined values.
Oppressive control systems.	Overly narrow span of control.	No formal strategy for entrepreneurship.	Extensive documentation requirement.	Resistance to change.	Lack of consensus over priorities.
Inflexible budgeting systems.	Responsibility without authority.	No vision from the top.	Over reliance on established rules of thumb.	Parochial bias.	Lack of fit.
Arbitrary cost allocation systems.	Top-down management.	Lack of commitment from senior executives.	Unrealistic performance criteria.	"TURF" protection.	Values that conflict with entrepreneurial requirements.
Overly rigid, formal planning system.	Restricted communication channels.	No entrepreneurial role at the top.		Complacency.	
	Lack of accountability.			Short term orientation.	
				Inappropriate skills/ talents.	

Source: Morris (1998:97)

Sathe (2003:85) cites the following obstacles in creating an entrepreneurial climate:

- Inappropriate reward systems, excessive red tape and lack of co-operation across divisions and levels.
- Lack of freedom.
- Lack of organisational support, or perceived apathy towards accomplishments.
- Poor project management.
- Inappropriate evaluation feedback.
- Insufficient resources.
- Too heavy workloads.
- Overemphasis on the status quo, unwillingness to change or take risks.
- Competition.

Burns (2005:147) concludes that you can either ignore barriers, or you can work around them, or you can remove them. An entrepreneurial organisation is one that embraces change.

3.6 SUMMARY

The literature review of entrepreneurship in this chapter serves the following purposes: It lays the basis for a more focused discussion of entrepreneurship within existing organisations; it identifies specific individual characteristics that promote the entrepreneurial climate in an organisation; and it gives attention to the activities of the entrepreneur (individual and in the corporate environment).

The individual entrepreneur, entrepreneurship and corporate entrepreneurship were defined in detail in this chapter. These definitions lead to identifying the characteristics of entrepreneurs.

The individual characteristics of a potential entrepreneur identified in the literature review are: Internal locus of control; calculated risk takers; commitment and determination; demonstrate a high tolerance of ambiguity; self motivated, self-reliant and prefer a degree of autonomy; high energy levels; they passionately seek opportunities (opportunity orientation); optimistic and self-confident; willing to learn/ Quick learners; they display pro-active behaviour patterns; they invest when it is the opportune time; they are selective when implementing opportunities; they think strategically; they are team players.

Entrepreneurship has evolved from the classic one-man start-up business to organisations of all types, in all stages of development. Thus, entrepreneurship can occur – or fail to occur – in organisations that are old and new; small and large; fast and slow growing; in the private, non-profit, and public sectors; in all geographic areas; and in all stages of a nation's development, regardless of politics (Timmons & Spinelli, 2007:79).

Entrepreneurial leaders are influencers that infuse imagination, motivation, commitment, passion, tenacity, integrity, teamwork, and vision. They face dilemmas and must make decisions despite ambiguity and contradictions. Entrepreneurship is about building, and continually renewing long-term value and durable cash flow. The result of this value creation process is that the total economic pie grows larger and society benefits (Oosthuizen, 2003:15).

Five basic dimensions of corporate climate namely new business venturing, innovativeness, self-renewal, risk-taking and pro-activeness were identified.

In order to foster a corporate entrepreneurial climate within an organisation, the role of corporate culture and climate should be considered. Corporate climate is created by the expectations of employees as well as attitudes and practices of key managers. It was therefore necessary to discuss the role of middle managers in the entrepreneurial organisation with specific focus on the characteristics of entrepreneurial managers.

The chapter was concluded with a discussion on the obstacles to corporate entrepreneurship to reinforce the awareness to ignore barriers, work around them or to remove them.

CHAPTER 4

A LITERATURE REVIEW OF ENTREPRENEURIAL CLIMATE

4.1 INTRODUCTION

In this chapter entrepreneurial climate and culture are defined, and the thirteen constructs of the corporate entrepreneurial climate in an organisation, as identified by Oosthuizen (2006:121) are discussed in detail.

The organisational culture and climate are critical in how well the organisation will deal with growth. This applies to new ventures and existing organisations (Timmons & Spinelli, 2007:540). Rogg, Schmidt, Shull and Schmidt (2001:433) confirm that there are several studies that document the importance of organisational climate as a determinant of organisational outcomes. Cummings and Worley (2005:482) claim that “a well-conceived and well-managed organisational culture, closely linked to an effective business strategy, can mean the difference between success and failure in today’s demanding environments.”

It is essential for entrepreneurial organisations to be successful in changing and keep up with changes (often setting the pace) (De Villiers, 2008:73). According to Kreitner and Kinicki (2007:109), organisational culture involves a set of values and beliefs about what people do and how they act. This includes both formal and informal practices in support of values.

This study focuses on organisational climate rather than the organisation’s culture.

Timmons and Spinelli (2007:541) identified six basic dimensions to describe an organisation's climate:

- Clarity: The degree of being well organised, concise, and efficient in the way that tasks, procedures, and assignments are made and accomplished.
- Standards: The amount of focus and pressure management puts on employees for high standards and excellent performance.
- Commitment: The extent to which employees feel committed to the goals and objectives of the organisation.
- Responsibility: The extent to which employees and management takes responsibility for their own goals without being monitored constantly.
- Recognition: The extent to which employees feel they receive recognition for a job well done, instead of only being punished for their mistakes.
- "Esprit de corps": The extent to which employees feel a sense of belonging, cohesion, team spirit and working well together.

Entrepreneurship is recognised as being of fundamental importance to economic growth. The economy as a whole benefits by the creation of new ideas, enterprises and jobs (Heinonen & Poikkijoki, 2006:80).

4.2 ORGANISATIONAL CULTURE

Hunt and Levie (2003:1) describe human culture as a set of commonly held beliefs, attitudes, dispositions and modes of behaviour. George and Zahra (2002:5) refer to these beliefs, behaviour and attitudes as the enduring set of values of a nation, a region or a business.

Morris, Kuratko and Covin (2002:250) define organisational culture as an organisation's basic beliefs and assumptions about what the company is about, how its members should behave, and how it defines itself in relation to its external environment. Nieman *et al.* (2003:250) continue to define organisational culture as the beliefs, norms and values that an organisation upholds and lives and operates by.

Organisational culture "is a pattern of beliefs and expectations shared by the organisation's members. These beliefs and expectations produce norms that shape the behaviour of individuals and groups in the organisation" (Schwartz & Davies, 1981:33).

According to Eliasson, Wiklund and Davidson (2002:3), business culture is one of the key factors fostering entrepreneurial activities in businesses. They quote Brown, Davidson and Wiklund (2001); Zahra (1993) and Covin and Slevin (1991) to support this assertion. The culture of a business touches and influences everything that people do. It is pictured as existing on different levels, such as assumptions, values (substance) and artefacts (forms) rules of conduct, vocabulary, methodology, rituals and rites, myths and stories (Morris & Kuratko 2002:255).

Morris and Kuratko (2002:260) are of the perception that organisational culture is rich in entrepreneurial organisations and this culture drives the organisation. Elements of an entrepreneurial culture include the following (Dhliwayo, 2007:121):

- People and empowerment focused.
- Value creation through innovation and change.
- Attention to basics Hands-on management.
- Doing the right thing.
- Freedom to grow and fail.
- Commitment and personal liability.
- Emphasis on the future and a sense of urgency.

Culture refers to more than only the group of organisational members. It is rooted in history, collectively held, and is sufficiently complex to resist attempts at direct manipulation (Denison, 1996:644).

Culture is a system of shared meaning held by members that distinguishes the organisation from other organisations (Robbins, Odendaal & Roodt, 2004:380). Culture shapes and guides the attitudes and behaviours of employees. Culture

allows organisations to develop a core set of assumptions, understandings and implicit rules that govern behaviour in the workplace, and ensure that everyone is working in the same direction (Nayager & Van Vuuren, 2005:31).

4.3 ORGANISATIONAL CLIMATE

Organisational climate (sometimes known as corporate climate) is the process of quantifying the "culture" of an organisation. Reichers and Schneider (1990:22) define organisational climate as "the shared perception of the way things are around here". These properties are assumed to influence the motivation and behaviour of the employees (Reichers & Schneider, 1990:22).

Burke and Litwin (1992), cited by Kangis, Gordon and Williams (2000:532), define organisational climate as the perception that individuals have of how their local work unit is managed and how effectively they (and their colleagues) work together on conducting their job. The focus is thus on the group, the work unit. Denison (1996:644) confirms that climate refers to the situation and its link to thoughts, feelings, and behaviours of organisational members.

Moran and Volkwein (1992:20) define organisational climate as an enduring characteristic of an organisation which distinguishes it from other organisations and include the collective perceptions of members about their organisation. The perceptions of the organisation's members are based on dimensions such as autonomy, trust, cohesiveness, support, recognition, innovation and fairness.

In an entrepreneurial climate, the organisation would engage in new business venturing and would be innovative, pro-active as well as continually renew itself (Antoncic & Hisrich, 2001:496).

Echols and Neck (1998:39) state that the more entrepreneurial qualities an organisation exhibit, and the more all employees and management believe in behaving entrepreneurially, the greater the chance for the organisation to achieve maximum innovation and entrepreneurial success.

An overview article on organisational climate (Moran & Volkwein, 1992:21) identifies four conceptual perspectives on this topic:

- A structural perspective: Climate is an objective manifestation of the organisational structure; ergo climate is formed because members of an organisation are exposed to common structural characteristics of an organisation.
- A perceptual perspective: Individuals respond to situational variables in a way that is psychologically meaningful to them. Climate is a psychologically processed description of organisational conditions.
- An interactive perspective: The interaction of individuals in responding to the same organisational setting brings forth the shared agreement where the organisational climate is grounded.
- A cultural perspective: The interaction of individuals who share a common frame of reference - the organisational culture - creates the organisational climate as they come to terms with situational contingencies.

The concepts of organisational culture and climate, which are profound and fundamental components of organisations, are dependent on each other and combine the entire managerial system of organisations (Mehmet, 2006:94).

4.4 CONSTRUCTS OF THE CORPORATE ENTREPRENEURIAL CLIMATE IN AN ORGANISATION

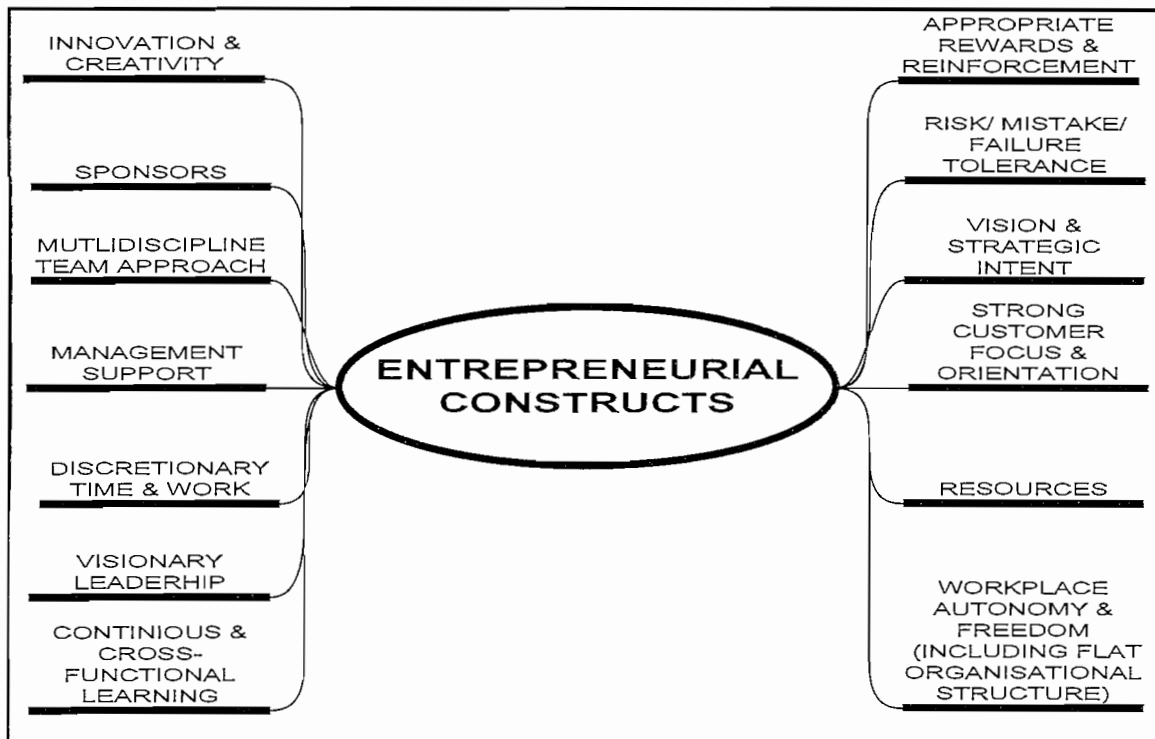
The nature of the corporate entrepreneurial climate is discussed in this chapter. Emphasis is placed on the constructs on a corporate entrepreneurial climate and their importance in the fostering of a corporate entrepreneurial climate within organisations.

According to Hornsby, Naffziger, Kuratko and Montagno (1993:29), organisational characteristics that promote corporate entrepreneurship are: rewards for innovation, management support of entrepreneurial projects, resource availability, risk-taking,

and a tolerance for failure. Management has control of each of the abovementioned elements (Hisrich & Peters, 1998:47).

Oosthuizen (2006:130) identified thirteen constructs that seem to dominate prior research. Jordaan, Van der Merwe and Oosthuizen (2009:1) identified human related factors from the thirteen constructs, and added a subdivision under the flat organisation structure construct namely workplace autonomy and freedom. These fourteen constructs or factors are summarised in Figure 4.1 below, followed by a discussion of each of the constructs.

Figure 4.1: Constructs characterising a corporate entrepreneurial climate



Source: Adapted from Oosthuizen (2006:130)

4.4.1 Visionary leadership / entrepreneurial leadership

Visionary leadership is future-oriented. According to Cohen (2004:16), visionary / entrepreneurial leadership refers to the ability of setting the organisation's vision, and then creating the space, systems, procedures and culture to mobilise others to achieve the vision. Kuratko and Welsch (2001:349) agree with the statement, but

also stress the importance of a shared vision as a critical element for a strategy that seeks high achievement. This confirms Quinn's (1986:9) perspective that innovative managements (whether technical or not) project clear long-term visions for their organisations that go beyond simple economic measures.

The optimal use of the new energy to the organisation's benefit requires visionary leadership with the ability to strike a balance between deliberately creating the kind of chaos that sparks creativity and the rigour and discipline that is required to channel this towards improved competitiveness and ultimately financial performance. By allowing creativity and innovation to thrive, the leaders of the organisation would need to have defined the vision clearly enough for it to be autonomously implemented by managers and staff (Nicholson-Herbert, Mkhize & Schroder, 2004:43).

There should be a formal entrepreneurial strategy, e.g. to address financing, measurement and targets. This should include specific objectives and programs (Kuratko & Welsch, 2004:355). Senior executives should have a commitment towards entrepreneurial behaviour and innovation, which means the ultimate responsibility lies with top-level executives (Morris & Kuratko, 2002:369). The vision set at the top should be very clear and it should be communicated to the rest of the organisation in a way every one knows and understands the vision (Kuratko & Welsch, 2004:355).

Hisrich *et al.* (2005:50) describe a visionary leader as a person who dreams great dreams, and who also has the ability to communicate these dreams in such a way that the employees also want to voluntarily become part of it.

One does not "manage" people. The task is to lead people, and the goal is to make productive the specific strengths and knowledge of each individual (Drucker, 2001:81). It is important for a visionary leader to put enabling structures in place, and to lead by example (Turner, 2002:22).

Rue and Byars (2005:346) as well as Kuratko and Welsch (2001:349) emphasise that the long term results, benefits and changes required to achieve a shared vision in an organisation, should be set out clearly in order for employees to easily visualise the ultimate outcome.

Section A, questions 1, 14, 27, 40 and 53 of the questionnaire, evaluates entrepreneurial leadership (Refer to Annexure A). These questions are:

- 1 Our leaders take a long-term view of our organisation.
- 14 Our leaders challenge the status quo and they inspire us to think and act in innovative ways.
- 27 This organisation has a specific value system which we all know and live up to.
- 40 Our leaders lead by example and people are eager to voluntarily follow them.
- 53 Our leaders seek to maximise value from opportunities.

4.4.2 Management support

Management should be the key driver of corporate entrepreneurial processes in an organisation (Goosen, De Coning & Smit, 2002:43).

Management support refers to the willingness of managers to facilitate and promote entrepreneurial activity in the organisation (Hornsby *et al.*, 2002:259; Turner, 2002:45; Kuratko & Welsch, 2001:351; Damanpour, 1991:584; Sykes & Block, 1989:163; Hisrich & Peters, 1986:311; Quinn, 1986:9). According to these scholars, support can assume many forms, including championing ideas, providing the necessary resource or expertise, or institutionalising the entrepreneurial activity within the organisation's systems and processes.

Goosen *et al.* (2002:42) developed a 'key factor' entrepreneurship instrument based on the ENTRESALE to measure corporate entrepreneurship. The instrument consists of three factors of which two (innovativeness and pro-activeness) focus externally and one (management) focus internally. The internal factor represents the

influence of management on corporate entrepreneurship. The management factor consists of ten dimensions as set out in table 4.1.

Table 4.1: Dimensions of managerial influence on corporate entrepreneurship

MANAGERIAL INFLUENCE ON CORPORATE ENTREPRENEURSHIP	
DIMENSIONS	DESCRIPTION
Goal setting	Inclusion of corporate entrepreneurial practices when objectives are set
Rewards, creativity and innovation systems	Rewarding systems that promote creativity and innovation
Intracapital	Capital is made available in advance to kick-start corporate entrepreneurial efforts
Communication	Open communication channels and flat organisational structures, this improves productivity and facilitates synergism
Entrepreneurship championing	Management champions corporate entrepreneurship
Staff input	Corporate entrepreneurial freedom whereby employees are encouraged to express their ideas and are taken seriously by management
Entrepreneurial freedom	Limiting over-control by management. Management trusts, empowers and manage risks
Problem solving culture	Fostering a problem-solving culture is a key element of productivity
Staff empowerment	Staff is empowered; they are trusted and are allowed to feel part of the creative process. They are allowed to fully unlock their personal knowledge and capabilities within the organisation
Innovation and creativity systems	Management provide opportunity for innovation and creativity

Source: Goosen *et al.* (2002:42)

The vast impact of management support on a corporate entrepreneurial climate is clear from table 4.1. All 10 of the dimensions link directly to one or more of the thirteen corporate entrepreneurial constructs identified.

Managers play a crucial role in establishing and maintaining a working environment that facilitate and promote entrepreneurial activity (Bolton & Thompson, 2004:315; Robinson, 2001:98). Management support for the process include promoting innovativeness; being receptive to ideas put forward by employees and encourage their development as well as providing financial resources needed (Kuratko & Hodgetts, 2004:63; Wickham, 2004:560).

Section A, questions 2, 15, 28, 41 and 54 of the questionnaire, evaluates management support (Refer to Annexure A). These questions are:

- 2 Management encourages us to develop ideas that would improve the organisation.
- 15 Top management is receptive to my ideas and suggestions.
- 28 Those employees who come up with innovative ideas on their own receive management's encouragement for their activities.
- 41 The creation of innovative ideas is a regular occurrence in our organisation.
- 54 Senior managers allow innovators to bend rules and rigid procedures in order to keep promising ideas on track.

4.4.3 Sponsors (champions)

Pinchot and Pellman (1999:3) view sponsors for projects as the most important "ingredient" of corporate entrepreneurship. The sponsors will protect and coach the project team, ensure adequate resources, complete the paperwork and deal with internal politics. The project sponsors will also promote and award the outcome of innovative ideas (Sharma & Chrisman, 1999:23; Morris & Kuratko, 2001:93).

Morris and Kuratko (2001:93) define a sponsor as "the patron or senior management advocate of the initiative, pushing for its acceptance and completion, playing a major advising or mentoring role as it unfolds, and perhaps housing it. This high-level person acts as buffer, protector, and modifier of rules and policies and helps the venture obtain the needed resources".

Sponsors are people in the organisation who assist the entrepreneurial manager in learning organisational skills and who supplement the manager's skills with their own. In an entrepreneurial organisation sponsors can help the manager through a tough time (Cornwall & Perlman, 1990:188). Morris *et al.* (2008:393), as well as Turner (2002:49), stress that these sponsors should be corporate managers at higher levels in the organisation willing to protect entrepreneurial individuals by building environments of safety around them.

Section A, questions 3, 16, 29, 42 and 55 of the questionnaire evaluates the champions and sponsors construct (Refer to Annexure A). These questions are:

- 3 My manager helps me to get my work done by removing obstacles in my way.
- 16 Originators of new ideas find it easy to implement because of the support rendered by influential people at the organisation.
- 29 Our organisation has people with influence that support, coach, protect, and find resources for a corporate entrepreneurial project and its team.
- 42 Our organisation's managers have the skills, commitment and courage to be effective champions of corporate entrepreneurial initiatives.
- 55 In this organisation it is easy to build coalitions of sponsors to help projects succeed.

4.4.4 Tolerance for risks, mistakes and failure

Risk-taking is the degree to which managers are willing to make large and risky resource commitments that have a reasonable chance of costly failure (Kreiser, Marino & Weaver, 2002:2). This is one key element of innovation.

Risk-taking involves tolerance for failure. It is important that employees perceive an environment that encourages calculated risk-taking while maintaining reasonable tolerance for failure (Wang, 2008:640).

Entrepreneurial culture encourages employees to experiment with new products and to take risks, responsibility and ownership of their creations. This can only happen

employees are allowed to take risks, make mistakes and fail in their attempts at innovation (Nayager & Van Vuuren, 2005:32).

Employees should be allowed to take calculated risks. Sharing risks and rewards with employees is regarded by Van der Merwe and Oosthuizen (2008:16) as fundamental to corporate entrepreneurial behaviour. Kuratko and Welsch (2001:351) confirm that an organisation should tolerate failure, but also learn from it. The nature of success demands trial and error (Turner, 2002:52).

The drawback in learning from mistakes is that generally mistakes are very costly. It is thus important to recognise the potential benefit of a mistake, but also the cost attached to it. The organisation should set measures in place to minimise the potential cost while maximising the potential benefit from the mistake (Dawes, 2007:21-22).

In entrepreneurial work environments employees are trusted to make give input and make decisions about their work processes and are seldom criticised for making mistakes when innovating (Hornsby et al., 2002; Goosen *et al.*, 2002:42). This tolerance of failure should facilitate innovative, pro-active and risk-taking behaviours in employees, it is essential to unlock personal knowledge and capabilities to its fullest extend (Goosen *et al.*, 2002:42).

Section A, questions 4, 17, 30, 43 and 56 of the questionnaire evaluates the tolerance of risks, mistakes and failure construct (Refer to Annexure A). These questions are:

- 4 Development at our organisation is based on taking calculated risks at the right time.
- 17 Projects involving calculated risk are highly valued, even when things do not always turn out according to plan.
- 30 We occasionally take big risks to keep ahead of our competitors.
- 43 This organisation supports many small and experimental projects realising that some will undoubtedly fail.

56 If you make a mistake in this organisation you will be forgiven.

4.4.5 Innovation and creativity; new ideas encouraged

Fostering a culture of corporate entrepreneurship is about creating the space for stimulating ideas to bubble up from individuals. This implies that individuals who are required to innovate should not be bogged down by routine work and tied down by bureaucracy. Ideas can be further enriched by social interaction and facilitated conversations within teams (Nicholson-Herbert *et al.*, 2004:43).

Kreiser *et al.* (2002:2) state that innovation is embodied in a strong business commitment to engage in and support new ideas, novelty, experimentation and creative processes that may result in new products, services or technological processes.

Innovation focuses on developing new resources and capabilities that offer growth opportunities. Innovation is encouraged by an entrepreneurial internal environment, as new products and production processes are often necessary in order to seek new opportunities for growth (Nayager & Van Vuuren, 2005:37; Covin & Miles, 1999:51). Nayager and Van Vuuren (2005:38) stress that an organisation that experiments with the creation of new products, creates knowledge and utilises that knowledge, perpetuates its growth.

Innovation is the main factor assisting an organisation to achieve sustainable competitive advantage, i.e. they create new and improved products, services and processes (Morris & Kuratko, 2002:10). Davila, Epstein and Sheldon (2006:3) agree that, in the long run, the only reliable security for any company is the ability to innovate better and longer than competitors.

Systems and structures that promote creativity and innovations will greatly enhance corporate entrepreneurship (Goosen *et al.*, 2002:42), and will be beneficial to increase profitability (Nayager & Van Vuuren, 2005:38).

Continuous innovation occurs largely because top executives appreciate innovation and manage their organisation's value system and atmosphere to support it (Quinn, 1986:8).

Section A, questions 5, 18, 31, 44 and 57 of the questionnaire evaluates the innovation and creativity construct (Refer to Annexure A). These questions are:

- 5 Our organisation quickly implements improved work methods that are developed by employees.
- 18 There is considerable number of employees at the organisation that are involved in generating and implementing innovative ideas.
- 31 This organisation provides me with the chance to be creative and try out new methods of doing my job.
- 44 Training is provided to ensure that innovative new processes are implemented effectively.
- 57 Employees are inspired to push their boundaries and to think "out-of-the-box".

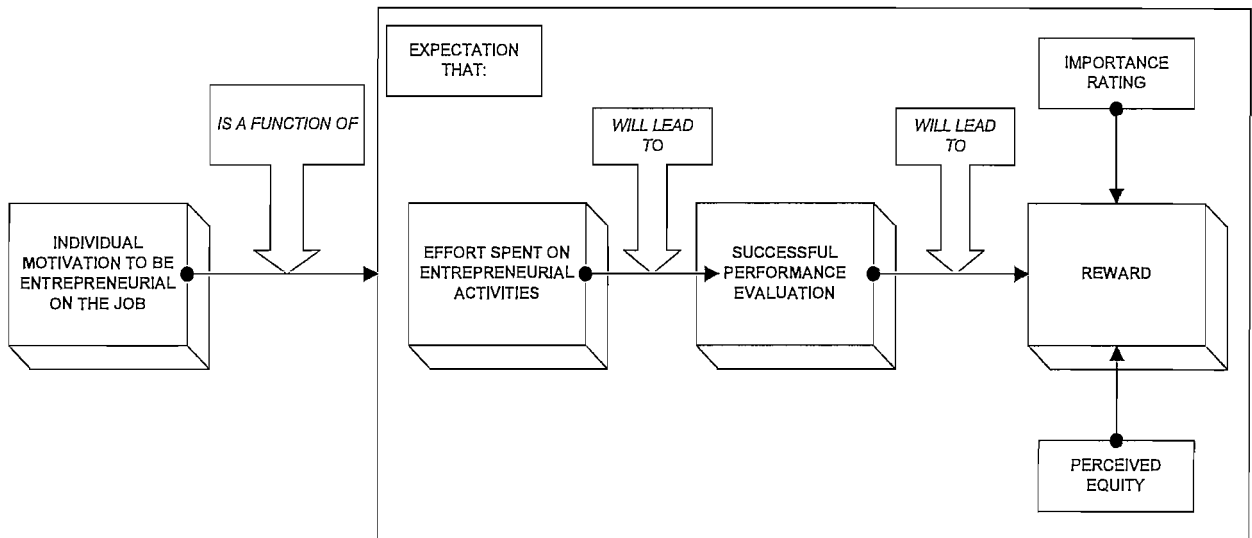
4.4.6 Appropriate rewards and reinforcement

Large companies do not have to make their innovators millionaires, but rewards should be visible and significant (Quinn, 1986:19). Rewards and reinforcement motivate individuals to engage in innovative, pro-active and moderate risk-taking behaviour, as well as to attract and retain the appropriate talent required by the organisation (Kuratko *et al.*, 2001:28). Hough and Scheepers (2008:19) are of the opinion that for a reward system to initiate entrepreneurial activity, the reward system should consider goals, feedback, with the emphasis on individual responsibility, and performance-based incentives. This view is supported by Jacobs and Kruger (2001:5) who are of the opinion that the performance-based evaluation system plays an important role in reinforcing corporate entrepreneurial behaviour.

Organisations adopting an entrepreneurial orientation should place more emphasis on individual long-term performance while rewarding group efforts to encourage collaboration (McBeth & Rimac, 2004:21).

Morris *et al.* (2008:175) are of the perception that the question is not whether an employee is generally motivated or not, but whether he or she is motivated towards specific behaviours. Their concern is with entrepreneurial motivation. Figure 4.2 is a schematic representation of how motivation for entrepreneurial behaviour is obtained.

Figure 4.2: A model of motivation for entrepreneurial behaviour



Source: Morris *et al.* (2008:176)

As seen in figure 4.2, elements of systems to promote creativity and innovations include a reward system, which rewards corporate entrepreneurship. It also includes methods through which the creativity is enhanced and through which the different stages of innovation are managed (from conception to final product) (Goosen *et al.*, 2002:42).

Organisational systems can have a direct and immediate effect on the occurrence of entrepreneurial behaviour. In particular, whether or not the reward system encourages risk taking and innovation has been shown to have a strong effect on individuals' tendencies to behave in entrepreneurial manners (Covin & Slevin, 1991:32). Kuratko, Montagno and Hornsby (1990:52) empirically identified "reward and resource availability" as a principal determinant of entrepreneurial behaviour by middle- and first-level managers. Similar results have been reported in subsequent studies (Hornsby, Holt & Kuratko, 2008:2; Morris *et al.*, 2008:175).

A number of studies suggest organisations must have effective reward systems in place to promote individual entrepreneurial activity (Hornsby et al., 2008:2; Morris *et al.*, 2008:176; Hisrich *et al.*, 2005:49). These systems can include both extrinsic and intrinsic rewards.

A good example of a successful reward system is a profit-sharing mechanism that supports the distribution of profits that have been made as a result of a specific idea. By linking profit-sharing with team projects, this creates incentives for individuals to directly benefit from their own innovations. This is a more personal sense of achievement, not unlike that experienced by the individual entrepreneur starting a business (Nicholson-Herbert *et al.*, 2004:44).

Section A, questions 6, 19, 32, 45 and 58 of the questionnaire, evaluates the appropriate rewards and recognition construct (Refer to Annexure A). These questions are:

- 6 Individuals implementing successful innovative projects receive additional rewards and compensation.
- 32 My supervisor will give me special recognition if my work performance is outstanding.
- 58 Employees are rewarded in relation to their job performance.
- 46 The vision and strategies of the organisation often help me in setting priorities in my work.
- 59 There is considerable buy-in from employees into the value system of the organisation.

4.4.7 Vision and strategic intent

Innovative managements - whether technical or not - project clear long-term visions for their organisations that go beyond simple economic measures (Quinn, 1986:9).

Strategic objective in terms of growth targets, market development, market share and market position, the entrepreneurial venture usually goes beyond the small business regarding to the strategic objective (Wickham, 1998:19). Without a clearly strategic objective, the management activities just like a boat without a rudder. Undoubtedly, a well defined strategic objective can help the venture.

Garcia-Morales, Llorens-Montes and Verdu-Jover (2006:25) highlight the importance of a shared vision in an organisation to the commitment for a desired future and a shared sense or organisational purpose. It is important that employees feel part of and understand the vision (especially the entrepreneurial effort). If employees do not feel part of or understand the entrepreneurial vision in the organisation, it will hamper their ability to find innovative solutions, there will be less dedication to innovation and they will have difficulty in setting their priorities and directing their efforts (Kuratko & Welsch, 2001:349; Pinchot & Pellman, 1999:107).

Section A, questions 7, 20, 33, 46 and 59 of the questionnaire, evaluates the vision and strategic content construct (Refer to Annexure A). These questions are:

- 7 I am well informed about our organisational vision and strategies.
- 20 I have regular meetings with my manager where information is shared between us.
- 33 Great effort has been made to clarify what the vision and strategy of the organisation mean to us in our own department.
- 46 The vision and strategies of the organisation often help me in setting priorities in my work.
- 59 There is considerable buy-in from employees into the value system of the organisation.

4.4.8 Discretionary time and work

According to Antoncic and Hisrich (2001:502), work discretion can be seen as the degree of autonomy that is given to pursuing entrepreneurial efforts at work. Antoncic and Hisrich (2001:502) however caution that the effectiveness of discretionary time should be monitored since excessive decentralisation and freedom

might result in duplication of effort and a waste of resources. There must be a clear purpose to the freedom. The purpose must be to generate new sources of competitive advantage. Autonomy is important, but should be focussed and coordinated enough to ensure efficiency within the organisation (Mathisen, Einarsen, Jorstad & Bronnick, 2004:383).

Kuratko *et al.* (2005:699) suggested that middle managers need to evaluate the workloads of employees to ensure that individuals and groups have the time needed to pursue innovations and that their jobs are structured in ways that supports efforts to achieve short and long term organisational goals. Managers should be reasonable in assigning the workload of their employees and allow employees to work with others on long-term problem solving (Hough & Scheepers, 2008:19).

According to Cummings and Worley (2005:334), autonomy refers to the amount of independence, freedom and discretion that the employee has to schedule and perform tasks. Employees are more likely to experience responsibility for their work outcomes when high amounts of autonomy exist.

In terms of the corporate venturing aspect of corporate entrepreneurship, a high degree of autonomy should be accorded to those charged with venturing (Block & MacMillan, 1995:253).

One of the most important tasks that an entrepreneurial manager can perform is to motivate and empower employees to do “the right thing” without having to instruct them to do so (Burns, 2005:119).

Section A, questions 8, 21, 34, 47 and 60 of the questionnaire, evaluates the discretionary work and time construct (Refer to Annexure A). These questions are:

- 8 An employee with a good idea is often given time to develop that idea within working hours.
- 21 A staff member who has initiated a new project/process is allowed to carry it through to completion/implementation.

- 34 Nobody at the organisation is forced to develop new ideas.
- 47 I am allowed time at work to explore new ideas I believe have potential.
- 60 Our organisation provides ample opportunities for learning and growth.

4.4.9 Empowered teams, multi-disciplined teamwork and diversity

A team is a small number of people with complementary skills who are committed to a common set of goals and tasks for which they hold themselves mutually accountable. Teams are appropriate for firms that seek innovative solutions to dynamic opportunities and challenges. Team members are given power, freedom, and responsibility to control their work. Teams develop direction, momentum, and commitment by working to shape a meaningful purpose, such as designing a new product (Dorf & Byers, 2004:267).

Cross-functional teams are people from about the same hierarchical level, but from different work areas, who come together to accomplish a task. Cross-functional teams exchange information, develop new ideas and solve problems (Robbins *et al.*, 2004:204).

Advantages of teamwork (Dorf & Byers, 2004:268):

- Teams substitute peer-based control for hierarchical control of work.
- Instead of management devoting time and energy to controlling the workforce directly, workers control themselves.
- Teams permit employees to pool their ideas to come up with better and more creative solutions to problems.
- The advantage of a team is the benefits obtained from a combination of people with diverse characteristics, skills, knowledge, and capabilities. The quality of collaboration within an entrepreneurial team is positively correlated with a new venture's success (Dorf & Byers, 2004:268).
- Team members can support entrepreneurship when they have the necessary competencies and experience and believe that they collectively have the ability to perform the necessary tasks (Dorf & Byers, 2004:268).

Creative teams have members of diverse backgrounds and change membership periodically (Dorf & Byers, 2004:268).

A team that works as a team may be the most distinguishing feature of high potential organisations (Timmons & Spinelli, 2007:293). They also concluded that team efforts make others' jobs easier, make heroes out of partners and key people, and motivate people by celebrating their successes.

Since intellectual cross-pollination fosters creativity, and the widest possible variety of knowledge is gained through collaboration and networking, the most intensive and valuable learning will take place in multidisciplinary teams (McBeth & Rimac, 2004:18).

The issue of external linkages also merits attention. The functional work teams described above should create links to outside groups such as industry associations. This access to valuable sources of information concerning current industry practices could then foster additional creative ideas (Purewal & Seidle, 2004:35).

Section A, questions 9, 22, 35, 48 and 61 of the questionnaire, evaluates the empowered teams construct (Refer to Annexure A). These questions are:

- 9 Working together in project teams is encouraged at the organisation.
- 22 We use cross-functional teams effectively at the organisation to develop and implement new ideas.
- 35 Top management encourages the establishment of teams from various departments whenever needed for a project.
- 48 Project teams have choices in recruiting and selecting new team members.
- 61 Cross-functional teams are characterised by diversity based on the skills required by the project.

4.4.10 Resource availability

The access of available physical resources such as communication, utilities, transportation, land or space at reasonable prices is important for entrepreneurial activity (Foxcroft, Wood, Kew, Herrington & Segal, 2002:55). Timmons and Spinelli (2004:58) state that the resources important in the entrepreneurial process are financial resources, assets, people and a business plan. It is crucial to maximise the use of all the resources including human, financial, physical and information resources (Cronjé, Du Toit, Marais & Motlatla, 2004:118).

Management need to provide the necessary resources both in monetary value and in time flexibility needed (Hornsby *et al.*, 2002:259). Entrepreneurial companies recognize that they have almost unlimited access to capital and they structure their practices accordingly. They let it be known that if their people come up with good ideas, they will be able to find the necessary capital, just as private venture capitalists or investment bankers find resources for small entrepreneurs (Quinn, 1986:14).

The balance of internal resources has change from tangible to intangible resources. Today, tangible resources are easily accessible or easy to imitate, which mean that it is no longer a sufficient way to gain a competitive advantage. Intangible resources, such as core competencies (Prahalat & Hamel, 1990:82) and sustained competitive advantage (Barney, 1991:100), have been crucial since the beginning of the 1990s. The main reason for focusing on internal resources in relation to corporate entrepreneurship is that many companies possess a bundle of unexploited resources – mainly intangible, knowledge resources held by employees. The knowledge resources are a mixture of skills, experience, competencies and capabilities that cannot easily be articulated and therefore cannot be transferred at arm's length or imitated by others. This makes the perspective of internal resources very important in relation to corporate entrepreneurship, as emphasised by Drucker (1993:7): "the basic economic resources ... is and will be knowledge".

Drucker (2001:15) is of the view that an organisation has only one true resource, its people. Organisations succeeds by making human resources productive, it

accomplishes its goals through work. To make work productive is an essential function

The strength of the company is to bring together employees possessing different, specialised knowledge resources and to enable the creation of new knowledge resources, or combination of existing ones, to generate innovations and competitive advantage (Barney, 1991:102).

The internal resource perspective thus constitutes a big potential for corporate entrepreneurship. Continuous knowledge creation, sharing and dissemination and the identification and exploitation of new possibilities are a way of maintaining a sustained competitive advantage and keeping organisational competencies up-to-date (Christensen, 2003:208).

Section A, questions 10, 23, 36, 49 and 62 of the questionnaire, evaluates the resource availability construct (Refer to Annexure A). These questions are:

- 10 There are several options within the organisation for individuals to get financial support for their innovative projects and ideas.
- 23 Money is often available to get new project ideas off the ground.
- 36 Resources are readily accessible in pursuance of new ideas and opportunities.
- 49 The process for accessing and acquiring resources to pursue new opportunities is streamlined so that approval is quickly granted.
- 62 Attracting resource commitment for entrepreneurial ventures in this organisation is relatively easy.

4.4.11 Continuous learning and cross-functional learning

Senge (1990), as quoted by Morris and Kuratko (2002:346), refers to a learning organisation as an organisation that continually improves through its capacity to learn from its experiences. Entrepreneurial organisations offer continual training geared

towards encouraging creative and integrative thinking and building team capabilities and support networks (McBeth & Rimac, 2004:21).

According to Nicholson-Herbert *et al.* (2004:44), the very nature of corporate entrepreneurship requires individuals who constantly improve and develop themselves, and it is to this that South African corporations, and indeed corporations all over the world, should be paying attention. Allowing these individuals' opportunities for personal growth can foster a culture of constant unease with the status quo which gives rise to mindsets that are obsessed with continuous improvement and staying ahead of the game.

To maximise learning, organisations need to analyse each entrepreneurial project or effort to identify the underlying reasons for success or failure (Morris & Kuratko, 2002:347). Management can thus extract maximal learning from project history to make this an entrepreneurial experience. Block and MacMillan (1993:312) conclude that organisations often ignore the learning gained at a great expense from their own project history, and prefer to look at what other organisations are doing. To ignore or discard it is to squander an irreplaceable asset.

Learning organisations have strong cultures that promote openness, creativity and experimentation amongst employees. These values and norms provide the underlying social support for successful learning and encourage employees to acquire, process and share information; they nurture innovation and provide the freedom to try new things, to risk failure, and to learn from mistakes (Robbins *et al.*, 2004:380).

The very nature of corporate entrepreneurship requires individuals who constantly improve and develop themselves, and it is to this that South African corporations, and indeed corporations all over the world, should be paying attention. Allowing these individuals' opportunities for personal growth can foster a culture of constant unease with the status quo which gives rise to mindsets that are obsessed with continuous improvement and staying ahead of the game. Furthermore, this can

contribute significantly to employee commitment to the organisation (Nicholson-Herbert *et al.*, 2004:44).

According to Dodgson (1993:377), organisational learning can be described as the ways firms build, supplement and organise knowledge and routines around their activities and within their cultures, and adapt and develop organisational efficiency by improving the use of broad skills of their workforces.

According to Van der Merwe and Oosthuizen (2008:15), organisations should provide sufficient learning opportunities to employees and employees must be encouraged to stay on par with new developments in their area of expertise. Organisations should also promote cross-functional knowledge sharing through cross-functional teamwork and resource sharing (Robbins *et al.*, 2004:204).

McBeth and Rimac (2004:21) are of the perception that learning experiences can include broader job descriptions, self-selection for specific tasks, exposure to a variety of organisational areas, and participation in a variety of cross-functional teams. Robbins *et al.* (2004:204) agree that cross functional learning can be established through cross-functional teams.

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

Section A, questions 11, 24, 37, 50 and 63 of the questionnaire, evaluates the continuous and cross functional learning construct (Refer to Annexure A). These questions are:

- 11 People are keen to share knowledge within the organisation, even over departmental or functional boundaries.
- 24 Employees are encouraged to talk to their colleagues in other departments of the organisation about ideas for new projects.

- 37 Our organisation has open communication channels in which all employees participate.
- 50 Employees are encouraged to stay abreast of developments in their functional fields and to share their knowledge with others.
- 63 Employees are willing to assist others and share knowledge and skills even if it is not required from them.

4.4.12 Strong customer orientation

Morris *et al.* (2008:127) define customer orientation as: "Developing an obsession with customer service and satisfaction, where the focus is on value creation, customization to diverse groups, management of points of customer contact or interface, service quality, and continuous customer feedback".

Today's companies must be market-centred companies, watching both their customers and competitors (Kotler & Armstrong, 2006:108). Customers needs and wants determine which areas the company should have competitive advantages. And competitors determine how strong the competitive advantages must be.

Both marketers and entrepreneurs pay attention to customer needs. Marketers continually monitor and analyse the buying behaviour patterns of targeted customers. Entrepreneurs intuit and exhume business opportunities, which conceal in the market (Dollinger, 1995: 226).

Section A, questions 12, 25, 38, 51 and 64 of the questionnaire, evaluates the customer orientation construct (Refer to Annexure A). These questions are:

- 12 A great deal of resources is spent in determining customer needs and satisfaction.
- 25 Product and service innovation are driven by a strong customer orientation.
- 38 Our organisation involves customers in service and product development.
- 51 We regularly ask our customers to give their opinions of our service and product offerings.

4.4.13 Workplace autonomy and freedom (including a flat organisational structure)

Morris *et al.* (2008:235) believe entrepreneurship flourishes where there are fewer layers of levels in the structure of the organisation. The orientation is towards a more horizontal and less vertical design. In terms of operations, organisations are decentralised, with few hierarchical levels but in terms of the vision and strategic direction, the direction comes from the top (Morris *et al.*, 2008:235).

The organisational structure is the underlying framework which determines how quickly and to what extent the organisation will be able to change. Ideally, entrepreneurial organisations should be decentralized, flexible, and experiential (providing opportunities to learn by doing and experimenting). The optimal structure is flat, people-centred, team-based, and dominated by informal networks and a strong support for employees' desire for independence (McBeth & Rimac, 2004:20).

Morris and Kuratko (2002:173) comment that entrepreneurial behaviour is promoted by the following aspects with regards to the organisational structure:

- As few hierarchical levels as practically possible.
- A fairly broad span of control for managers, to enable decision making.
- Responsibility should be enabled by the relevant levels of authority.
- Management systems should be informed from lower levels.
- Communication channels should be open.
- Employees should be held accountable.

According to Quinn (1986:10), innovative companies try to keep their operating divisions and total technical units small (below 400 people). With such a small team, only two layers of management are required. In units much larger than 400, people quickly lose touch with the concept of their product or process, staffs and bureaucracies tend to grow, and projects may go through too many formal screens to

survive. The more management layers there are the less new projects and ideas will be (Quinn, 1986:10).

An advantage of a simpler flat organisation structure is the sense of community where employees take care of each other and help each other. Employees will steer away from their own agendas and will rather focus on what will benefit the organisation (Pinchot & Pellman, 1999:112).

Section A, questions 13, 26, 339, 52 and 65 of the questionnaire, evaluates the flat organisational structure construct (Refer to Annexure A). These questions are:

- 13 People are allowed to make decisions about their work processes without going through elaborate justification and approval procedures.
- 26 Employees are given ample opportunity for independence and freedom in how they do their work.
- 39 I have autonomy to decide how to do my work.
- 52 The degree of hierarchical control is relatively low in our organisation.
- 65 Employees determine their key performance areas in co-operation with their supervisors.

4.5 PERCEIVED SUCCESS OF THE ORGANISATION

Zahra and Covin (1995:44) have argued that the economic benefits of corporate entrepreneurship efforts may not be readily apparent in the short run, but take several years to come to fruition. In conducting research on the relationship between corporate entrepreneurial initiatives and performance (especially activities involving the expenditures of significant financial and nonfinancial resources), researchers must make judicious use of lag effects to incorporate the temporal nature of their subject of inquiry.

Entrepreneurship is considered to be a vital component in the process of economic growth and development for various reasons. It is a mechanism by which society

converts technological information into products and services (Shane & Venkataraman, 2000:219).

Van der Post (1997:75) proposes that financial performance is a sound basis on which to make inferences about organisational effectiveness as it encompasses the outcomes of all system dimensions of an organisation. It can be reasoned with Cornwall and Perlman (1990:15) that corporate entrepreneurship is in essence, a system for generating wealth and as such the calculation of shareholders' wealth will be indicative of the measure of entrepreneurship found in organisations. Zahra and Covin (1995: 47) support this view. Zahra and Covin (1995:15) argue that there are at least two reasons for expecting a relationship between entrepreneurial activities and subsequent organisational performance. Firstly, innovation can be a source of strong positive market reputation and indicating competitive advantage for an organisation. Secondly, entrepreneurial organisations are agile, flexible and quick to respond to attractive opportunities.

Ireland *et al.* (2006:10) are of the perception that in the twenty-first century, knowledge and the ideas flowing from it are a more important source of competitive advantage than the physical assets of a firm. Kuratko (2006:3) added that the United States achieved its highest economic performance during the past ten years by fostering and promoting entrepreneurial activity within large firms.

In terms of market position, Nicholson-Herbert *et al.* (2004:44) are of the opinion that measurements such as the growth in the organisation's market share can help the organisation keep track of whether its entrepreneurial endeavours are contributing to its position relative to competitors.

Section B of the questionnaire (see annexure A) evaluates the perceived success of the organisation.

The following statements evaluate the different perceived areas of success:

Financial measures

- 13 Our business has experienced growth in turnover over the past few years.
- 16 Our business has experienced growth in profits over the past few years.
- 3 Our business has experienced growth in market share over the past few years.

Customer/market measures

- 9 Taking care of customers is our business' top priority.
- 6 Our business has a high customer retention rate.
- 1 Our business develops product/services with customers' needs in mind.
- 11 Our customers are satisfied with our business's product/service offerings.
- 15 Employees in our business understand the needs of our customers.
- 7 Our customers are loyal to our business.

Process measures

- 2 The competitive position of our business has improved over the past few years.
- 14 The effectiveness (doing the right things) of our business has improved over the past few years.
- 17 The efficiency (doing things right) of our business has improved over the past few years.

People development

- 8 In our business, employees are viewed as the most valuable asset of the business.
- 4 Our employees are highly committed to our business.
- 10 The morale (job satisfaction) of our employees has improved over the past few years.

Future (long-term) success

- 12 The image (stature) of our business, relative to our competitors, has grown over the past few years.
- 5 During difficult economic periods, investments in research and development/innovative projects continue and no significant financial cuts are made.

4.6 ESTABLISHING CORPORATE ENTREPRENEURSHIP

Jordaan *et al.* (2009:24) recommended that organisations should integrate current innovation programmes into a formal corporate entrepreneurship strategy. Training of managers and employees on various aspects of intrapreneurship should also be attended to.

The following practical recommendations are suggested by Jordaan *et al.* (2009:24):

- Strong entrepreneurial leadership and commitment from all levels of management is critical in fostering an entrepreneurial climate in the organisation. Top management should, however, take the lead and align the vision of the organisation to the human-related factors affecting intrapreneurship in the organisation.
- Management should actively support intrapreneurship in the organisation and reinforce entrepreneurial behaviour on a continuous basis by means of the availability of resources and appropriate rewards.
- Managers should furthermore, create an environment in which workplace autonomy and freedom can be fostered. Employees should therefore be empowered and given the freedom to make mistakes and to take risks, although calculated, in their entrepreneurial endeavours.

A multidiscipline team approach across departmental boundaries should also be encouraged and fostered by all levels of management (Jordaan *et al.*, 2009:24).

In the case study of FedEx Corporation (an example of an entrepreneurial organisation) conducted by Bhardwaj and Momaya (2006:41) management support for corporate entrepreneurship included the following:

- Recognition and publicity is given to improve group efforts.
- The internal leadership provides direct access and guidance to executive management. Organisational support system is also provided for entrepreneurial activities.
- Company's value proposition is used as a common language across all departments and divisions.
- Work group, departmental and divisional goals are all aligned and directly related to improving customer experience.
- A percentage of company's profits are shared with employees to encourage them and make them understand their efforts' contribution to the company's competitive edge.

Hisrich and Peters (2008:75-76) recommend the following detailed steps when establishing corporate entrepreneurship in the organisation:

- The first step in this process is to secure a commitment to corporate entrepreneurship in the organisation by top, upper, and middle management levels. Without top management commitment, the organisation will never be able to go through all the cultural changes necessary for implementation. Once the top management of the organisation has been committed to corporate entrepreneurship for a sufficient period of time (at least three years), the concept can be introduced throughout the organisation. This is accomplished most effectively through seminars, where the aspects of corporate entrepreneurship are introduced and strategies are developed to transform the organisational culture into an entrepreneurial one. General guidelines need to be established for corporate venture development. Once the initial framework is established and the concept embraced, corporate entrepreneurs need to be identified, selected and trained. This training needs to focus on identifying

- viable opportunities and their markets and developing the appropriate business plan.
- Second, ideas and general areas that top management is interested in supporting should be identified, along with the amount of risk money that is available to develop the concept further. Overall program expectations and the target results of each corporate venture should be established. As much as possible, these should specify the time frame, volume, and profitability requirements for the new venture, as well as the impact of the organisation. Along with entrepreneurial training, a mentor/sponsor system needs to be established. Without sponsors or champions, there is little hope that the culture of the organisation can be transformed into an entrepreneurial one.
 - Third, a company needs to use technology to make itself more flexible. Technology has been used successfully for the past decade by small companies that behave like big ones. Similarly, large companies can use technology to make themselves responsive and flexible like smaller firms.
 - Fourth, the organisation should be a group of interested managers who will train employees as well as share their experiences. The training sessions should be conducted one day per month for a specified period of time. Informational items about corporate entrepreneurship in general - and about the specifics of the company's activities in developing ideas into marketable products or services that are the basis of new business venture units - should be well publicized. This will require the entrepreneurial team to develop a business plan, obtain customer reaction and some initial intentions to buy, and learn how to coexist within the organisational structure.
 - Fifth, the organisation needs to develop ways to get closer to its customers. This can be done by tapping the database, hiring from smaller rivals, and helping the retailer.
 - Sixth, an organisation that wants to become more entrepreneurial must learn to be more productive with fewer resources. This has already occurred in many companies that have downsized. Top-heavy organisations are out of date in today's hypercompetitive environment. To accommodate the large cutbacks in middle management, much more control has to be given to subordinates at all levels in the organisation. Not surprisingly, the span of control may become as

high as 30 to 1 in divisions of such companies. The concept of "lean and mean" needs to exist if corporate entrepreneurship is to prevail.

- Seventh, the organisation needs to establish a strong support structure for corporate entrepreneurship. This is particularly important since corporate entrepreneurship is usually a secondary activity in the organisation. Since entrepreneurial activities do not immediately affect the bottom line, they can be easily overlooked and may receive little funding and support. To be successful, these ventures require flexible, innovative behaviour, with the corporate entrepreneurs having total authority over expenditures and access to sufficient funds. When the corporate entrepreneur has to justify expenses on a daily bases, it is really not a new internal venture but merely an operational extension of the funding source.
- Eighth, support also must involve tying the rewards to the performance of the entrepreneurial unit. This encourages the team members to work harder and compete more effectively since they will benefit directly from their efforts. Because the corporate venture is a part of the larger organisation and not a totally independent unit, the equity portion of the compensation is particularly difficult to handle.
- Finally, the organisation needs to implement an evaluation system that allows successful entrepreneurial units to expand and unsuccessful ones to be eliminated. The organisation can establish constraints to ensure that this expansion does not run contrary to the corporate mission statement. Similarly, corporate ventures that fail to show sufficient viability should not be allowed to exist just because of vested interests.

4.7 SUMMARY

This chapter is the second of the two literature review chapters. The main purpose of this chapter was to discuss findings of a literature review on the constructs of an entrepreneurial climate.

Firstly the terms organisational culture and organisational climate was discussed to determine the definition of each and to establish the relationship if any between the two terms.

According to the reviewed literature, a corporate entrepreneurial climate comprises of 13 constructs or dimensions, which include inter alia visionary leadership; management support; sponsors; tolerance for risks, mistakes and failure; innovation and creativity; appropriate rewards and reinforcement; vision and strategic intent; discretionary time and work; empowered teams, multi-disciplined teamwork and diversity; resource availability; continuous learning and cross-functional learning; strong customer orientation; as well as workplace autonomy and freedom (including a flat organisational structure).

These constructs should be present in order to implement a corporate entrepreneurial climate successfully in an organisation.

The literature study also included the factors influencing the perceived success of the organisation. These factors were investigated by looking at financial measures, customer/market measures, process measures, people development as well as future (long-term) success of the organisation.

Lastly the literature study on how to establish corporate entrepreneurship in an organisation was discussed and recommendations were made to establish an entrepreneurial climate in a corporate organisation.

CHAPTER 5

EMPIRICAL STUDY ON THE ENTRAPRENEURIAL CLIMATE AT XSTRATA SOUTH AFRICA (PTY) LTD - ALLOYS

5.1 INTRODUCTION

This chapter combines the company background of Xstrata South Africa (Pty) Ltd – Alloys with the literature study discussed in chapters three and four.

The primary objective of this study was to assess the level of corporate entrepreneurship in the South African alloy mining environment, with specific reference to Xstrata Alloys and to make recommendations on the encouragement and promoting of a climate conducive to corporate entrepreneurship in Xstrata South Africa (Pty) Ltd - Alloys.

The empirical study was conducted by means of a self-completion questionnaire administered to middle managers in Xstrata South Africa (Pty) Ltd – Alloys. The questionnaire was distributed to respondents by e-mail or in hard copy format. The questionnaire was constructed by Oosthuizen (2006) and adapted by Jordaan (2008).

Refer to Annexure A for an example of the questionnaire.

This chapter provides insight into the methods used in gathering the information for the empirical research of this study, the sample used (including the sampling method and size), the demographic framework of the population, the method used for gathering information, the presentation and discussion of the research results.

5.2 GATHERING OF DATA

Participants had to follow the instructions, complete the survey by highlighting or marking the appropriate box they selected with an "X", and return it to the sender via e-mail, facsimile or in hard copy format.

The details regarding the gathering of data will be discussed in this section.

5.2.1 Study population

In this study the survey population is made up of 252 middle managers at Xstrata South Africa (Pty) Ltd – Alloys. The identifying of the population for the study entailed a name list of all the permanently employed middle managers. This list was obtained from the Human Resources department at head office. This list furthermore included the job levels of incumbents. Due to confidentiality restrictions this list will not be included as an annexure in this research document.

The levels of management in Xstrata South Africa (Pty) Ltd – Alloys encompass:

- Top management salary band F (Patterson grading).
- Senior management salary band E (Patterson grading).
- Middle management salary band D (Patterson grading).

The study population consisted of middle managers working in various functional departments such as processing and smelting, mining, human resources and human resource development, information technology and business systems, finance, engineering and administration department. A category "other" was also included in the questionnaire to accommodate middle managers working in departments other than the listed departments.

All general managers in the chrome and head office divisions of Xstrata Alloys granted permission for the study to be conducted in their operational units. The questionnaires were thus distributed to all of the 252 middle managers employed in

the chrome and head office divisions of Xstrata Alloys. Formal permission from general managers in the vanadium and platinum divisions were not received in time for distribution of the questionnaires to the 79 middle managers in these divisions.

5.2.2 Questionnaire used in this study

In order to confirm and substantiate the outcomes of the literature review and to assess corporate entrepreneurship in Xstrata South Africa (Pty) Ltd – Alloys a structured questionnaire was used. Oosthuizen (2006:130-146) conducted a comprehensive literature study on the characteristics of an entrepreneurial climate in terms of corporate organisations. He identified 13 themes or constructs that seem necessary for an entrepreneurial climate in corporate organisations. Based on the literature study, Oosthuizen (2006) constructed a questionnaire. This questionnaire was adapted by Jordaan (2008). The version of the questionnaire used in this study was also adapted, and a section measuring the perceived success of the organisation was added.

The questionnaire consists of three parts, namely:

Part 1: Assessment of the entrepreneurial climate

The purpose of this part is to assess the current entrepreneurial climate in the organisation. The measuring instrument assessed the 13 constructs of a climate conducive to corporate entrepreneurship with 65 statements on the basis of a 5-point Likert type scale ranging from Strongly Disagree (1) to Strongly Agree (5). In respect of each statement, subjects have to indicate the degree to which they agree or disagree with a certain statement.

Part 2: Measuring the success of the organisation

In this section, 17 items were identified to measure the perceived success of the organisation in terms of financial, customer or market, process, people development and long term success. In respect of each item, respondents have to indicate the degree to which they agree or disagree with a certain statement.

Part 3: Demographical information

Demographical information was gathered in order to draw correlations between the demographical information and the results obtained from the entrepreneurial climate survey as well as the perceived success of the company. Participants had to indicate their age group, gender, race, highest academic qualification and functional department in which they work.

5.2.3 Confidentiality

Confidentiality was ensured for each participant. No individual results were or will be made available, and even whether or not respondents chose to complete the questionnaire will not be disclosed in order to ensure anonymity.

5.2.4 Statistical analysis of data

Data collected during the survey was analysed by the Statistical Consultation Services of the North-West University (Potchefstroom-Campus) using Statistica (Statsoft, 2008) and SPSS (SPSS, 2008). In this study frequency distributions will be portrayed graphically with the form of histograms and bar charts. The mean will be employed as measure of central tendency and the standard deviation to indicate dispersion of data.

The relationship between the 13 factors was examined by means of Pearson's correlation analysis. Thereafter, the association between the demographic variables and the variables was explored by means of paired tests and effect sizes.

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

5.3 RESPONSES TO THE SURVEY

In Table 5.1 a tabular presentation is given of the responses to the survey.

Table 5.1: Responses to the survey

Response type	Frequency	Percentage
Number of questionnaires distributed	252	100%
Number of questionnaires returned	105	41.67%
Number of questionnaires discarded	2	0.79%
Number of questionnaires analysed	103	40.87%

A total of 252 questionnaires were sent to respondents in the chrome and head office division, and 105 were returned by the cut off date of 21 August 2009. The response rate was thus 41.67%, but only 40.87% of the questionnaires distributed could be analysed. Top managers at the chrome and head office operational units supported the survey. Two questionnaires had to be discarded since those respondents completed only one section of the questionnaire. Ultimately 103 questionnaires were analysed.

5.4 DEMOGRAPHIC INFORMATION OF RESPONDENTS

Part 3 of the survey questionnaire consisted of demographical information where respondents had to indicate their age group, gender, race (according to South African race classification), highest academic qualification and functional department they work in.

5.4.1 Gender of respondents

In this question the split between male and female participating middle managers was determined as indicated in table 5.2.

Table 5.2: Gender of respondents

Gender	Frequency	Percentage
Male	71	69.90%
Female	30	29.13%
Missing information	1	0.97%
Total	103	100%

Of the 103 respondents who completed the questionnaire, 71 (69.9%) were male respondents and 30 (29.13%) were female respondents. One respondent did not indicate his/her gender.

5.4.2 Racial group classification of respondents

Respondents were requested to indicate their racial group according to the South African racial group classification. Table 5.3 indicates the frequency distribution per race group.

Table 5.3: Race group classification of respondents

Racial group	Frequency	Percentage
Asian	4	3.88%
Black	19	18.45%
Coloured	1	0.97%
White	78	75.73%
Missing information	1	0.97%
Total	103	100%

The majority of the respondents are white (75.73%) while 19 (18.45%) respondents are black. Only four (3.88%) Asian and one (0.97%) Coloured middle managers participated in this study. One respondent did not indicate his/her racial group.

5.4.3 Age group classification of respondents

The purpose of this question was to understand the age distribution of respondents, as for example a group closer to retirement (60+) could have different views than the group of 29 and younger. Respondents were requested to indicate their age group in one of the predetermined categories. The results of the age group classification of the participating respondents are presented in table 5.4.

Table 5.4: Respondents by age group

Age group	Frequency	Percentage
29 and younger	11	10.68%
Between 30 and 39	46	44.66%
Between 40 and 49	31	30.10%
Between 50 and 59	13	12.62%
60 and older	2	1.94%
Total	103	100%

The majority of the participating respondents fall in the age group category 30 to 39 (44.66%) years old and 40 to 49 (30.10%) years old respectively. These two age group categories amount to 74% of the total responses. All respondents completed this question.

5.4.4 Highest academic qualification achieved by respondents

The purpose of this question was to determine the respondents' highest academic qualification in order to establish the relationship between level of qualification and corporate entrepreneurship. The ability to manage, operate and sustain an entrepreneurial climate is very complex, and an entrepreneur's educational background could play an important role in this regard.

Table 5.5 presents the highest academic qualification achieved by the participating respondents.

Table 5.5: Highest academic qualification achieved by respondents

Qualification group	Frequency	Percentage
Lower than grade 12	2	1.94%
Grade 12	9	8.74%
National Certificate	12	11.65%
National Diploma	30	29.13%
Degree	16	15.53%
Post graduate degree	28	27.18%
Missing information	6	5.83%
Total	103	100%

The largest group (71.84%) of respondents had obtained a qualification in the qualification groups higher than a National Certificate (which includes the National Diploma, Degree and Post graduate degree groups). Respondents with a National Diploma or equivalent qualification constitute the single largest group (30) of the sample and they account for 29.13%. The second largest group (28) possess a post graduate degree and they constitute 27.18% of the sample. Six respondents did not indicate their qualifications.

5.4.5 Functional departments

Respondents from different functional departments deal with different types of challenges on a day-to-day basis. The different working conditions might have an effect on both the type of person choosing to work there, as well as the presence or absence of an entrepreneurial climate. For this reason, the geographical split was also done according to the functional departments that middle managers work for as indicated in table 5.6.

Table 5.6: Department where respondents are working

Functional department	Frequency	Percentage
Processing/smelting	20	19.42%
Mining	6	5.83%
HR/HRD	9	8.74%
IT/Business systems	5	4.85%
Finance	14	13.59%
Engineering	13	12.62%
Admin	6	5.83%
Marketing/Logistics	11	10.68%
Other	11	10.68%
Missing information	8	7.77%
Total	103	100%

The processing and smelting divisions made up the largest category (19.42%). The other categories were fairly evenly distributed, ranging from 4.85% (Information technology and business systems) to 13.59% (Finance department). A total of eight of the respondents (7.77%) did not respond to this item and care should therefore be taken with the interpretation of this data.

5.4.6 Distribution of management level

For the purpose of this study, participating managers were classified as being top (F and E band Patterson grading), middle (D band Patterson grading) or lower level (C5 Patterson grading) managers. Table 5.7 presents the management level of the participating respondents.

Table 5.7: Management level of respondents

Management level	Frequency	Percentage
Top Management (F and E Band)	0	0%
Middle management (D Band)	103	100%
Junior Management (C5)	0	0%
Total	103	100%

Questionnaires were only distributed to employees on middle management level according to the employee information lists received from the human resources department. All respondents (100%) indicated their management level as middle management.

5.5 RELIABILITY OF THE QUESTIONNAIRE

In order to assess the internal consistency between the items in the research instrument, Cronbach alpha coefficients were calculated. The Cronbach alpha coefficient is based on the average correlation of variables within a test (Struwig & Stead, 2004:132). The greater the value of the Cronbach alpha coefficient, the higher the internal consistency and the more reliable the scale used in the study (Struwig & Stead, 2004:133). The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. Nunnally and Bernstein (1994:265) suggest that for acceptable reliability the Cronbach alpha coefficient should be equal or greater than 0.7.

Table 5.8 indicates the Cronbach alpha coefficients of the constructs measuring the entrepreneurial climate and perceived success of the organisation.

Table 5.8: Cronbach alpha coefficients of construct (ranked in order of value size)

No	CONSTRUCT	n
CONSTRUCTS MEASURING ENTREPRENEURIAL CULTURE		
12	Customer orientation	0.864
10	Resource availability and accessibility	0.852
3	Champions and sponsors	0.824
6	Appropriate rewards and reinforcement	0.817
9	Empowered teams	0.815
1	Entrepreneurial leadership	0.803
7	Vision and strategic intent	0.802
11	Continuous and cross-functional learning	0.783
13	Flat organisational structure	0.738
5	Innovation and creativity/new ideas encouraged	0.737
2	Management support	0.701
4	Tolerance of risks, mistakes and failure	0.654
8	Discretionary time and work	0.650
PERCEIVED SUCCESS OF THE ORGANISATION		
4	People development	0.850
2	Customer/market measures	0.793
3	Process measures	0.738
1	Financial measures	0.634
5	Future (long term) success	0.405

The results as indicated in table 5.8 suggest that the research instrument used in this study to access the corporate entrepreneurial climate within Xstrata South Africa (Pty) Ltd – Alloys, has acceptable reliability, since only two of the constructs, i.e. **discretionary time and work** (0.650) and **tolerance of risks, mistakes and failure** (0.654), had a lower Cronbach alpha coefficient than 0.7. For the purpose of this study, both the discretionary time and work construct and the tolerance of risks,

mistakes and failure construct will be included in the research since the Cronbach alpha coefficients of these two constructs is close to 0.7 as confirmed by Nunnally and Bernstein's (1994:265) view.

In terms of the constructs measuring the perceived success of the organisation, two of the variables i.e. **financial measures** (0.634) and **future (long term) success** (0.405), had a lower Cronbach alpha coefficient than 0.7. For the purpose of this study, the financial measures variable will be used since it is close enough to 0.7 to be acceptable, but the future success variable will be excluded from the rest of this study since the Cronbach alpha coefficient is too low.

5.6 ASSESSMENT OF THE ENTREPRENEURIAL CLIMATE

5.6.1 Variables measuring entrepreneurial climate

Now that the reliability of the statements relating to the 13 constructs has been established, the results can be scrutinised.

As previously discussed, a Likert scale was used to evaluate the sixty-five statements. In respect of each statement, respondents had to indicate their degree of agreement (5) or disagreement (1) with the statement's content. Thus a higher number representing disagreement with the statement suggests that the statement is perceived to be untrue. Likewise a low number representing agreement with the statement suggests that the statement is perceived to be true.

In a normal distribution, the majority of values lie within an interval of plus and minus one standard deviation above and below the mean. The more dispersed the data, the larger the standard deviation (Levine *et al.*, 2006:118). The results of the means analysis for the 13 constructs are presented in table 5.9.

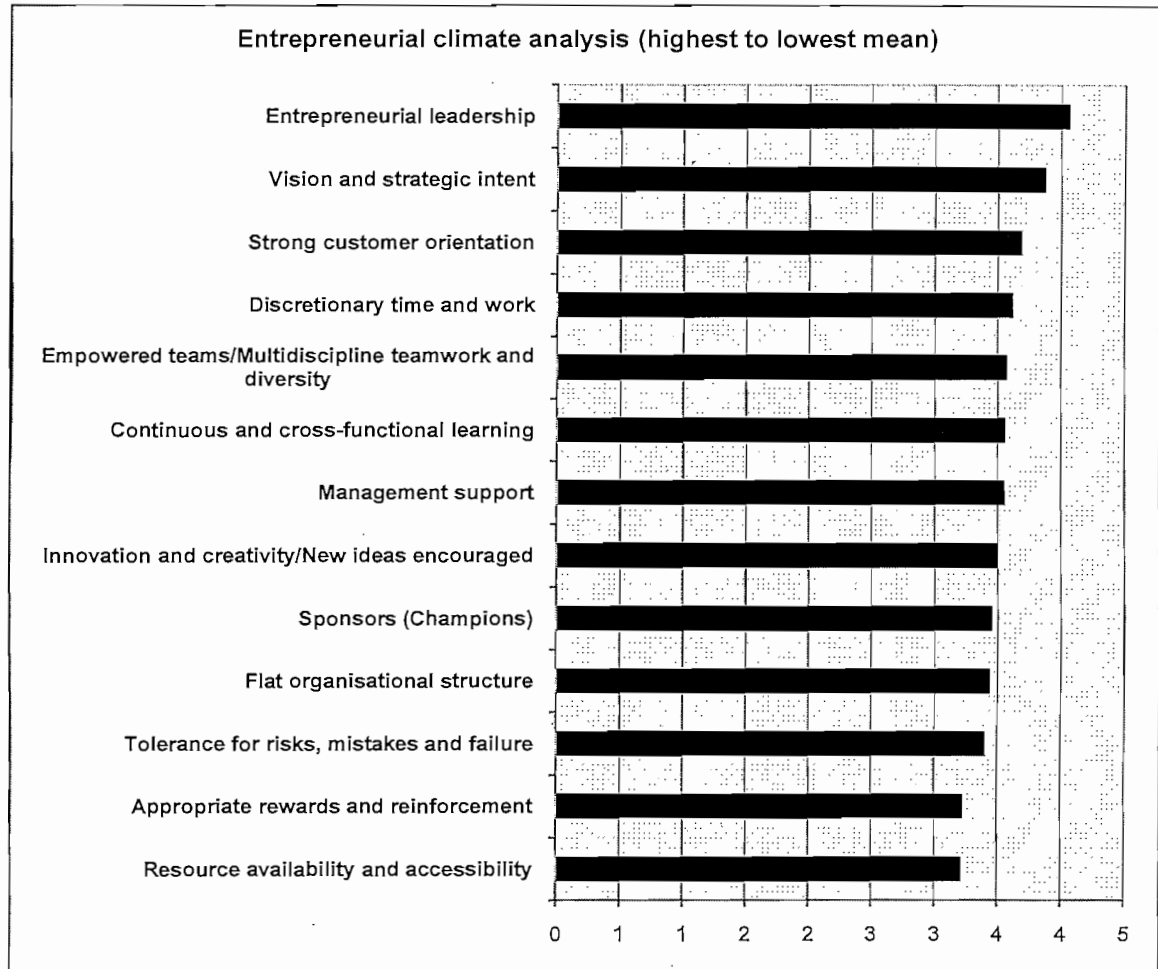
Table 5.9: Entrepreneurial climate survey results

CONSTRUCT		n	mean	s
1	Entrepreneurial leadership	103	4.066	0.730
2	Management support	103	3.558	0.683
3	Champions and sponsors	103	3.460	0.814
4	Tolerance of risks, mistakes and failure	103	3.407	0.696
5	Innovation and creativity/new ideas encouraged	103	3.508	0.788
6	Appropriate rewards and reinforcement	103	3.231	0.879
7	Vision and strategic intent	103	3.882	0.751
8	Discretionary time and work	103	3.622	0.708
9	Empowered teams	103	3.578	0.768
10	Resource availability and accessibility	103	3.217	0.844
11	Continuous and cross-functional learning	103	3.566	0.829
12	Customer orientation	103	3.694	0.820
13	Flat organisational structure	103	3.444	0.833
Average		103	3.556	0.627

The average mean of all constructs as evaluated by managers was $\bar{x} = 3.556$, indicating that the prevalence of corporate entrepreneurship constructs within Xstrata South Africa (Pty) Ltd – Alloys as being three and a half out of five on the Likert scale. It would seem that the constructs for an entrepreneurial climate has a fairly strong presence, but there are still room for improvement.

The results of the survey are graphically represented in a clustered bar chart in figure 5.1 that compare the values across the constructs ranked from the highest to lowest mean score.

Figure 5.1: Entrepreneurial climate analysis



Six of the 13 constructs, **Resource availability and accessibility** ($\bar{x} = 3.217$), **Appropriate rewards and reinforcement** ($\bar{x} = 3.231$), **Tolerance for risks, mistakes and failure** ($\bar{x} = 3.407$), **Flat organisational structure** ($\bar{x} = 3.444$), **Sponsors (Champions)** ($\bar{x} = 3.460$) and **Innovation and creativity/New ideas encouraged** ($\bar{x} = 3.508$) evaluated had a mean below the average mean ($\bar{x} = 3.556$), but all of the constructs still had a mean above three out of five.

The other seven constructs being **Management support** ($\bar{x} = 3.558$), **Continuous and cross-functional learning** ($\bar{x} = 3.566$), **Empowered teams/Multidiscipline teamwork and diversity** ($\bar{x} = 3.578$), **Discretionary time and work** ($\bar{x} = 3.622$), **Strong customer orientation** ($\bar{x} = 3.694$), **Vision and strategic intent** ($\bar{x} = 3.882$) and **Entrepreneurial leadership** ($\bar{x} = 4.066$) evaluated had a mean ranked higher

than the average mean of 3.556. The two constructs with the highest mean were **Vision and strategic intent** ($\bar{x} = 3.882$) and **Entrepreneurial leadership** ($\bar{x} = 4.066$).

5.6.2 Variables measuring the perceived success of the organisation

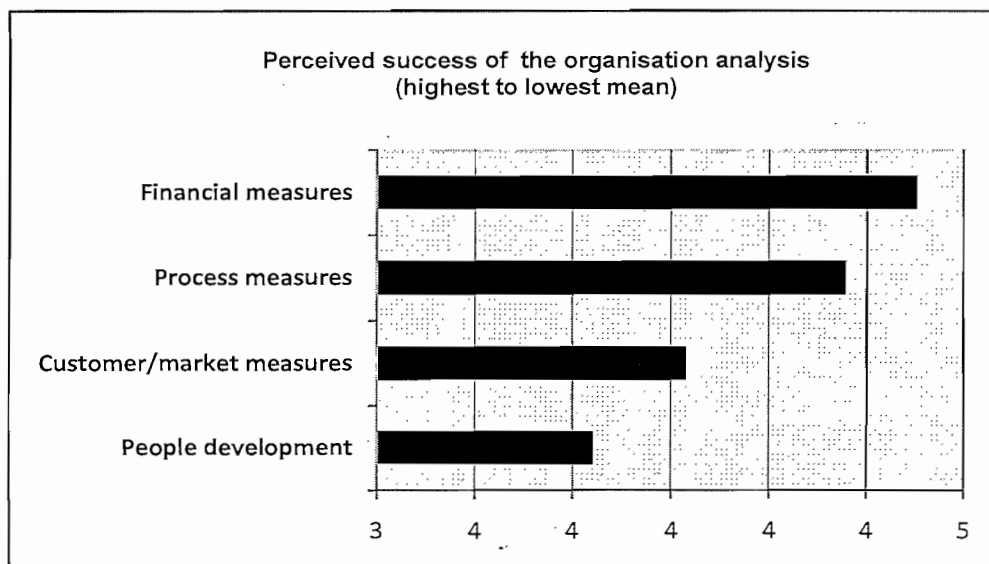
The results of the means analysis of the variables determining the perceived success of an organisation are presented in table 5.10. The variable future success was excluded due to a too low Cronbach alpha coefficient as discussed in section 5.5.

Table 5.10: Perceived organisational success survey results

VARIABLE		n	mean	s
1	Financial	103	4.505	0.546
2	Customer/market	103	4.032	0.603
3	Process	103	4.358	0.652
4	People development	103	3.843	0.916
Average		103	3.556	0.627

The results of the survey are graphically represented in a clustered bar chart in figure 5.2 that compare the values across the constructs ranked from the highest to lowest mean score.

Figure 5.2: Perceived success of the organisation



All five of the variables measuring the perceived organisational success were reported by respondents to have a mean above three. The average mean is $\bar{x} = 4.092$. The construct **People development** ($\bar{x} = 3.843$) obtained the lowest average score, but are still above the being three and a half out of five on the Likert scale. It would seem that the constructs for an entrepreneurial climate has a fairly strong presence, but there are still room for improvement regarding people development.

The constructs **Customer/market measures** ($\bar{x} = 4.032$), **Process measures** ($\bar{x} = 4.358$) and **Financial measures** ($\bar{x} = 4.505$) yielded relative high means, and is indicative of a relative strong presence of an entrepreneurial climate.

The following is an exposition of the variables determining the respondents' perceived success of the organisation:

Financial measures ($\bar{x} = 4.505$; $s = 0.546$). Almost all middle managers were of the opinion that the organisation has experienced growth in turnover, profits and market share over the past few years.

Process measures ($\bar{x} = 4.358$; $s = 0.652$). Managers were of the opinion that the competitive position of the organisation has improved over the past few years; this is a result of the improvement of the efficiency and effectiveness of the organisation.

Customer/market measures ($\bar{x} = 4.032$; $s = 0.603$). Managers indicated that the organisation take good care of their customers, the organisation has a high customer retention rate keeping customers' needs in mind, and customers are relatively satisfied with the organisation's product/service offerings. This may lead to relative loyal customers.

People development ($\bar{x} = 3.843$; $s = 0.916$). Managers pointed out that although employees are not always viewed as the most valuable asset of the organisation, they are relatively committed to the organisation. The job satisfaction did improve marginally over the past few years.

5.7 RELATIONSHIP BETWEEN DEMOGRAPHIC VARIABLES AND ENTREPRENEURIAL CONSTRUCTS INCLUDING THE PERCEIVED SUCCESS OF THE ORGANISATION

In order to test for statistical significance, the independent (two-sample) *t*-test was used. The results of this test are *p*-values. For the purpose of this study, the simple conservative approach was applied and the *t*-test that does not assume equal variances was used (Elliott & Woodward, 2007:59).

A small *p*-value, for example smaller than 0.05, indicates significance (Ellis & Steyn, 2003:51). However, Ellis and Steyn (2003:51) caution against the drawback of using the *p*-value, being that larger sample sizes tend to result in smaller *p*-values without necessarily indicating statistical significance.

In order to overcome the effect of the sample size on the *p*-value, the *d*-value will also be calculated. For the purpose of this study, the effect sizes/*d*-values 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 large effects can be regarded as visible effects and with *d* ≥ 0.8 as practically significant, since it is the result of having a large effect (Field, 2005:32; Ellis & Steyn, 2003:51-53).

For the purpose of this study, the demographical data are classified according to the following categories: **Gender:** male; female and **Race:** white; black (includes Blacks, Coloureds and Asians).

5.7.1 RELATIONSHIP BETWEEN DEMOGRAPHIC VARIABLES AND ENTREPRENEURIAL CONSTRUCTS

The purpose of the analysis to determine the relationship between demographic variables and entrepreneurial constructs is to determine if there is a significant difference between the evaluations based on the mean score for instance male and female respondents with regard to a specific construct.

The relationship between the demographical variables and the 13 constructs were examined by independent t-tests and effect sizes. The demographical factors used were the gender classification of respondents, race classification of respondents and the age of the respondents.

5.7.1.1 Relationship between entrepreneurial constructs and the gender of respondents

Table 5.11 indicates the relationship between the 13 constructs measuring entrepreneurial climate and the demographic variable gender, with mean ($\bar{x}$), standard deviation (s), t-test (p) and effect sizes (d).

Table 5.11: Relationship between the construct measuring entrepreneurial climate and the demographic variable gender

Construct		GENDER							
		Male			Female			Comparison	
		n	$\bar{x}$	s	n	$\bar{x}$	s	p	d
1	Leadership	72	4.119	0.738	30	3.972	0.698	0.342	0.200
2	Support	72	3.606	0.665	30	3.463	0.729	0.362	0.195
3	Sponsor	72	3.557	0.830	30	3.248	0.748	0.071	0.372
4	Risk tolerance	72	3.376	0.739	30	3.482	0.597	0.450	0.143
5	New ideas	72	3.556	0.777	30	3.425	0.815	0.458	0.160
6	Rewards	72	3.299	0.873	30	3.111	0.881	0.331	0.213
7	Vision	72	3.950	0.755	30	3.747	0.728	0.209	0.269
8	Discretionary time	72	3.662	0.682	30	3.513	0.777	0.367	0.191
9	Teams	72	3.567	0.780	30	3.613	0.763	0.784	0.059
10	Resources	72	3.276	0.787	30	3.122	0.951	0.436	0.163
11	Cont. learning	72	3.673	0.804	30	3.340	0.847	0.072	0.393
12	Customer service	72	3.683	0.841	30	3.757	0.767	0.671	0.087
13	Flat structure	72	3.477	0.816	30	3.387	0.891	0.634	0.101

None of the *p*-values are smaller than 0.05. This indicates that men are not statistically significantly more positive than women regarding the any of the 13 constructs of an entrepreneurial climate.

When taking the *d*-values into account, which means that the sample size does not distort the results, it can be seen that in all instances the effect sizes are too small to

be of any practical significance since none of the effect sizes even came close to a medium effect (d -value = 0.5).

5.7.1.2 Relationship between entrepreneurial constructs and the race of respondents

Table 5.13 indicates the relationship between the 13 constructs measuring entrepreneurial climate and the demographic variable race (black and white), with mean ($\bar{x}$), standard deviation (s), t -test (p) and effect sizes (d).

Table 5.12: Relationship between the construct measuring entrepreneurial climate and the demographic variable gender

		RACE							
		Black			White			Comparison	
Construct		n	$\bar{x}$	s	n	$\bar{x}$	s	p	d
1	Leadership	24	3.767	0.923	78	4.163	0.641	0.059	0.430
2	Support	24	3.467	0.743	78	3.594	0.667	0.459	0.171
3	Sponsor	24	3.329	0.889	78	3.503	0.796	0.396	0.196
4	Risk tolerance	24	3.252	0.800	78	3.454	0.663	0.268	0.253
5	New ideas	24	3.367	0.999	78	3.561	0.714	0.3833	0.195
6	Rewards	24	3.083	0.900	78	3.290	0.871	0.329	0.229
7	Vision	24	3.883	0.823	78	3.895	0.727	0.951	0.011
8	Discretionary time	24	3.525	0.827	78	3.660	0.671	0.472	0.163
9	Teams	24	3.577	0.852	78	3.585	0.749	0.967	0.010
10	Resources	24	3.156	0.854	78	3.246	0.846	0.651	0.105
11	Cont. learning	24	3.488	0.906	78	3.610	0.793	0.556	0.135
12	Customer service	24	3.688	0.989	78	3.705	0.770	0.937	0.018
13	Flat structure	24	3.333	0.968	78	3.487	0.793	0.485	0.158

The p -values are all larger than 0.05, which indicate that whites are not statistically more positive than blacks regarding any of the constructs of an entrepreneurial climate. Only in terms of the construct **leadership** (with a p -value of 0.059) are whites relative significantly more positive than blacks.

In all instances the effect sizes are too small to be of any practical significance since none of the effect sizes had a large effect (d -value = 0.8). The variable **Entrepreneurial leadership** (d -value = 0.430) had a medium effect. Meaning the

visible difference in the perception of whites was slightly more positive than the perception of blacks with regard to this construct.

5.7.2 RELATIONSHIP BETWEEN DEMOGRAPHIC VARIABLES AND THE PERCEIVED SUCCESS FACTORS OF AN ORGANISATION

5.7.2.1 Relationship between perceived success factors and the gender of respondents

Table 5.12 indicates the relationship between the factors measuring the perceived success of the organisation and the demographic variable gender, with mean ($\bar{x}$), standard deviation (s), *t*-test (*p*) and effect sizes (*d*).

Table 5.13: Relationship between the factor measuring the perceived organisational success and the demographic variable gender

		GENDER							
		Male			Female			Comparison	
Factor		n	$\bar{x}$	s	n	$\bar{x}$	s	p	D
1	Financial	72	4.482	0.565	30	4.5444	0.507	0.583	0.111
2	Customer market	72	4.046	0.621	30	3.967	0.544	0.523	0.127
3	Process	72	4.363	0.678	30	4.344	0.610	0.890	0.028
4	People develop	72	3.896	0.865	30	3.744	1.038	0.485	0.146

None of the *p*-values are smaller than 0.05. This indicates that men are not statistically significantly more positive than women regarding any of the factors indicating perceived success of the organisation.

When taking the *d*-values into account, which means that the sample size does not distort the results, it can be seen that in all instances the effect sizes are too small to be of any practical significance since none of the effect sizes even came close to a medium effect (*d*-value = 0.5). None of the effect sizes even indicated a small effect (*d*-value = 0.2).

5.7.2.2 Relationship between perceived success factors and the race of respondents

Table 5.14 indicates the relationship between the factors measuring the perceived success of the organisation and the demographic variable race (black and white, with mean ($\bar{x}$), standard deviation (s), *t*-test (*p*) and effect sizes (*d*).

Table 5.14: Relationship between the factor measuring the perceived organisational success and the demographic variable race

Factor		RACE							
		Black			White			Comparison	
		n	$\bar{x}$	s	n	$\bar{x}$	s	p	D
1	Financial	24	4.375	0.559	78	4.547	0.542	0.192	0.308
2	Customer market	24	3.964	0.687	78	4.053	0.582	0.567	0.130
3	Process	24	4.236	0.684	78	4.404	0.641	0.294	0.245
4	People develop	24	3.708	1.013	78	3.889	0.892	0.438	0.181

None of the *p*-values are smaller than 0.05. This indicates that whites are not statistically significantly more positive than blacks regarding any of the factors indicating perceived success of the organisation.

When taking the *d*-values into account, which means that the sample size does not distort the results, it can be seen that in all instances the effect sizes are too small to be of any practical significance since none of the effect sizes even came close to a large effect (*d*-value = 0.8). The factor **Financial measures** (*d*-value = 0.308) had a small to medium effect, and the factor **Process measures** (*d*-value = 0.245) had a small effect.

5.8 SUMMARY

The empirical study, detailed in this chapter, used a survey questionnaire to investigate the 13 constructs of an entrepreneurial climate in an organisation, as well as five factors evaluating the perceived success of an organisation. The sample size for the study consisted of the whole study population, since the research questionnaire was distributed to all middle managers in the population. 105 of the

questionnaires were returned, and in the end 103 of the questionnaires were analysed.

The demographic information of the respondents were analysed in terms of gender (71 males and 30 females), race (4 Asian, 19 black, 1 coloured and 78 white), age group ($\leq 29 = 11$, $30-39 = 46$, $40-49 = 31$, $50-59 = 13$, $60+ = 2$), highest qualification (74 of respondents obtained a qualification above a national certificate level) and the functional departments the middle managers are working in (relative evenly distributed, from the highest of 20 in the processing/smelting departments to the lowest of 5 in the IT related departments).

Cronbach's alpha coefficient values were used to determine the internal consistency amongst items in the research instrument. In only three of the constructs' alpha values of less than α -value = 0.8 were calculated, indicating a relatively high level of internal reliability of the research instrument.

An assessment of the corporate entrepreneurial climate in Xstrata SA (Pty) Ltd – Alloys was conducted and the average mean for the study calculated. The means of six constructs were lower than the average mean ($\bar{x} = 3.556$) while seven constructs were ranked higher. The two constructs with the highest mean were **Vision and strategic intent** ($\bar{x} = 3.882$) and **Entrepreneurial leadership** ($\bar{x} = 4.066$).

The future success variable measuring the perceived success of the organisation was excluded from the rest of this study since the Cronbach alpha coefficient is too low (0.405). The variables measuring the perceived organisational success were reported by respondents to have a mean above three. The average mean was $\bar{x} = 4.092$.

An analysis was done to determine the relationship between demographic variables and responses regarding the 13 corporate entrepreneurial constructs as well as the variables measuring the perceived organisational success was conducted. The effect of gender and race on the responses regarding the 13 corporate entrepreneurial constructs as well as the variables measuring the perceived

organisational success was analysed and effect sizes and practical significance were determined. In all instances the effect sizes were too small to be of any practical significance since none of the effect sizes had a large effect (d -value = 0.8).

In the next chapter conclusions will be drawn from the findings discussed in this chapter and recommendations will be made on how to foster a corporate entrepreneurial climate within Xstrata SA (Pty) Ltd – Alloys.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter discuss the implications of the findings of the empirical research as presented in chapter 5.

This is the final chapter on the assessment of the corporate entrepreneurial climate in Xstrata South Africa (Pty) Ltd – Alloys consisting of two sections. In the first section of the chapter, conclusions will be drawn from the results of the literature study and the findings of the empirical study. Keeping the primary and secondary objectives in mind as formulated in chapter 1, the discussion focuses on findings of the assessment of the current corporate entrepreneurial climate in Xstrata South Africa (Pty) Ltd – Alloys.

Conclusions will be drawn pertaining to the empirical research conducted and the statistical analysis results as discussed in chapter 5. Further more the relevance of relationships between demographic variables such as age, gender, race, highest academic qualification, managerial level, functional department and constructs of the corporate entrepreneurial climate and perceived organisational success will be illustrated.

Now that the current state of affairs regarding corporate entrepreneurial activity within Xstrata South Africa (Pty) Ltd – Alloys is clear, the question is how to get from the present state to an even more desirable future state of an organisation characterised by an environment conducive to corporate entrepreneurial activity that will enhance competitiveness. Moving from the current state to the future one will of course imply a process of planned change and a mind shift from all stakeholders within the organisation.

The second section of the chapter will contain proposals and guidelines on the fostering of a corporate entrepreneurial climate within Xstrata South Africa (Pty) Ltd – Alloys.

6.2 CONCLUSIONS

Conclusions will follow the basic structure of the questionnaire, and will firstly address the basic demographic information, followed by an evaluation of the Cronbach Alpha coefficient to establish the reliability of the measurement used for the assessment of the constructs of an entrepreneurial climate as well as the assessment of the factors of the perceived organisational success. Lastly the factors indicating perceived organisational success will be discussed.

6.2.1 Demographic information

Demographic information of respondents was obtained regarding age, gender, racial group, highest academic qualification, management level and functional division. Relationships between gender and racial group distribution and the corporate entrepreneurial constructs as well as the perceived organisational success are discussed in section 6.2.5.

From the results of the survey questionnaire, the following conclusions about demographical information were made:

- The gender representation of middle managers in Xstrata South Africa (Pty) Ltd – Alloys is uneven, with two thirds (69.9%) identified as male, and one third (29.13%) as female.
- Most of the middle managers, who responded to the item on race, are white (75.73%).
- The majority of middle managers are between 30 and 49 years of age, with an almost equal split between managers in the 30 to 39 years range (44.66%) and

managers in the 40 to 49 years range (30.1%). The fact that only 15% of managers are older than 49, is beneficial to Xstrata South Africa (Pty) Ltd – Alloys since it suggests that young people are lured to a career in the organisation which could impact positively on innovativeness in general terms in the organisation.

- The largest group (29.13%) of respondents have a national diploma, with almost a similar portion of the respondents having Post graduate degrees (27.18%). Due to a number of non-responses regarding highest qualification (5.84%), care should be exercised when interpreting findings concerning this variable. The reason for the relative large number of non-responses is not clear, but it may be due to respondents not being willing to indicate their qualifications.
- The respondents are relative evenly spread over several departments with the majority of the middle managers in the processing or smelting (19.42%), finance (13.59%), engineering (12.62%) and marketing or logistics departments (10.68%). 7.77% of the respondents did not indicate their functional department, care should thus also be exercised when interpreting findings concerning the departments respondents are working in.

6.2.2 Reliability of the entrepreneurial climate questionnaire

Following the results of the survey, only two of the constructs measuring entrepreneurial climate obtained a Cronbach Alpha Coefficient calculated below 0.7. Discretionary time and work measured 0.650 and tolerance of risks, mistakes and failure measured 0.654 which is still very close to 0.7. The statements used to test these two constructs need to be investigated further to improve the internal consistency of the questionnaire.

Two of the variables measuring the perceived success of the organisation obtained a Cronbach Alpha Coefficient calculated below 0.7. Financial measures obtained 0.634, and Future (long term) success obtained 0.405. For the purpose of this study,

the financial measures variable was used since it was close enough to 0.7 to be acceptable, but the future success variable was excluded from the rest of the study since the Cronbach alpha coefficient was too low.

Due to the fact that Cronbach alpha coefficient values exceeding 0.8 and higher were recorded concerning seven of the constructs measuring corporate entrepreneurial climate, and one of the variables measuring perceived success of the organisation, it has been concluded that the research instrument used in this study to assess the corporate entrepreneurial climate in Xstrata South Africa (Pty) Ltd – Alloys, has acceptable reliability.

6.2.3 Assessment of the corporate entrepreneurial climate

For the purpose of this discussion, a score of 3.0 on the five point Likert scale (as employed in this study) is regarded as an average score (the mean of a Likert scale from one to five is three). The average mean of all independent constructs as evaluated by middle managers was 3.556 which can be regarded as a just above average score in terms of the five point Likert scale. The average score on the Likert scale (3.000) is used as a benchmark for the purpose of making recommendations. For the purpose of this study, mean scores of $\bar{x} < 3.000$ are interpreted as being indicative of perceptions by middle managers that those constructs have lower than average prevalence in Xstrata South Africa (Pty) Ltd – Alloys and therefore indicates areas that require development. Ranked relative to each other, mean scores of $\bar{x} > 3.000$ are interpreted as being indicative of a higher than average prevalence, identifying areas that could be built on to further enhance the corporate entrepreneurial climate in the organisation. It would seem that the constructs for an entrepreneurial climate has a fairly strong presence, but there are still room for improvement.

Based on the results as discussed in the previous chapter, the current climate in Xstrata South Africa (Pty) Ltd – Alloys is averagely entrepreneurially orientated. Seven of the constructs evaluated had a mean ranked higher than the average mean of 3.556. For the purpose of this study, this indicates a relative strong prevalence of

corporate entrepreneurship constructs within Xstrata South Africa (Pty) Ltd – Alloys since all the constructs had a mean closer to four than to three and this is an indication of a slight agreement with the relevant items.

For practical purposes and for the specific purpose of this study, the conclusions will each be discussed in terms of their average mean score compared as well as the comparison of the mean score of the different statements addressing a specific construct.

Conclusions for each individual construct are:

6.2.3.1 Entrepreneurial leadership

The construct, **entrepreneurial leadership**, received the highest score with $\bar{x} = 4.066$ meaning just more than “slightly agree” with the statement. All statements scored above $\bar{x} = 3.8$. It therefore seems that, from the respondents’ perspective, leaders take a long-term view of our organisation ($\bar{x} = 4.544$) and leaders seek to maximise value from opportunities. The organisation’s value system is furthermore well known and management challenges the status quo. Management also inspires the workforce to think and act in innovative ways. Most of the respondents agreed that the leaders lead by example and people are eager to voluntarily follow them.

6.2.3.2 Management support

The construct, **management support**, obtained a score of $\bar{x} = 3.558$ meaning just less than “slightly agree” but more than “Neither agree nor disagree” and is reported as the seventh highest score, equal to the average mean score of all 13 entrepreneurial constructs ($\bar{x} = 3.556$). The respondents are of the perception that management encourages employees to develop ideas that would improve the organisation and the creation of innovative ideas is a fairly regular occurrence in the organisation. They also agreed that top management is receptive to the employees’ ideas and suggestions and those employees who come up with innovative ideas on their own receive management’s encouragement for their activities.

The weakest score was received by management's ability to bend rules and procedures in order to keep promising ideas on track. This is not surprising, since the organisation has a strong value system which is communicated to all employees during induction training.

6.2.3.3 Sponsors for projects

The construct, **sponsors for projects**, obtained the fifth lowest score ($\bar{x} = 3.460$). All of the statements received a score above $\bar{x} = 3.000$, indicating that respondents perceive this construct as positive. Many of the respondents agreed that the organisation's managers have the skills, commitment and courage to be effective champions of corporate entrepreneurial initiatives.

Respondents slightly agreed that their managers help them to get their work done by removing obstacles in their way. This goes hand in hand with the perception that the organisation has people with influence that support, coach, protect, and find resources for a corporate entrepreneurial project and its team. Originators of new ideas thus find it easy to implement because of the support rendered by influential people within the organisation.

Respondents were fairly neutral in their assessment of the ease to build coalitions of sponsors to help projects succeed within the organisation.

6.2.3.4 Tolerance for risks, mistakes and failure

This construct, **tolerance for risks, mistakes and failure**, obtained the third lowest score ($\bar{x} = 3.407$). All of the statements in this construct obtained a score between $\bar{x} = 3.196$ (lowest) and $\bar{x} = 3.735$ (highest). Respondents edged towards agreeing that the business has been build up by taking calculated risks at the right times, and that the organisation occasionally take big risks to keep ahead of their competitors. Respondents were fairly neutral in their assessment of the value placed on projects involving calculated risk, even when things do not always turn out according to plan, but they were more positive that if they make a mistake in this organisation they will

be forgiven. Average support for small, experimental projects is available. Taking the low average score into consideration, Xstrata SA (Pty) Ltd – Alloys will have to develop an action plan to enhance the tolerance for risks, mistakes and failure in the organisation.

6.2.3.5 Innovation and creativity/New ideas encouraged

The construct, **innovation and creativity**, was ranked eighth and obtained a mean score of $\bar{x} = 3.508$. Respondents slightly agreed that the organisation provides them with the chance to be creative and try out new methods of doing their jobs, the organisation quickly implements these improved work methods. Training is provided to ensure that innovative new processes are implemented effectively and employees are inspired to push their boundaries and to think "out-of-the-box".

Respondents were fairly neutral in their perception of the number of employees at the organisation that are involved in generating and implementing innovative ideas.

6.2.3.6 Appropriate rewards and reinforcement

Given that **appropriate rewards and reinforcements** are one of the best ways in which to shape the desired behaviour of employees, it is concerning that this construct received the second lowest overall rating with a mean score of $\bar{x} = 3.231$. The positive side to this is that although this is the second weakest construct, it was still rated as to be average in comparison with the Likert scale rating definitions.

Individuals implementing successful innovative projects do not regularly receive additional rewards and compensation, nor are effective intrapreneurs generally rewarded.

Respondents slightly agrees with the statements indicating that supervisors will give special recognition if work performance is outstanding, and that employees are rewarded in relation to their job performance. In this organisation recognition rather

than criticism should be emphasised, with specific focus on recognition for entrepreneurial behaviour or activities.

6.2.3.7 Vision and strategic intent

The construct, **vision and strategic intent**, obtained the second highest score with a mean of $\bar{x} = 3.882$. Cognisance should be taken to the fact that all the statements regarding this construct obtained a very high mean score (close to $\bar{x} = 4.000$), except for one statement which received a lower mean score rating of $\bar{x} = 3.505$.

Employees are well informed about the organisational vision and strategies since this forms part of the annual induction each employee receive. Respondents agreed that great effort has been made to clarify what the vision and strategy of the organisation mean to employees in their own departments and this could be communicated during the regular meetings with their managers where information is shared between them. The vision and strategies of the organisation often help employees in setting priorities in their work.

Although employees are well informed regarding the vision and strategies of the organisation and the buy-in from employees into the value system of the organisation is only average compared to the other statements evaluating this construct with a mean score of $\bar{x} = 3.505$.

6.2.3.8 Discretionary time and work

With a mean score of $\bar{x} = 3.622$ the construct, **discretionary time and work**, is ranked fourth of the 13 constructs evaluating the entrepreneurial climate.

Although no one in the organisation is forced to develop new ideas, an employee with a good idea is often given time to develop that idea within working hours and a staff member who has initiated a new project/process is allowed to carry it through to completion/implementation.

The creativity of employees in the organisation is enhanced by allowing employees time at work to explore new ideas and by providing ample opportunities for learning and growth.

6.2.3.9 Empowered teams/Multi-disciplined teamwork and diversity

The construct relating to **empowerment of teams** and the presence of **multi-disciplined teamwork** and diversity was ranked fourth and received a mean score of $\bar{x} = 3.578$, which means that respondents tended to slightly agree with that cross-functional or cross-business unit teams are used effectively.

Although working together in project teams is encouraged in the organisation and cross-functional teams are characterised by diversity based on the skills required by the project, projects do not have enough choice in recruiting and selecting new team members.

6.2.3.10 Resource availability and accessibility

Of all 13 entrepreneurial constructs assessed, **resource availability and accessibility** received the lowest rating with a mean score of $\bar{x} = 3.217$. Although this average mean score is still above the three out of five rating on the Likert scale, it should be evaluated in comparison to the other constructs' mean scores.

The statement with the highest mean score ($\bar{x} = 3.373$) indicating that managers are of the perception that resources are readily accessible in pursuance of new ideas and opportunities, are still well below the average mean of all constructs ($\bar{x} = 3.556$).

It seems as if money is not easily available to get new project ideas off the ground which include the lack of options within the organisation for individuals to get financial support for their innovative projects and ideas.

Middle management perceive the process for accessing and acquiring resources to pursue new opportunities as not streamlined and that it takes time for approval of

resources to be granted. They also feel that it is very difficult to attract resource commitment for entrepreneurial ventures in the organisation.

6.2.3.11 Continuous and cross-functional learning

Continuous learning is rated the sixth strongest construct and with mean score of $\bar{x} = 3.566$ is almost equal to the average means score ($\bar{x} = 3.556$) of all 13 entrepreneurial constructs.

Respondents neither agreed nor disagreed with the statement that people are keen to share knowledge within the organisation; they were also not convinced that employees are encouraged to talk to their colleagues in other departments of the organisation about ideas for new projects.

The statement with the highest mean score ($\bar{x} = 3.660$) evaluating this construct is that employees are encouraged to stay abreast of developments in their functional fields and to share their knowledge with others. The organisation seems to develop their employees, and employees are allowed to attend workshops and seminars to keep them abreast of developments.

The middle managers perceive the openness of communication channels as moderate and they do not think that employees are willing to assist others and share knowledge and skills even if it is not required from them.

6.2.3.12 Strong customer orientation

The construct, **strong customer orientation**, obtained an above average rating of $\bar{x} = 3.694$ and was ranked third. Respondents tend to strongly agree that customers are treated as very important stakeholders ($\bar{x} = 4.200$) and that product and service innovation are driven by a strong customer orientation.

Middle managers neither agree nor disagree with the statement that customers are involved in service and product development ($\bar{x} = 3.534$), and evaluating the

perceptions and opinions of customers regarding the organisation's service and product offerings forms part of their involvement. It seems as if a fairly great deal of resources is spent in determining customer needs and satisfaction.

6.2.3.13 A flat organisational structure and open communication

At 31 August 2009, Xstrata SA (Pty) Ltd – Alloys had a total of 8 148 employees, with a total management team consisting of 458 managers, or only 6% of the work force (information received from the human resources department). This is an indication that the organisation has a very flat organisational structure.

The middle managers rated this construct at number ten, with an average mean score of $\bar{x} = 3.444$ are slightly contradicting the facts reported above. The only statement that received a high mean score is that employees determine their key performance areas in co-operation with their supervisors ($\bar{x} = 3.932$). This is an indication that organisational structures evaluated on paper do not necessarily mean that employees and managers perceive the organisational structures the same as how it was identified on paper.

The only other statements rated above the average mean score of $\bar{x} = 3.556$, are that employees are given ample opportunity for independence and freedom in how they do their work and that they have autonomy to decide how to do their work.

Middle managers were of the perception that people need to go through elaborate justification and approval procedures when making decisions about their work, and that the degree of hierarchical control is relatively high in the organisation.

6.2.4 Assessment of the perceived success of the organisation

The Likert scale was also used to assess how middle managers perceive the successfulness of the organisation. The perceived success of the organisation was evaluated through 17 statements in terms of four variables. The variables identifying

the perceived success of the organisation are financial measures, customer/market measures, process measures and people development.

The average mean score of all five variables is $\bar{x} = 4.092$. This is relative high indicating that respondents agree strongly with the statements. Care should be taken when interpreting the results of the assessment of the perceived results of the organisation since two of the variables measuring the perceived success of the organisation obtained a Cronbach Alpha Coefficient calculated below 0.7. Financial measures obtained 0.634, and Future (long term) success obtained 0.405.

6.2.4.1 Financial measures

With an average mean score of $\bar{x} = 4.505$ this variable was rated the highest of all the organisational success variables. This variable consisted of only three statements.

Respondents agreed very strongly that the organisation has experienced growth in turnover over, growth in profits as well as growth in market share over the past few years.

6.2.4.2 Customer/market measures

This variable consisted of six statements. Customer/market measures was rated third out of five with a mean score of $\bar{x} = 4.032$ which is just below the average mean score of all five variables ($\bar{x} = 4.092$).

Respondents therefore strongly agreed that taking care of customers is the organisation's top priority; the organisation will therefore develop product/services with customers' needs in mind which results in the customers being satisfied with the organisation's product/service offerings.

6.2.4.3 Process measures

With a mean score of $\bar{x} = 4.358$, this variable was ranked second of the four perceived organisational success variables evaluated. Respondents very strongly agreed with the statements that the competitive position, the effectiveness (doing the right things) and the efficiency (doing things right) of the organisation has improved over the past few years

6.2.4.4 People development

The mean score of the variable people development ($\bar{x} = 3.843$) was ranked as the second lowest of the five perceived organisational success variables. Although this is low in comparison to the other variables, it is still above the midpoint of three on the Likert scale rating. The middle managers agreed that employees are viewed as a relative important asset of the organisation. Middle managers perceived the employees as having a moderate to highly commitment towards the organisation, but they did not think that the morale (job satisfaction) of the employees has improved over the past few years.

6.2.5 Relationships between demographic variables and entrepreneurial constructs

Conclusions on the analysis of the significance of relationships between demographic variables such as gender (male versus female) and race (white versus black), and corporate entrepreneurial constructs as well as perceived success of the organisation are indicated below.

If a visible difference in terms of the *d*-value is determined, it would mean that should you split the middle managers into two groups (male and female or black and white) and an outsider were to spend enough time with each group, he/she would be able to tell that a specific group have a more positive view regarding a specific construct or variable than the other group (De Villiers, 2008:164).

6.2.5.1 Relationship between gender and corporate entrepreneurial climate constructs

Based on the results of the analysis regarding the relationship between gender and corporate entrepreneurial climate constructs, it has been concluded that gender does not influence respondents' perceptions of corporate entrepreneurial climate at Xstrata SA (Pty) Ltd – Alloys. In practice the results did not indicate a statistical significant difference ($p < 0.05$) in the mean values between the perceptions of male and females with regard to 12 of the 13 constructs relating to a corporate entrepreneurial climate.

Although male participants rated ten of the 13 constructs as more positive than their female counterparts, the differences were not practical significant for nine of the ten constructs and only a small effect ($d = 0.200$; $d = 0.195$; $d = 0.372$; $d = 0.160$; $d = 0.213$; $d = 0.269$; $d = 0.191$; $d = 0.163$; $d = 0.101$ respectively) could be determined.

The only three constructs in which females responded more positively than men are **tolerance of risks, mistakes and failure** (men had mean score of $\bar{x} = 3.376$ and women $\bar{x} = 3.482$), **empowered teams** (men had mean score of $\bar{x} = 3.567$ and women $\bar{x} = 3.613$) and **customer service** (men had mean score of $\bar{x} = 3.683$ and women $\bar{x} = 3.757$). No visible difference was determined for the constructs as discussed above.

6.2.5.2 Relationship between gender and perceived organisational success variables

The results indicated no statistical significant difference ($p < 0.05$) in the mean values between the perceptions of male and female managers with regard to all the perceived organisational success variables. Females rated financial factors and the customer market higher than the male middle managers. Males rated the process factors and people development in the organisation marginally higher than their female counterparts. The differences were not practical significant and only a small effect ($d = 0.111$; $d = 0.127$; $d = 0.028$; $d = 0.146$ respectively) could be determined.

6.2.5.3 Relationship between race and corporate entrepreneurial climate constructs

Based on the results of the analysis regarding the relationship between racial classification and corporate entrepreneurial climate constructs, it has been concluded that race does not have a practical significant influence on respondents' perceptions of corporate entrepreneurial climate at Xstrata SA (Pty) Ltd – Alloys. The results did not indicate a statistical significant difference ($p < 0.05$) in the mean values between the perceptions of Blacks (including Coloureds and Asians) and Whites with regard to 12 of the 13 constructs relating to a corporate entrepreneurial climate. The results indicated a statistical significant difference ($p < 0.05$) in the mean values between the perceptions of Blacks and Whites with regard to the construct “entrepreneurial leadership” ($p = 0.059$) which if compared to the other mean values and for the purpose of this study is close enough to $p < 0.05$ to be rated as being a statistical significant difference.

Although white participants rated all of the 13 constructs as more positive than their black counterparts, the differences were not practical significant for 13 of the 13 constructs and only a small effect ($d = 0.171$; $d = 0.196$; $d = 0.253$; $d = 0.195$; $d = 0.229$; $d = 0.014$; $d = 0.163$; $d = 0.10$; $d = 0.105$; $d = 0.135$; $d = 0.018$; $d = 0.158$ respectively) could be determined. One of the constructs did have a visible effect if compared to the other effect sizes. The “entrepreneurial leadership” construct had an effect size of $d = 0.430$ which is close to having a medium effect ($d = 0.5$). This indicates that race have a visible effect on the rating of the construct “entrepreneurial leadership”.

6.2.5.4 Relationship between race and perceived organisational success variables

The results indicated no statistical significant difference ($p < 0.05$) in the mean values between the perceptions of black (including asian and coloured) and white managers with regard to all the perceived organisational success variables. White middle

managers rated the perceived organisational success higher than their black counterparts on all four of the perceived organisational success variables analysed. The differences were not practical significant and only a small effect ($d = 0.308$; $d = 0.130$; $d = 0.0245$; $d = 0.178$ respectively) could be determined. In all instances the effect sizes are too small to be of any practical significance since.

6.3 RECOMMENDATIONS

From the conclusions made on the 13 constructs measuring entrepreneurial climate and the five variables (only four analysed) measuring the perceived success of the organisation, it was evident that the overall climate in Xstrata SA (Pty) Ltd – Alloys is relative conducive to entrepreneurial behaviour in the organisation. For even higher levels of corporate entrepreneurship to be established and maintained within the organisation, harmony must exist amongst the organisational climate, the principles underlying corporate entrepreneurship as well as sector specific demands and expectations.

Furthermore, from the literature study it was evident that to create and foster an entrepreneurial climate in any organisation top management's support and commitment is vital.

The corporate entrepreneurial constructs evaluated identified that the following nine areas need special attention to ensure the fostering and enhancing of the current corporate entrepreneurial climate in Xstrata SA (Pty) Ltd – Alloys. All of these areas received a rating of less than $\bar{x} = 3.6$. The areas to be developed are discussed in order from the area that received the lowest mean rating to the area that received the mean rating closest to $\bar{x} = 3.6$.

6.3.1 Resource availability and accessibility

A system should be implemented through which resources are made readily available and accessible to pursue new ideas and opportunities. Specific resources should be allocated (budgeted) to entrepreneurial ventures.

To consider acting in entrepreneurial ways, employees need to perceive resources as assessable for corporate entrepreneurial activities.

Systems should ensure easy access to resources (Jordaan, 2008:121):

- Processes and procedures to access resources should be simplified.
- Capital should be made available in advance to kick-start corporate entrepreneurial efforts.
- Bootstrapping, i.e. doing more with less, should be encouraged.
- Up-to-date technology should be employed to increase productivity levels, and whenever new technology is employed, staff should be afforded the necessary training.

6.3.2 Appropriate rewards and reinforcement

By sharing the information about profits and financial data, Xstrata Alloys can make the employees understand the difference they are making. Based on the organisation's profitability, all employees can form part of a profit sharing plan by for example receiving a profit sharing payment just before Christmas. Although it is very difficult to practically implement a profit sharing plan, and it is not always practically possible, the advantages of profit sharing include:

- Brings employees together to work towards a common goal. Their sole aim will be the success of the company.
- Motivation levels will be high.
- The employee focus will be on profitability.
- Increases commitment to the organization amongst the employees.
- Employee can identify with the company. He or she will feel part of it.
- Bridges the gap between the employee and employer.
- Promotes the well-being of the employee.

- Additional income for the employee to lead a comfortable life. If he or she is comfortable in personal life, then his or her performance at work will also be good.

Employees should be appropriately recognised and rewarded in relation to their job performance and the value added to the organisation (Van der Merwe & Oosthuizen, 2008:17). The evaluation system used to measure performance should reinforce corporate entrepreneurial behaviour (Jacobs & Kruger, 2001:5). Rewards should be a function of the level of individual performances and the attainment of performance objectives.

A remuneration system comprising of a mixture of fixed salary and incentives is proposed (Kuratko *et al.*, 2001:62). Although this is implemented by some operational units and in some of the management levels, care should be taken to ensure that incentives are not only “performance based” (production based) but flexibility should be build in to the reward system to also cater for activities enhancing the corporate entrepreneurial climate in the organisation.

Reward systems, both positive and negative, can be especially useful as ways of reinforcing the values and behaviours that an organisation needs to be successful in implementing the chosen strategy. A key step in any reward system is the evaluation system used to measure an individual's performance (Thompson, Fulmer & Strickland, 1992:446).

6.3.3 Tolerance for risks, mistakes and failure

Xstrata Alloys should allow employees to take calculated risks and practical experimentation. To be able to implement this, employees will have to be developed in the process of taking calculated risks, and employees should be part of a mentoring system to first guide them in the risk taking process. Mistakes should be accepted and viewed as part of a learning process. Managers should share risks and rewards with employees, this implies that individuals and teams could lose in

terms of bonuses, freedom, research support or other resources if projects fail or under perform, and they are rewarded well when projects are highly successful.

To bring buy-in from employees into the value system of the organisation, alignment of the different value systems should take place, and identification of a few dominant values, which can include innovation, risk taking and tolerance for failure, should be brought about. Top management should stress the fact that mistakes would be tolerated within the organisation in the quest for creativity without risking the safety of employees.

6.3.4 Flat organisational structure

Covin and Slevin (1991:18) have noted that an 'appropriate' structure for a firm with an entrepreneurial posture will often include decentralisation of decision-making authority, minimal hierarchical levels or structural layers, free-flowing communication channels, and closely integrated research and development, manufacturing and marketing functions. Drucker (1994:101) has observed that "the simplest organisation structure that will do the job is the best one".

Top management should practice decentralisation of powers, which help in the reduction of decision making levels.

The organisational structure should allow for a free-flow of ideas and participation from employees, it should thus facilitate the process of employee empowerment.

Xstrata Alloys should communicate and educate employees on the decentralisation of focused profit centres (operational units) in each commodity business. Employees do not seem to be aware of the extend of decentralisation in Xstrata Alloys.

Devolution of power or "entrepreneurial autonomy" should be emphasised, allowing employees more freedom to manage their budgets and their projects (Bellone & Goerl, 1992:131). This freedom should include accountability. Employees should

have the autonomy to take their own decisions about following their ideas, but should still update top management about their decisions.

6.3.5 Sponsors (Champions)

Xstrata Alloys should have sponsors who champion, coach, protect and marshal resources for corporate entrepreneurial endeavours.

Burgelman (1983:1353) stresses the importance of the middle-level "manager champion" in addition to the more familiar operational-level "product champion" role in implementing a new business idea. Supervisors' fear of losing control over employees who are entrepreneurial should be put to rest.

A support structure is very important, especially since corporate entrepreneurship is unlikely to be the primary activity and focus area. If proper support is not in place, the entrepreneurial effort is more likely than not to die off. A mentorship program would be a good overlap in building the proper support structure.

6.3.6 Innovation and creativity/New ideas encouraged

Top management should provide support for small experimental projects, and innovation should be included in leadership development programmes (Van der Merwe & Oosthuizen, 2008:17).

Idea generation should be encouraged, for instance by means of suggestion boxes and brain storming sessions. Employees that came up with innovative ideas that are implemented should be given recognition. There are usually many ideas floating around any organisation, but ideas are useless unless they are put to use.

Rules and procedures in Xstrata Alloys should be flexible, allowing for innovative practices, but should not compromise safety or production.

6.3.7 Management support

A support structure is very important, especially since corporate entrepreneurship is not the primary activity and focus area. If proper support is not in place, the entrepreneurial effort is more likely to die off.

Managers must create a supportive environment in the working place which stimulates entrepreneurial thinking and which creates a supporting base for employees with new ideas. Create a system that ensures that new ideas generated reach management and that it doesn't go by unheard of.

A proper mentorship program should be implemented to form part of the management support system.

Recognition and publicity should be given to improve employee/employee group efforts. The internal leadership should provide direct access and guidance to executive management.

Management should ensure that work-group, departmental and divisional goals are all aligned and directly related to the organisational strategy. Xstrata Alloys should identify areas of conflict between individual and corporate values, as well as conflict between value systems of groups of employees. Top management should state what the organisation stands for. Corporate values at Xstrata Alloys should strengthen corporate entrepreneurial behaviour patterns in the organisation.

In order for a company to successfully employ corporate entrepreneurship in their organisation, their rules and plans must be flexible (Sykes & Block 1989:161). Instead of enforcing standard procedures, specific ground rules should be made for each situation. Control should not be exerted against plans, but plans changed to reflect new learning.

6.3.8 Continuous and cross-functional learning

In establishing a corporate entrepreneurial orientation, managers should acquire the skills in following the leveraging resources (resources should be leveraged to achieve seemingly unreachable goals) approach. For managers who have not yet translated a strategic intent into work group action, this may also entail learning a new skill (Higgins 1996:31).

According to Sykes and Block (1989:161), the traditional management practice of managing functionally results in new-venture failure and should be replaced with management action supporting the corporate entrepreneur with managerial and multidiscipline skills. Skills that should be employed in implementing strategies for establishing a corporate entrepreneurial orientation therefore include the following:

- Managers need to acquire skill in following the leveraging resources approach to implementing this strategy.
- Managers must acquire the skill of translating strategic intent into work group action.
- Corporate entrepreneurs should be equipped with managerial and multidiscipline skills.

Xstrata Alloys should encourage employees to undertake various training programmes to increase their experience and knowledge base.

6.3.9 Empowered teams/Multidiscipline teamwork and diversity

Xstrata Alloys should focus on the following regarding their organisational structure to establish multidiscipline teamwork of empowered teams:

- The organisational structure should allow for a free-flow of ideas and participation from employees (Jordaan, 2008:118).
- The structure should facilitate the process of employee empowerment (Oosthuizen, 2006:254).

- The organisational structure should allow for decentralisation of decision making authority; it should be flexible and inhibiting rules and regulations should be removed (Hisrich & Peters, 2002:330; Covin & Slevin, 1991:18).
- The organisational structure should be network-orientated, rather than hierarchical (Dhliwayo, 2007:112).
- The organisational structure should foster responsiveness and allow for rapid changing conditions and innovation (Osborne and Gaebler (1992) as quoted by Jordaan (2008:118)).

Xstrata Alloys should focus on alignment between departments; this pollination of disciplines will help to stimulate innovation since people from different backgrounds work together to solve common problems.

Employees should be encouraged to work together in cross-functional teams to facilitate information sharing. Cross-functional teams should have freedom in electing team members. Managers should spell out mandates of cross-functional teams and limit interference thereafter.

Inter-departmental as well as inter-divisional cooperation and coordination is an important aspect for corporate entrepreneurship. Inter-departmental cooperation should be encouraged. To facilitate inter-departmental collaboration, regularly organised inter-departmental picnics, recreational activity days, community volunteer programs or lunches with peers could be arranged to facilitate teamwork in developing ideas.

Other systems that could enhance multidiscipline teamwork are:

- Sharing of information and rendering assistance across divisions should be encouraged.
- Diversity of thinking and the development of new ideas that challenge conventional ways of doing things should be encouraged.

6.4 ACTION PLAN

In this section a short action plan is proposed to facilitate the fostering of a corporate entrepreneurial climate in Xstrata South Africa (Pty) Ltd – Alloys. The plan address some of the recommendations made and includes specific activities, key performance areas (KPI's), as well as managers responsible for executing these activities.

6.4.1 Action plan to facilitate the fostering of a corporate entrepreneurial climate in Xstrata Alloys

OBJECTIVE: PROMOTING THE CORPORATE ENTREPRENEURIAL CLIMATE IN XSTRATA ALLOYS			
Activity	Task owners	Methods and tools	Standard/KPI
Give feedback to top management on findings of study and recommendations made	Researcher	PowerPoint presentation	Top management fully informed about findings of study.
Revisit corporate values and get buy-in from employees. Identify a few dominant values based on inputs received.	Middle managers Board Top and senior management	Divisional meetings; Mass meetings; Suggestion boxes; Brainstorming sessions and Questionnaires. Meetings.	Values aligned to entrepreneurial constructs. Aligned-commitment of all employees.
Develop a strategic plan to ensure incorporation of corporate entrepreneurial constructs: Obtain inputs from employees at all levels.	Middle managers	Brainstorming sessions; Divisional meetings.	Strategic plan aligned to entrepreneurial constructs. Aligned-commitment from all employees.
The activities below could be executed in any order.			
Develop a procedure outline for allocation of resources in terms of: - Bootstrapping. - Production requirements. - Employee development. - Company projects. - Mini employee initiated projects. - Entrepreneurial activities. - Development of multi discipline teams.	Line managers HRD departments Finance managers	Departmental meetings; Production meetings; Employee individual development meetings; Budget meetings.	Policies and procedures simplified and aligned to company needs and requirements Budget allocation beneficial to entrepreneurial climate in the organisation.
Revisit rewarding system to recognise and reward entrepreneurial behaviour: - Profit-sharing. - Rewards in terms of job performance. - Mixed remuneration system (salary and incentives)	Top Management Board	Board meetings; EXCO meetings.	Rewarding system in place to encourage entrepreneurial behaviour.

Recognition for corporate entrepreneurs.	Top management	Staff meetings; Intranet; Internal memorandums; Unit newsletters; Certificates/corporate gifts.	Timeouts recognition is given for corporate entrepreneurial activities and behaviour that added value to the organisation.
Develop procedures and processes regarding tolerance for risks, mistakes and failures: - Identify areas where risks and mistakes will be tolerated. - Identify the level of tolerance. - Safety aspects. - Risk to production aspects.	Line management	Departmental meetings.	Process clear on risk tolerance without jeopardising safety or production in the organisation.
Revisit the organisational structure of the organisation taking into account: - Confirm a flat organisational structure. - Define decision making authority levels. - Minimise hierarchical levels. - Decentralisation of powers.	Top management Senior management	EXCO meetings; Management meetings.	Flat organisational structure that allows for: - Decentralised decision making. - Participation from all employees. - Innovation.
Establish a communication strategy to ensure: - Re-enforcement of the value system on a continuous basis. - Effective communication channels are in place (horizontal and vertical)	Corporate marketing department Line managers Employees	On corporate gifts; diaries; stationary. Intranet; organisational unit news letters; formal meetings; mass meetings; one-on-one discussions;	Shared values are communicated on gifts, stationary and diaries. All employees are informed about what is going on.
Implement the mentoring process in all departments, focussing on departments with entrepreneurial potential: - Select employees with entrepreneurial potential. - Allocate mentors to employees. - Encourage the mentor-mentee relationships.	Line managers Supervisors Employees	Allocate budget to mentee development programme; Mentoring meetings.	Employees with sponsors to champion protect and marshal resources for corporate entrepreneurial endeavours.
Build strong multidiscipline teams: Ensure procedures regarding recruitment of team members are flexible.	Line managers	Meetings	Cross functional teams in place. Information is shared.

Encourage forming of networks (formal and informal)			Assistance is rendered. Networks are in place and functions effectively.
Ensure rapid implementation of new processes.	Management team	Group sessions.	All new processes are implemented rapidly.
Align the following goals to each other as well as to the organisational strategy: - Departmental goals. - Work-group goals. - Divisional goals.	Senior management Team leaders	Strategic sessions; Brain storming sessions; Workshops.	Workgroup, departmental and divisional goals are all aligned and directly related to the organisational strategy.
Staff development should focus on: - Multidiscipline skills. - Team diversity and teamwork. - Emotional intelligence. - Leveraging resources (managers). - Corporate entrepreneurial skills development. - Transformational leadership. - Supervisory skills.	HRD departments	Skills audit; Skills gaps analysis; Individual development plan; Developmental interventions; Evaluation of effectiveness.	Managers have managerial and multidiscipline skills to translate the strategic intent into work group action. Multidiscipline teams.
Assessment and evaluation system revisited to incorporate corporate entrepreneurial behaviour patterns: - KPI's aligned. - Performance assessments.	Line managers and employees	Performance rating system; Performance review meetings; Meetings with employees.	Evaluation criteria aligned to corporate entrepreneurial climate constructs. Performance assessments completed.

6.5 ACHIEVEMENT OF OBJECTIVES

The evaluation of the success of this study is based on the achievement of the research objectives as indicated in section 1.3.

6.5.1 Primary objective

The primary objective of this study was to assess the level of corporate entrepreneurship in the South African alloy mining environment, with specific reference to Xstrata Alloys and to make recommendations on the encouragement and promoting of an entrepreneurial climate.

The primary objective was achieved by realising the secondary objectives of the study.

6.5.2 Secondary objectives

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

- To define corporate entrepreneurship and entrepreneurial climate.
- To obtain insight into the dynamics of corporate entrepreneurship and entrepreneurial climate by means of a literature review.
- To gain insight into the business environment of Xstrata PLC as a company focussing on Xstrata Alloys as part of the South African mining sector.
- To assess the current corporate entrepreneurial climate in Xstrata Alloys by means of a questionnaire.
- To propose recommendations to ensure and promote an entrepreneurial climate in Xstrata Alloys.

The first two objectives were attained by means of a comprehensive literature study as presented in chapter three and four. Corporate entrepreneurship was defined in section 3.2.3 and an entrepreneurial climate was defined in section 4.3. The

dynamics of corporate entrepreneurship was discussed in section 3.3 where the dimensions of corporate entrepreneurship were examined. The constructs of the corporate entrepreneurial climate in an organisation were discussed in section 4.4.

The third objective, which focuses on Xstrata Alloys, was achieved in chapter two where the overview, history and commodities of Xstrata PLC with specific focus on Xstrata Alloys were discussed.

The fourth secondary objective was to measure Xstrata (Pty) Ltd – Alloys' current entrepreneurial climate by means of a questionnaire. To achieve this objective, the reliability of the measuring instrument was firstly confirmed by using the Cronbach Alpha Coefficient. Secondly the corporate entrepreneurial climate was evaluated by means of the questionnaire as discussed in chapter five.

The last objective which was to propose recommendations to ensure and promote an entrepreneurial climate in Xstrata Alloys was attained in chapter six with specific focus in section 6.3 and 6.4.

6.6 SUGGESTIONS FOR FURTHER RESEARCH

Based on the findings of the study, the following suggestions are put forward for consideration pertaining future research on corporate entrepreneurship in the mining industry:

The scope of the study was limited to middle management within Xstrata Alloys. Junior management including supervisors was excluded. The views of junior management should be included in future studies on this topic since in Xstrata Alloys junior management employees plays a significant role in managing groups of employees/teams.

Future studies to include the whole of Xstrata PLC as a population group could be beneficial to align Xstrata's corporate strategy to foster a corporate entrepreneurial climate, and a study to determine the relationship between employee turnover and

corporate entrepreneurial climate could be beneficial to all organisations in the mining industry.

6.7 SUMMARY

Conclusions drawn from the empirical research results as discussed in chapter five was discussed. The basic demographics of age, gender, division, race and qualification were firstly discussed.

The Cronbach Alpha Coefficient established the reliability of the items evaluating each construct, after which each of the 13 constructs present in a corporate entrepreneurial climate were discussed in relation to the results of the questionnaires distributed. The relationships between the demographic variables (being male and female; and black and white) were discussed for the 13 constructs as well as for the factors measuring the perceived organisational success in order to identify statistically significant variances in perceptions.

Section 6.3 dealt with recommendations and practical ways in which a corporate entrepreneurial climate could be enhanced and maintained in Xstrata SA (Pty) Ltd – Alloys. Systems and processes should be revisited and adapted to ensure adherence to the requirements of a corporate entrepreneurial climate. Procedures must be simplified to facilitate the rapid implementation of new processes.

Section 6.4 consists of an action plan to facilitate the fostering of corporate entrepreneurial constructs in the organisation. The action plan included actions such as:

- Give feedback to top management on findings of study and recommendations made.
- Revisit corporate values and get buy-in from employees.
- Develop a strategic plan to ensure incorporation of corporate entrepreneurial constructs.
- Develop a procedure and process outlines for allocation of resources.
- Revisit rewarding system to recognise and reward entrepreneurial behaviour.

- Recognition for corporate entrepreneurs.
- Develop procedures and processes regarding tolerance for risks, mistakes and failures.
- Revisit the organisational structure of the organisation taking into account.
- Establish a communication strategy to ensure.
- Implement the mentoring process in all departments, focussing on departments with entrepreneurial potential.
- Build strong multidiscipline teams.
- Ensure rapid implementation of new processes.
- Align the following goals to each other as well as to the organisational strategy.
- Staff development.
- Assessment and evaluation system revisited to incorporate corporate entrepreneurial behaviour patterns.

The chapter concluded by addressing the achievement of all the objectives, and by recommending possible future research that could be undertaken based on this study.

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ANNEXURE A

Code number:

CORPORATE ENTREPRENEURIAL CLIMATE QUESTIONNAIRE

CONFIDENTIAL

Note: All responses are confidential and neither the individual nor the organisation would be identified in any report or release.

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CORPORATE ENTREPRENEURIAL CLIMATE QUESTIONNAIRE

Dear Respondent

Corporate entrepreneurship is becoming increasingly important for the competitiveness of Xstrata SA (Pty) Ltd – Alloys as we face dynamic competition unleashed by globalisation as well as by local and international competitors. Internal environmental factors play a crucial role in translating entrepreneurship into performance. Corporate entrepreneurship (intreprenurship) with concomitant creativity and high rates of responsiveness should be the preferred mode of operations in Xstrata SA (Pty) Ltd – Alloys.

The focus of this research study is on middle management in Xstrata SA (Pty) Ltd – Alloys. The role of middle management is crucial as they form the link between the vision and strategic direction from top management and the employees at operational level responsible for mining and production.

With the 2007 Global Entrepreneurship Monitor (GEM) Report again indicating that South Africa performs poorly in comparison to other emerging economies in terms of entrepreneurial activity and development, attention should be focused on interventions which support and encourage business initiatives and development.

Research has been conducted on corporate entrepreneurship in the mining environment focussing mainly in the gold and platinum industries. Xstrata SA (Pty) Ltd – Alloys was not included in the population of previous research. Corporate entrepreneurship in Xstrata SA (Pty) Ltd – Alloys should therefore emphasise the establishment of business models, processes and structures in the mining sector so as to increase the level of corporate entrepreneurship at the various operational units within Xstrata SA (Pty) Ltd – Alloys.

This questionnaire attempts to measure the corporate entrepreneurial climate in your department in order to determine whether it is conducive to foster a corporate entrepreneurial spirit, as well as to indicate possible barriers or trigger factors. Your contribution is highly valued and appreciated.

Please complete every question / statement to ensure the validity and reliability of the study.

GENERAL INSTRUCTIONS

Virtually all questions may be answered by ticking (X) or **highlighting** the relevant block.

Use the following key to indicate your preference:

SCALE	TERM USED
5	Strongly agree
4	Slightly agree
3	Neither agree nor disagree
2	Slightly disagree
1	Strongly disagree

Please select the number which best describes your opinion about a specific question or statement. In the example beneath, the respondent slightly agreed to the statement listed.

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly agree	Strongly Agree
A03	My manager helps me to get my work done by removing obstacles in my way.	1	2	3	4	5

SECTION A: CORPORATE ENTREPRENEURIAL CLIMATE

This section consists of 65 statements. Please indicate to what extent you agree or disagree with each statement. Please mark the applicable block with a cross(X) or **highlighting**.

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A01	Our leaders take a long-term view of our organisation.	1	2	3	4	5
A02	Management encourages us to develop ideas that would improve the organisation.	1	2	3	4	5
A03	My manager helps me to get my work done by removing obstacles in my way.	1	2	3	4	5
A04	Development at our organisation is based on taking calculated risks at the right time.	1	2	3	4	5
A05	Our organisation quickly implements improved work methods that are developed by employees.	1	2	3	4	5
A06	Individuals implementing successful innovative projects receive additional rewards and compensation.	1	2	3	4	5
A07	I am well informed about our organisational vision and strategies.	1	2	3	4	5
A08	An employee with a good idea is often given time to develop that idea within working hours.	1	2	3	4	5
A09	Working together in project teams is encouraged at the organisation.	1	2	3	4	5
A10	There are several options within the organisation for individuals to get financial support for their innovative projects and ideas.	1	2	3	4	5
A11	People are keen to share knowledge within the organisation, even over departmental or functional boundaries.	1	2	3	4	5
A12	A great deal of resources is spent in determining customer needs and satisfaction.	1	2	3	4	5
A13	People are allowed to make decisions about their work processes without going through elaborate justification and approval procedures.	1	2	3	4	5
A14	Our leaders challenge the status quo and they inspire us to think and act in innovative ways.	1	2	3	4	5
A15	Top management is receptive to my ideas and suggestions.	1	2	3	4	5
A16	Originators of new ideas find it easy to implement because of the support rendered by influential people at the organisation.	1	2	3	4	5
A17	Projects involving calculated risk are highly valued, even when things do not always turn out according to plan.	1	2	3	4	5
A18	There is considerable number of employees at the organisation that are involved in generating and implementing innovative ideas.	1	2	3	4	5
A19	In this organisation recognition rather than criticism is emphasised.	1	2	3	4	5
A20	I have regular meetings with my manager where information is shared between us.	1	2	3	4	5
A21	A staff member who has initiated a new project/process is allowed to carry it through to completion/implementation.	1	2	3	4	5
A22	We use cross-functional teams effectively at the organisation to develop and implement new ideas.	1	2	3	4	5
A23	Money is often available to get new project ideas off the ground.	1	2	3	4	5
A24	Employees are encouraged to talk to their colleagues in other departments of the organisation about ideas for new projects.	1	2	3	4	5
A25	Product and service innovation are driven by a strong customer orientation.	1	2	3	4	5

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A26	Employees are given ample opportunity for independence and freedom in how they do their work.	1	2	3	4	5
A27	This organisation has a specific value system which we all know and live up to.	1	2	3	4	5
A28	Those employees who come up with innovative ideas on their own receive management's encouragement for their activities.	1	2	3	4	5
A29	Our organisation has people with influence that support, coach, protect, and find resources for an intrapreneurial project and its team.	1	2	3	4	5
A30	We occasionally take big risks to keep ahead of our competitors.	1	2	3	4	5
A31	This organisation provides me with the chance to be creative and try out new methods of doing my job.	1	2	3	4	5
A32	My supervisor will give me special recognition if my work performance is outstanding.	1	2	3	4	5
A33	Great effort has been made to clarify what the vision and strategy of the organisation mean to us in our own department.	1	2	3	4	5
A34	Nobody at the organisation is forced to develop new ideas.	1	2	3	4	5
A35	Top management encourages the establishment of teams from various departments whenever needed for a project.	1	2	3	4	5
A36	Resources are readily accessible in pursuance of new ideas and opportunities.	1	2	3	4	5
A37	Our organisation has open communication channels in which all employees participate.	1	2	3	4	5
A38	Our organisation involves customers in service and product development.	1	2	3	4	5
A39	I have autonomy to decide how to do my work.	1	2	3	4	5
A40	Our leaders lead by example and people are eager to voluntarily follow them.	1	2	3	4	5
A41	The creation of innovative ideas is a regular occurrence in our organisation.	1	2	3	4	5
A42	Our organisation's managers have the skills, commitment and courage to be effective champions of intrapreneurial initiatives.	1	2	3	4	5
A43	This organisation supports many small and experimental projects realising that some will undoubtedly fail.	1	2	3	4	5
A44	Training is provided to ensure that innovative new processes are implemented effectively.	1	2	3	4	5
A45	In this organisation effective intrapreneurs are generally rewarded.	1	2	3	4	5
A46	The vision and strategies of the organisation often help me in setting priorities in my work.	1	2	3	4	5
A47	I am allowed time at work to explore new ideas I believe have potential.	1	2	3	4	5
A48	Project teams have choices in recruiting and selecting new team members.	1	2	3	4	5
A49	The process for accessing and acquiring resources to pursue new opportunities is streamlined so that approval is quickly granted.	1	2	3	4	5
A50	Employees are encouraged to stay abreast of developments in their functional fields and to share their knowledge with others.	1	2	3	4	5
A51	We regularly ask our customers to give their opinions of our service and product offerings.	1	2	3	4	5
A52	The degree of hierarchical control is relatively low in our organisation.	1	2	3	4	5
A53	Our leaders seek to maximise value from opportunities.	1	2	3	4	5
A54	Senior managers allow innovators to bend rules and rigid procedures in order to keep promising ideas on track.	1	2	3	4	5
A55	In this organisation it is easy to build coalitions of sponsors to help projects succeed.	1	2	3	4	5

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
A56	If you make a mistake in this organisation you will be forgiven.	1	2	3	4	5
A57	Employees are inspired to push their boundaries and to think "out-of-the-box."	1	2	3	4	5
A58	Employees are rewarded in relation to their job performance.	1	2	3	4	5
A59	There is considerable buy-in from employees into the value system of the Organisation.	1	2	3	4	5
A60	Our organisation provides ample opportunities for learning and growth.	1	2	3	4	5
A61	Cross-functional teams are characterised by diversity based on the skills required by the project.	1	2	3	4	5
A62	Attracting resource commitment for entrepreneurial ventures in this organisation is relatively easy.	1	2	3	4	5
A63	Employees are willing to assist others and share knowledge and skills even if it is not required from them.	1	2	3	4	5
A64	Customers are treated as very important stakeholders.	1	2	3	4	5
A65	Employees determine their key performance areas in co-operation with their supervisors.	1	2	3	4	5

SECTION B: SUCCESS OF THE ORGANISATION

This section consists of 17 statements. Please indicate to what extent you agree or disagree with each statement. Please mark the applicable block with a cross (X) or highlighting.

		Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree
B01	Our organisation develops product/services with customers' needs in mind.	1	2	3	4	5
B02	The competitive position of our organisation has improved over the past few years.	1	2	3	4	5
B03	Our organisation has experienced growth in market share over the past few years.	1	2	3	4	5
B04	Our employees are highly committed to our organisation.	1	2	3	4	5
B05	During difficult economic periods, investments in research and development/ innovative projects continue and no significant financial cuts are made.	1	2	3	4	5
B06	Our organisation has a high customer retention rate.	1	2	3	4	5
B07	Our customers are loyal to our organisation.	1	2	3	4	5
B08	In our organisation, employees are viewed as the most valuable asset of the organisation.	1	2	3	4	5
B09	Taking care of customers is our organisation' top priority.	1	2	3	4	5
B10	The morale (job satisfaction) of our employees has improved over the past few years.	1	2	3	4	5
B11	Our customers are satisfied with our organisation's product/service offerings.	1	2	3	4	5
B12	The image (stature) of our organisation, relative to our competitors, has grown over the past few years.	1	2	3	4	5
B13	Our organisation has experienced growth in turnover over the past few years.	1	2	3	4	5
B14	The effectiveness (doing the right things) of our organisation has improved over the past few years.	1	2	3	4	5
B15	Employees in our organisation understand the needs of our customers.	1	2	3	4	5
B16	Our organisation has experienced growth in profits over the past few years.	1	2	3	4	5
B17	The efficiency (doing things right) of our organisation has improved over the past few years.	1	2	3	4	5

SECTION C: BACKGROUND INFORMATION

The following information is needed to help with the statistical analysis of data for comparisons among different interest groups. All your responses will be treated confidentially. Your assistance in providing this important information is appreciated.

Please mark the applicable block with a cross (X) or highlighting.

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 highest academic qualification				
	Lower than Grade 12				
	Grade 12				
	National certificate				
	National diploma				
	3-year degree				
	Post graduate qualification				

C05	Indicate your management level	Top management (E/F Band)	Middle management (D Band)	Lower management (C5)
	Other: (Specify):			

C06	Indicate your functional department				
	Processing/ Smelting	Mining	HR/HRD	IT/ Business Systems	Finance
	Engineering	Admin	Other		

THANK YOU VERY MUCH FOR YOUR VALUED INPUT.

ANNEXURE B

Descriptive Statistics (Statistica dataset)

	N	Mean	Minimum	Maximum	Std.Dev.
A1	103	4.544	2	5	0.638
A2	102	4.206	1	5	0.916
A3	103	3.786	1	5	0.977
A4	102	3.735	1	5	1.134
A5	103	3.456	1	5	1.144
A6	101	2.733	1	5	1.240
A7	103	4.058	2	5	0.968
A8	103	3.330	1	5	1.166
A9	102	3.892	1	5	1.014
A10	102	3.176	1	5	1.129
A11	102	3.382	1	5	1.178
A12	102	3.549	1	5	1.087
A13	103	3.029	1	5	1.317
A14	103	3.845	1	5	1.082
A15	103	3.748	1	5	1.045
A16	100	3.300	1	5	1.087
A17	100	3.230	1	5	1.004
A18	102	2.863	1	5	1.117
A19	102	3.147	1	5	1.057
A20	103	4.097	1	5	1.098
A21	102	3.520	1	5	1.002
A22	103	3.359	1	5	1.119
A23	102	3.216	1	5	1.105
A24	103	3.553	1	5	0.997
A25	103	3.767	1	5	0.952
A26	103	3.583	1	5	1.249
A27	103	4.165	1	5	0.981

	N	Mean	Minimum	Maximum	Std.Dev.
A28	103	3.680	1	5	0.921
A29	103	3.340	1	5	1.125
A30	103	3.534	1	5	1.187
A31	101	3.950	1	5	0.984
A32	103	3.874	1	5	1.160
A33	103	3.913	1	5	1.030
A34	102	3.735	1	5	1.143
A35	101	3.644	1	5	1.045
A36	102	3.373	1	5	1.043
A37	101	3.624	1	5	1.173
A38	103	3.534	1	5	1.055
A39	102	3.686	1	5	1.169
A40	102	3.824	1	5	1.121
A41	103	3.515	1	5	0.959
A42	102	3.814	1	5	1.069
A43	102	3.196	1	5	1.072
A44	103	3.398	1	5	1.207
A45	102	2.961	1	5	1.071
A46	103	3.835	1	5	0.940
A47	103	3.660	1	5	1.053
A48	103	3.301	1	5	0.927
A49	103	3.204	1	5	1.061
A50	103	3.660	1	5	1.099
A51	102	3.412	1	5	1.120
A52	103	3.000	1	5	1.129
A53	103	3.942	1	5	0.978
A54	103	2.660	1	5	1.168
A55	100	3.060	1	5	1.090
A56	103	3.340	1	5	1.053
A57	100	3.920	1	5	1.089
A58	102	3.422	1	5	1.246

	N	Mean	Minimum	Maximum	Std.Dev.
A59	103	3.505	1	5	0.979
A60	103	3.864	1	5	1.129
A61	103	3.689	1	5	0.970
A62	103	3.107	1	5	0.979
A63	103	3.612	1	5	1.113
A64	102	4.196	2	5	0.879
A65	103	3.932	1	5	1.087
B1	103	4.476	2	5	0.752
B2	103	4.583	2	5	0.707
B3	103	4.563	2	5	0.737
B4	102	4.088	2	5	0.846
B5	103	2.951	1	5	1.271
B6	102	3.892	1	5	0.953
B7	102	3.863	2	5	0.784
B8	103	3.893	1	5	1.137
B9	102	4.127	1	5	0.852
B10	103	3.553	1	5	1.127
B11	102	4.078	1	5	0.792
B12	103	4.495	2	5	0.712
B13	103	4.417	1	5	0.774
B14	103	4.282	1	5	0.833
B15	102	3.745	1	5	1.021
B16	103	4.534	3	5	0.639
B17	102	4.206	2	5	0.871
Leadership	103	4.066	2	5	0.730
Support	103	3.558	2	5	0.683
Sponsor	103	3.460	1	5	0.814
Tolerance	103	3.407	1	5	0.696
New ideas	103	3.508	2	5	0.788
Rewards	103	3.231	1	5	0.879
Vision	103	3.882	2	5	0.751

	N	Mean	Minimum	Maximum	Std.Dev.
Timework	103	3.622	2	5	0.708
Teams	103	3.578	2	5	0.768
Resources	103	3.217	1	5	0.844
Learning	103	3.566	1	5	0.829
Customer	103	3.694	2	5	0.820
Structure	103	3.444	1	5	0.833
Financial	103	4.505	3	5	0.546
Customer market	103	4.032	2	5	0.603
Process	103	4.358	2	5	0.652
People development	103	3.843	1	5	0.916
Future success	103	3.723	2	5	0.816