

An assessment of corporate entrepreneurship in the gold mining industry

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ABSTRACT

The primary objective of the study is to determine the level of corporate entrepreneurship within higher level employees at AngloGold Ashanti (Mponeng mine) in order to make recommendations regarding the encouragement of an entrepreneurial climate.

A comprehensive literature was conducted. In the literature review entrepreneurship, corporate entrepreneurship and an entrepreneurial climate were defined. The establishment of a climate of corporate entrepreneurship was found to be dependent on the presence of 13 important constructs. If proposed steps are followed to promote corporate entrepreneurship in an organisation, five identified success factors will improve as a result.

A historic overview of the gold mining industry including AngloGold Ashanti (Mponeng mine) was given in chapter 3. Part of the AngloGold Ashanti strategy is “innovation”, wanting to give all employees the opportunity to contribute to improvement by sharing their ideas within the organisation.

A questionnaire was adapted to test for the presence of the 13 constructs of the climate of corporate entrepreneurship which were identified and to verify current perceptions regarding the organisational success of the organisation among middle managers.

Empirical research was conducted which was focusing on discussing the results obtained from the questionnaires. Basic demographic information of the respondents were dealt with first, after which the perceptions of the respondents with regard to the 13 constructs measuring the entrepreneurial climate and the constructs measuring the perceived success of the organisation were discussed. Furthermore, the relationships were determined between demographic variables and the constructs measured in the questionnaire.

Following the detail analysis of chapter 4, it was concluded that managers participating in the survey regarded the entrepreneurial climate in Anglogold Ashanti (Mponeng mine) as being average. Based on the findings of the empirical research and the insight gained in the literature review, recommendations were made on how to foster an entrepreneurial climate within Anglogold Ashanti (Mponeng mine).

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CHAPTER 1

NATURE AND SCOPE OF THE STUDY

1.1 INTRODUCTION

According to Urban and Oosthuizen (2009: 170), the South African mining industry faces unique challenges to remain sustainable. A sustainable competitive advantage can be achieved through continuous innovation and the creation of new ideas, often termed as corporate entrepreneurship. South Africa's mining industry has to focus on productivity and cost trends to remain competitive. Operating margins have to remain, or become more competitive to attract investments into the industry, and to sustain the existing operations. For the industry to remain competitive, it must be provided with an operating and investment environment that does not disadvantage it in relation to local and global mining organisations.

Organisations with well developed entrepreneurial capabilities are able to sustain growth and innovation, which are critical competitive advantages in the twenty first century. Many business executives concur that the ability to drive business growth and implement new and innovative ideas are several of the top priorities of organisations in the twenty first century. However, the management of innovation and corporate entrepreneurship (CE) is complex, challenging and subject to risk (Scheepers, Hough & Bloom, 2008:50).

Intangible assets like knowledge, innovation and entrepreneurial leadership enables companies to gain and maintain competitive advantage. The ability to exploit opportunities and minimize threats through entrepreneurial initiatives has been shown to be crucial in developed countries. Many executives concur that the ability to drive business growth and implement innovative ideas through entrepreneurial ventures are some of the top priorities of the organisations in the turbulent business environment (Scheepers, & Hough, 2008:20).

Urban and Oosthuizen (2009:174) stated that there are three principles types of corporate entrepreneurship, namely the creation of a new business within an existing organisation which is usually referred to as corporate venturing or sometimes entrepreneurship; the transformation or renewal of existing organisations that can also be process-driven innovation, including the adoption of new solutions to old problems, and frame breaking or discontinuous change or changing the rules of competition of an industry.

Organisations have been faced by increasing demands for both faster products development and more features in smaller products and higher and uniform quality, stability and lower prices, despite the inherent incompatibility of such demands (Christensen, 2004:301). Yet current economic conditions and corporate strategies have diminished the crucial link to employee innovation. Current enlightened management philosophy is directed toward giving employees, particularly those at lower level, a voice in decisions and channelling their energy into self-directed pursuit that are closely aligned with overarching strategic plans and directions.

The goal is consistently high level of organisation-wide performance through the careful nurturing of human resources, while capitalising on inherent desire of self-involvement in operations and for taking part in decision making process, especially those that affects organisational members (Herbert, 2008:38).

1.2 PROBLEM STATEMENT

Corporate entrepreneurship (CE) suggests that corporate strategy is shaped by viable internal entrepreneurial initiatives that drive value creation. In this framework there are several processes from the initial product championing which starts by linking technology and needs, to the selecting stage in which the corporate centre designs a structural and cultural context that allows the entrepreneurial initiatives to develop. In this complex set of processes, local line leaders, middle managers and corporate managers play an important role (Thornberry, 2001:139).

Anglogold Ashanti (SA) is one of the top three gold producers in South Africa with one of the deepest mines in the world. In 2008, AngloGold Ashanti produced 4.98 million ounces of gold from its operations – an estimated 7% of global production – making it the third largest producer in the world. The bulk of its production came from deep-level underground operations (40%), surface operations (2%) in South Africa and the rest came from overseas (Anglogold Ashanti Annual Report, 2008:13).

Pressure on costs is not a unique gold mining phenomenon and has been identified as one of the key challenges facing the entire mining sector. In 2006, cash production costs increased by 7.4% to R78 447 per kilogram and total production costs per kilogram (excluding capital expenditure) rose by 11.9% to R99 725 per kilogram. Pressure on areas where either import parity pricing or administered pricing are in play, such as steel prices, water prices and electricity prices, translated through into the pressure on pricing that the industry experienced. Diminishing gold production also impacted on unit production costs as certain fixed costs still had to be met (Chamber of Mines Report 2007:33).

The environment within the organisation is constantly changing. The technological development and the scarcity of resources alone endanger stability and predictability of the market. To face fierce competition, organisations must review practices and actively search for new ways to practice flexibility, increase its capacity of innovation and show more competitiveness. The strengthening of entrepreneurship is an important objective for any enterprise that is building its responsiveness to a globalised and changing environment (Van Vuuren, Groenewald & Gantsho, 2009:325).

1.3 OBJECTIVES OF THE STUDY

1.3.1 Primary objective

The primary objective of the study is to determine the level of corporate entrepreneurship within higher level employees of AngloGold Ashanti (Mponeng mine). In conclusion recommendations will be made on how to foster an entrepreneurial climate in the organisation.

1.3.2 Secondary Objectives

The secondary objectives, which will support the primary objective, are:

- To define corporate entrepreneurship and entrepreneurial climate;
- To obtain insight into corporate entrepreneurship and entrepreneurial climate by means of a literature review;
- To gain insight into the business environment of Mponeng mine as an organisation as part of AngloGold Ashanti;
- To validate the reliability of the questionnaire by means of statistical analysis;
- To assess the entrepreneurial climate within Mponeng mine by means of a questionnaire;
- To determine if there is any relationship between the demographic variables, i.e. gender and management level with regard to the constructs measuring the entrepreneurial climate and the perceived success of the organisation; and
- To suggest recommendations to foster an entrepreneurial climate in the organisation.

1.4 THE SCOPE OF THE STUDY

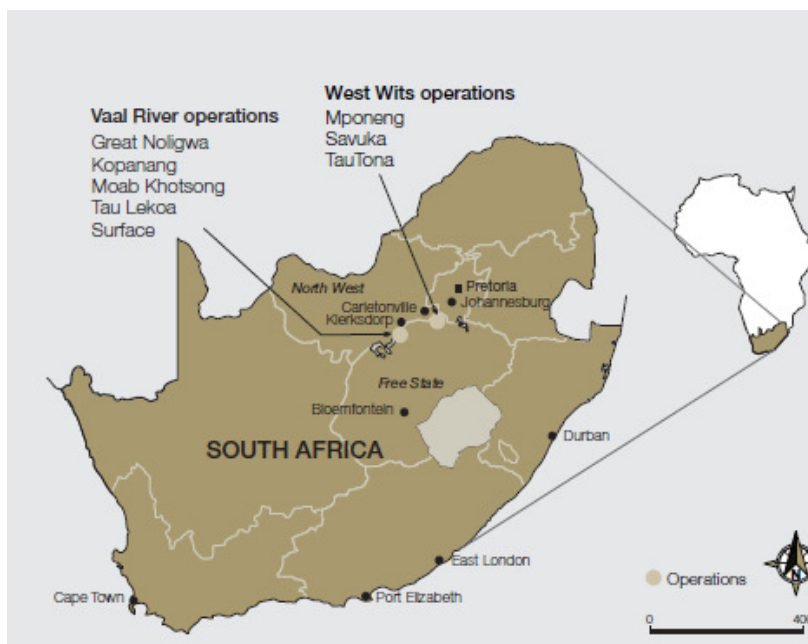
1.4.1 Field of study

The field of study includes corporate entrepreneurship, existing entrepreneurial climate and the impact middle managers have within the organisation.

1.4.2 Organisation under investigation

The study will be undertaken at AngloGold Ashanti shaft in South Africa, situated in Gauteng (West Wits) at Mponeng Mine. Mponeng currently employs about 6 600 employees. 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 AngloGold Ashanti's operations



Source: [http://www.anglogoldashanti.com/annual report](http://www.anglogoldashanti.com/annual%20report)

1.5 RESEARCH METHODOLOGY

The research was conducted in two phases namely a literature review and administration of questionnaires. The literature review was conducted on corporate entrepreneurship followed by the empirical study at AngloGold Ashanti, Mponeng Mine.

1.5.1 Literature review

Various publications were sourced in order to conduct the literature review. These included textbooks, previous research studies in this field as well as journal article on corporate entrepreneurship. The literature review has also focused on the following:

- Corporate entrepreneurship in general;
- Definition of corporate entrepreneurship;
- Forms of corporate entrepreneurship;
- Determinants of corporate entrepreneurship;
- Establishing corporate entrepreneurship in the organisation; and
- Perceived success of the organisation.

1.5.2 Empirical study

Information not obtained from publications that is relevant to this study was gathered through the use of questionnaires circulated through the AngloGold Ashanti e-mail system. Completed questionnaires will be printed and analysed.

1.5.2.1 Questionnaires used in this study

A questionnaire developed by Oosthuizen (2006) and adapted by Jordaan (2008) was used to measure corporate entrepreneurship within AngloGold Ashanti Mponeng Mine. Responses were given using a five-point Likert-type questionnaire, varying between 1 (for “strongly disagree”) to 5 (“strongly agree”).

The questionnaire is subdivided into three sections:

Section A

This section focused on the assessment of the entrepreneurial climate within AngloGold Ashanti. Middle managers and the first line supervisors will be required to complete the questionnaires in order to assess the constructs measuring the entrepreneurial climate in the organisation.

Section B

This section focused on evaluating the performance of the organisation in terms of people development, market and or customers, processes, financial and long term successes, in order to determine the effect of innovation and creativity on employee performance in a turbulent economy.

Section C

This section focused on the demographical information within the organisation. Information gathered indicated the age group, gender, race, highest academic qualifications of the respondents, occupational levels and the functional departments in which they work.

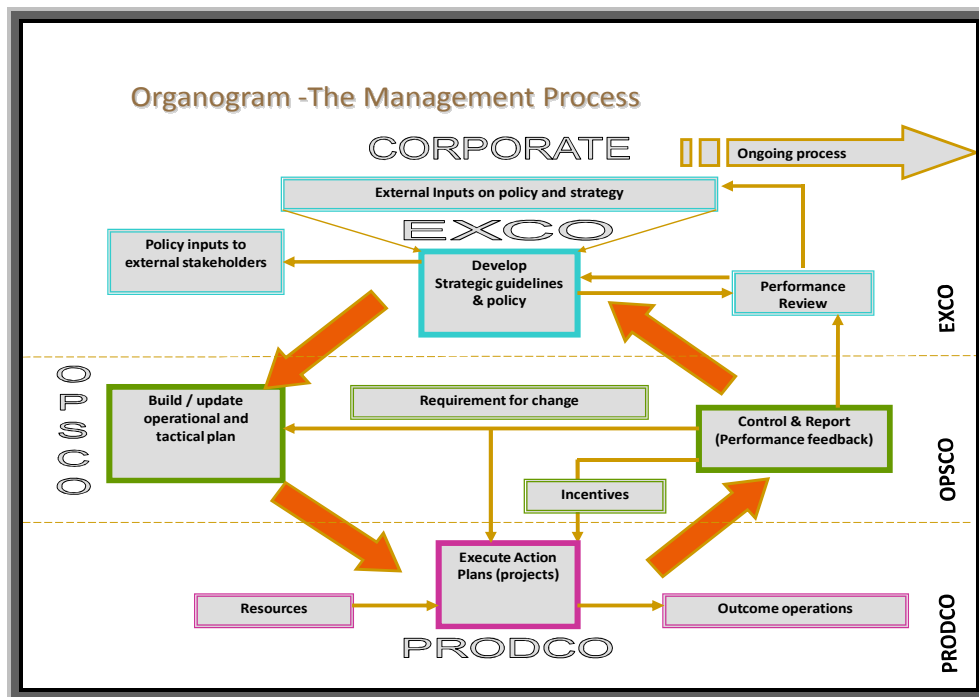
1.5.2.3 Data Gathering

Data was gathered by distributing questionnaires to all managers on the list obtained from Human Resources. Emails were sent out to 446 managers and first line supervisors. Electronic mail messages were distributed to the total study population to explain the purpose of the study.

1.5.2.4 Target population

The target population includes 446 employees within AngloGold Ashanti (Mponeng Mine) from OPSCO level to the PRODCO level. Figure 1.2 shows the management structure and responsibilities of different levels that is currently in place within the organisation.

Figure 1.2: Management structure and responsibilities



Source: [http://www.anglogoldashanti.com/annual report](http://www.anglogoldashanti.com/annual%20report)

Middle managers and first line supervisors were targeted as they were translators of information flowing through the organisation. They translated strategic directions from senior management to non-supervisory personnel and relay information about their impact from non-supervisory personnel to senior management.

1.5.2.5 Sample

The questionnaire was distributed to the total population and 103 completed questionnaires were received back. Follow-up e-mails were sent to the different managers of the departments where the response rate was low.

1.5.2.6 Statistical analysis

The completed questionnaires were analysed by the Statistical Consultation Services of the North-West University (Potchefstroom campus). Descriptive statistics were used to measure the perception of *the* respondents with regard to the constructs which measure the entrepreneurial climate and the constructs which measure the perceived success of the organisation. Means were used to measure the central tendency while the standard deviation was used to measure the scatter of the data around the mean.

Independent t-tests were performed to determine if there was any statistical significant relationship between selected demographical variables and the constructs measuring entrepreneurial climate as well as the perceived success of the organisations. To measure if differences between any of demographic variables and the constructs of the questionnaire are of practical significance effect size values (d-value) as discussed by Ellis and Steyn (2003:51-53) were determined.

The Cronbach's Alpha coefficient was used to determine the internal consistency or average correlation of the different items of the questionnaire. This was done to determine the reliability of the questionnaire. Cronbach's Alpha coefficients of 0.7 or higher were regarded as acceptable levels of reliability (Field, 2009:675).

1.6 LIMITATIONS OF THE STUDY

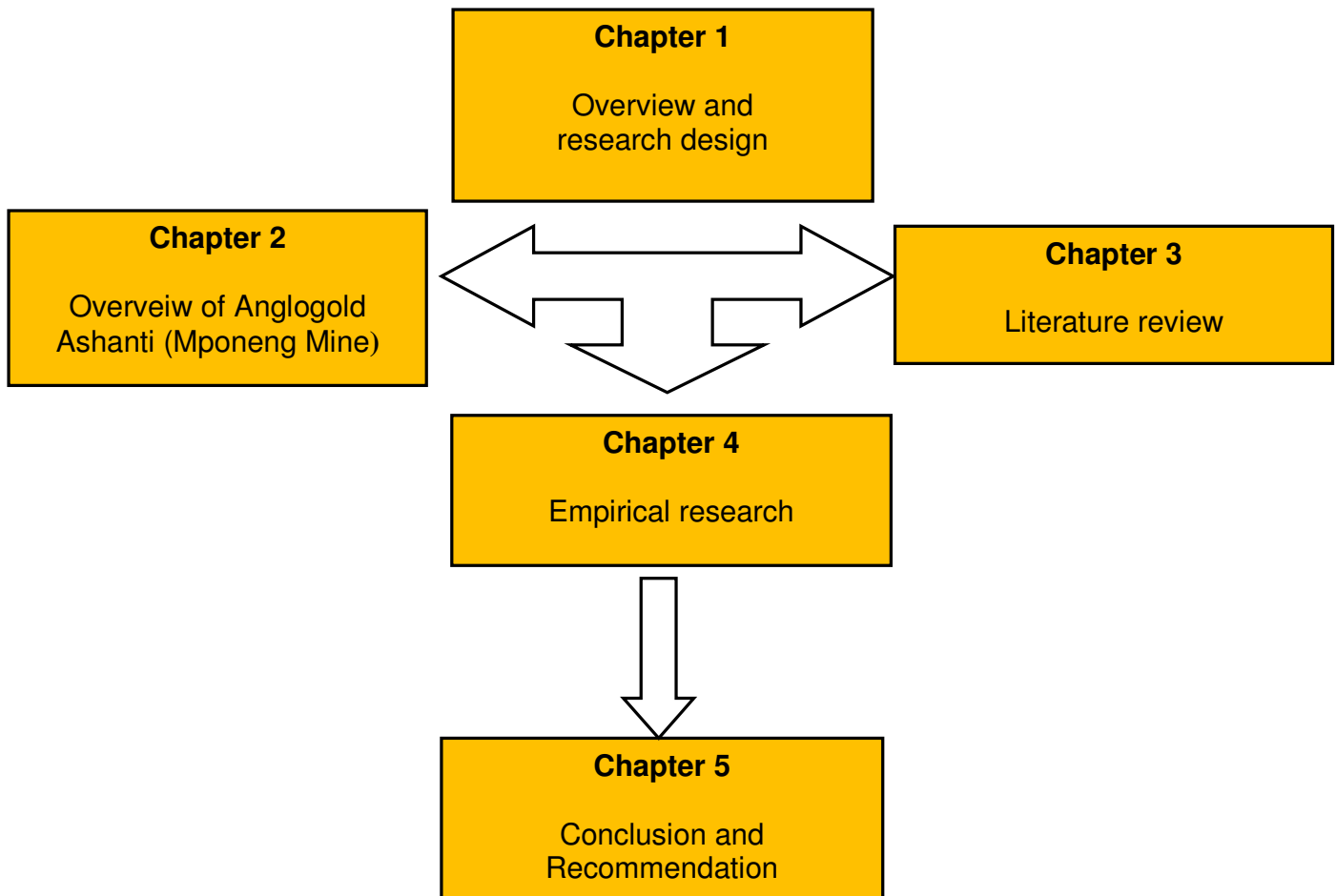
This study was limited to higher-level employees from AngloGold Ashanti (Mponeng Mine). While the ideal would be to obtain responses from employees at all levels, it would necessitate adaptation of the questionnaire to account to lower levels of literacy, lack of computer access and lack of time to complete surveys among lower level employees. Thus the decision was made to forego a larger potential population in favour of the ability to have a more incise questionnaire targeted at higher-level employees.

Results of the questionnaire are also limited to managers and first line supervisors who were willing to complete the survey. Although the original sample of 446 managers and first line supervisors was seen to be representative of the business unit, only 103 completed questionnaires were completed. This is seen as a sufficient number of respondents to be a statistically valid sample, but it does limit the use of advanced statistical techniques such as scale validation or structural equation modelling. The voluntary nature of completion of the survey might also mean that the sample is not representative of managers and first line supervisors at AngloGold Ashanti (Mponeng Mine).

1.6 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



Chapter 1 is a discussion on the nature and scope of the study. The problem statement is defined, and the primary and secondary objectives are set out. The chapter is an introduction of the study.

Chapter 2 covers the literature review on corporate entrepreneurship; including dimensions, characteristics of entrepreneurial climate and benefits of corporate

entrepreneurship. The focus is placed on the role of middle managers and first line supervisors.

Chapter 3 gives an overview of AngloGold Ashanti (Mponeng Mine) within the SA region in order to understand the environment and the culture of the organisation. The history of the gold mining industry in SA, organisation; challenges they are faced with as well as the current situation of the organisation in the world market. The organisational structure of AngloGold Ashanti (Mponeng mine) will be discussed to explain the role of lower managers, middle managers and senior managers that address the need to foster corporate climate in AngloGold Ashanti (Mponeng mine).

In chapter 4 an empirical study will be conducted. The questionnaire used and how data was collected will be discussed in detail. The findings from the study will also be tabulated and descriptive statistics conducted. Correlations will be drawn between demographic variables, i.e. gender and management level, with respect to constructs measuring the entrepreneurial climate and the perceived success of the organisation.

Chapter 5 covers the conclusions of the empirical research and its findings. This chapter draws conclusion on the current state of entrepreneurship in AngloGold Ashanti (Mponeng mine). Recommendations will be made based on the conclusions reached, after which the achievement of the organisation as set earlier in this chapter will be tested. This chapter will conclude by making suggestion for possible future study.

CHAPTER 2

LITERATURE REVIEW ON CORPORATE ENTREPRENEURSHIP

2.1 INTRODUCTION

In good and bad economic times, innovation is a requisite for an organisation seeking to remain competitive especially in uncertain and turbulent times. Many organisations are increasingly looking to corporate entrepreneurship as a way of combating the lethargy and bureaucracy that often accompany size (Thornberry, 2002:329).

Global competition has forced many organisations to adopt the Jack Welch model at General Electric of becoming lean and agile, restructuring, reengineering, downsizing, rightsizing, delayering, there are the business buzz words and processes that we have all become familiar with both in the literature and the realities of life in the large organisation.

The competitive pressures on large organisations to become lean and agile have helped many of them to survive. Many are leaner and more agile, with fewer management layers, increased dependence on lateral relations and team structures. Corporate entrepreneurship is quickly becoming a weapon of choice for many of these large companies. Corporate entrepreneurship is an attempt to take both mindset and skill set demonstrated by successful start-up entrepreneurs and inculcate these characteristics into the culture and activities of a large organisation (Thornberry, 2002:330).

Not all organisations need to embrace a concept of corporate entrepreneurship. Some organisations are doing quite well running their business in a planned, effective and efficient manner. But some organisations need a jolt, an infusion of creativity, especially if they are operating in rapidly changing and turbulent environment. Because rapidly changing environments are by definition unpredictable, planning becomes a fairly

imprecise and blunt weapon. If you can't plan for an unpredictable future, then you have to prepare for it by building an organisation that is opportunity focused (Thornberry, 2001:331).

2.2 DEFINITION OF TERMS

2.2.1 Defining entrepreneurship

Entrepreneurship is a process that takes place in different environments and settings which causes changes in the economic system through innovation brought about by individuals who generate or respond to economic opportunities that create value for both those individuals and society (Johnson, 2001:138).

Johnson (2001:138) stated that entrepreneurship can be defined by the fact that:

- It is a creative act whereby something is built/created that did not exist previously.
- Creation is based upon perceiving and capturing an opportunity that may be buried in the “noise” of the environment.
- Creation is opportunity driven rather than resource driven, i.e. if the opportunity is perceived significant, resource will be found.
- It invariably involves the degree of risk because of the newness and differentness that makes it difficult to calculate value.
- It results in the creation of value for the individuals, community or society.
- It often involves creative destruction.

Thus entrepreneurship, in its narrower sense, involves capturing ideas, converting them into products, services and then building a venture to take the product to the market. Corporate entrepreneurship involves fostering entrepreneurial behaviours within an established organisation. In short, corporate entrepreneurship means organisations can foster profit-making innovation by encouraging employees to think like entrepreneurs, and then giving them the freedom and flexibility to pursue their projects without bogging down in bureaucratic inertia (Echols & Neck, 1998:38).

2.2.2 Defining corporate entrepreneurship

According to Zahra (1991), corporate entrepreneurship refers to the process of creating new business within established organisations to improve organisational profitability and enhance an organisation's competitive position or strategic renewal of existing business. Thus corporate entrepreneurship is conceived of as an effort to extend an organisation's competitive advantage through internally generated innovation that scientifically alter the balance of competition within industries or create entirely new industries (Ferreira, 2002:30).

Corporate entrepreneurship is being embraced in order to promote organisational and economic development and wealth creation, be it as a result of organisational transformation through strategic renewal or the birth of new businesses and ventures within existing organisation. Corporate entrepreneurship is broadly defined as entrepreneurship within an existing organisation – regardless of its size-referring to emergent intensions and behaviours that deviate from the customary way of doing business (Heinonen & Toivonen, 2007:185).

Sayles and Steward (1995) define organisation level entrepreneurship as having three components, i.e.

- It is the activity that seizes profit opportunities without regard to resources currently controlled.
- It expands existing resources through enhanced learning, synergies, or bootstrapping.
- It promotes change and innovation leading to new combinations of resources and new ways of doing business.

2.3 FORMS OF CORPORATE ENTREPRENEURSHIP

- **Entrapreneurship** is described as the creation of entrepreneurial new ventures both within and surrounding the organisation. One of the clearest examples of this is displayed by Hewlett-Packard for whom a critical core competence is its capacity to take an idea, build it into a product and get it to the market quickly. It may be a large organisation but it moves dynamically and quickly (Johnson, 2001:138).
- **Dispersed entrepreneurship** is defined as building structures and a culture across the organisation to support entrepreneurship and innovation and to stimulate employees to take ownership of the business. Recent evidence suggests those organisations that are able to find common ground between the aims and aspirations of the individual and the organisation have the greatest chance of both surviving and prospering. The term “questrocracy” was coined to map out this integration of individual and organisational quest (Johnson, 2001:138).
- **Corporate venturing** is described as building innovation capacity by developing close relationship with small ventures in related sectors. This is crucial in an age in which large organisation need to focus upon core competency whilst at the same time maintaining access to development which if not exploited by them will be exploited by a competitor. Smaller organisations also see the potential benefit of such partnerships and now present themselves to large organisations via formal investment networks (Johnson, 2001:139).

By drawing the above distinction it is possible to highlight that you do not need to be an entrepreneur to display various facets of entrepreneurial behaviour. Moreover, this typology allows us to begin to consider the application of entrepreneurship as being applicable and adding value to public and social sectors in addition to the commercial world (Johnson, 2001:139).

2.4 DETERMINANTS OF CORPORATE ENTREPRENEURSHIP

2.4.1 Entrepreneurial Leadership

Corporate entrepreneurship often fails because large organisations present a hostile environment for creative ideas. Innovative proposals are frequently defeated by financial control systems and other formalities that are typical of large organisation (Dess & Lumpkin, 2005:153).

Entrepreneurial management is important in the founder-driven organisation, but also be used to foster the entrepreneurial posture within a larger organisation. The practice of successful contemporary entrepreneurial is fulfilled within the array of exciting activities and a new creative development – full of innovation and evolving concept, constantly changing, and in many cases, issues and activities that are difficult to classify. The interactive nature of these interpersonal activities means that the organisational framework created for them must nature and allow for constant change and, quite often, the consequent conflict management needs that evolve (Darling, Gabrielsson & Seristo, 2007:5).

Fernald, Solomon and Tarabishy (2005:3-4) emphasised that on the surface, one can associate entrepreneurs with the leadership function such as providing vision to the development of a new product, service, or organisation. A leader has to be entrepreneurial as well. Entrepreneurial leaders must possess individual characteristics which include vision, problem solving, decision making, risk taking and strategic initiatives.

These characteristics are discussed briefly:

- **Vision**

A vision is formulated by explicitly identifying a domain for competitive behaviour, a set of sources of competitive strength, and a profile for resource capability. A vision implies a capability construct that is determined by many factors including managerial vision, competence and capacity, logistic and technological profiles, as well as the financial resource access of the organisation (Fernald *et al.*, 2005:3).

A good vision should be realistic and feasible to provide a challenge for the whole organisation and mirrors the goals of its constituents; and can in turn be killed by fear of mistakes, inability to tolerate ambiguity, and lack of challenges (Fernald *et al.*, 2005:3).

- **Problem solving**

Task-oriented leadership gets best results with purely technical, fact-based problems. Consideration-oriented leadership copes more effectively with emotional, personal, and interpersonal problems. Effective leadership must solve, or face, problems quickly and hopefully, regardless of their nature (Fernald *et al.*, 2005:3).

- **Decision making**

Managers are more likely to seek assistance from subordinates in solving problems than when making decisions. As a general rule, whether leaders are directive or supportive, they know they must make decisions that commit the organisation to critical action. If a leader avoids this responsibility, subordinates will poorly judge him or her and the organisation will suffer accordingly (Fernald *et al.*, 2005:4).

- **Risk taking**

Balancing the risk is a necessity of leadership. Leaders must weigh the multitudinous factors involved, while understanding that no one can predict the future with certainty. Inability to deal with uncertainty precludes an organisation from achieving its goals (Fernald *et al.*, 2005:4).

- **Strategic initiatives**

Leaders must have a vision and plan for beyond a year or two in order to achieve long-term success. Entrepreneurial leadership has been coined by those who realise that a change in leadership style is necessary in order businesses, large and small, to be competitive with the rest of the world.

Organisations are undergoing paradigm shift rather than linear change. On such paradigm shift is from “producer mentality” that instructions to an “entrepreneurial mentality” that seeks results. This has lead to structural changes in organisation and new ways of doing business (Fernald *et al.*, 2005:4).

For the purpose of this study, the variable *entrepreneurial leadership* refers to whether the organisational leadership has received enough and relevant training and whether they are competent to implement and promote corporate entrepreneurship.

2.4.2 Management support

Bhardwaj, Agrawal & Momaya (2007a:133) stated that managers have been recognised as an important asset within the heterogeneous constellation of assets and capabilities, required in the implementation of almost all strategies. As a management team may be valuable, rare, imperfectly imitable and non-substitutable, the attribute of the management team may satisfy the conditions for achieving and maintaining competitive

advantage. The role of the management is not only direct, but also influential, shaping managerial processes and resources deployments.

Management support is a measure of the manager's willingness to facilitate and promote entrepreneurial activity in the organisation. This support can take on many forms, including championing innovative ideas, providing necessary resources or expertise, and institutionalising the entrepreneurial activity within the organisation's system and processes (Bhardwaj *et al.* 2007a:134).

Since it is the central task of managers to motivate employees to behave in the interest of the organisation, managers need to display the appropriate emotions depending on the actions they want employees to perform (Bhardwaj *et al.*, 2007a:134). Enhancing employee's willingness to act entrepreneurial is important for organisations for a number of reasons. First, acting entrepreneurially is essential for any organisation to create new knowledge and transform it into marketable products and services. Secondly, in order to respond to certain environmental conditions such as hostility and dynamism, organisations must pursue an entrepreneurial strategic posture and engage in corporate entrepreneurship; moreover, an entrepreneurial mindset of employees allows for the identification of new, uncertain, and high potential business opportunities which the organisation may miss (Brundin, Patzelt & Shepherd, 2006:225).

Management support is defined as the willingness of management to promote entrepreneurial behaviour; including the championing of innovative ideas and providing the resources people require taking entrepreneurial actions. Management support has been measured by receptivity (to employees' ideas), promoting innovative ideas, management encouragement, financial support, awarding ideas, and unconditional support, (Bhardwaj, Agrawal & Momaya, 2007b:51).

Bhardwaj and Momaya (2006:41) stated that management support in corporate entrepreneurship can be enhanced by the following:

- Recognition and publicity is given to improve the 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 the departments and divisions.
- Work group, departmental and divisional goals are all aligned and directly related to improving customer service and customer experience.
- A percentage of company's profits are shared with employees to encourage them to make understand their efforts' contribution to the company's competitive edge.

Management involvement as well as top management encouragement and rewarding of venture activities are felt to be important for corporate entrepreneurship. Organisational support in terms of training and trusting individuals within the organisation to detect opportunities has been proposed to positively influence an organisation's entrepreneurial behaviour. Organisational support in terms of resource availability has been identified as an important driver of the entrepreneurial activities of established organisations. In addition to a supportive organisational internal environment, availability of financial resources for corporate entrepreneurship has been given special attention. Management support including training and rewarding of employees, and establishing procedures for dealing with new ideas to foster creativity and innovation as part of corporate entrepreneurship construct dimension(strategic renewal) rather than considering them as antecedents of corporate entrepreneurship (Antonic & Hisrich, 2003:526).

Therefore, creating an organisation of entrepreneurial leaders at every level takes a focused, concerted and long term effort to shape the organisation's structures and processes. If the systems and processes that support taking initiative are not in place, then it will never take root. One of these is a clear entrepreneurial vision, reinforced

constantly. Company leaders need to articulate an aspiring future, in which the organisation makes an important difference for customers or community, and then use that vision repeatedly to guide decisions, inspire commitment, and motivate action (Cohen, 2004:2).

Epstein and Roger commented that for a manager to effectively manage corporate entrepreneurship within the organisation, he must possess the following ten competencies of a skilled manager:

- Manager rewards by providing positive and constructive feedback, recognising achievements and rewarding good performance.
- Communicates effectively by soliciting ideas and feedback, presenting a clear vision of the future and seek to inform, educate and inspire.
- Manages teams effectively by composing teams wisely and helping them to function smoothly and optimally.
- Manages the environment by creating and maintaining an attractive, functional work space and encouraging healthy relationship.
- Matches skills by identifying people's skills and assigning tasks appropriately.
- Identifies people who thrive on challenges, and seeks to push them beyond their current limits.
- Identifies skill levels and provide ongoing training to enhance a wide variety of skills.
- Identifies conflicts and resolve them before they escalate.
- Allocates resources in ways that people perceive as both generous and fair and
- Demonstrate high motivation by demonstrating energy, commitment and enthusiasm in their work.

For the purpose of this study the variable *management support* includes whether corporate entrepreneurship is supported from top management, and whether top management is committed to the implementation and fostering of corporate entrepreneurship.

2.4.3 Sponsors for projects

Corporate sponsors, who can be either line or staff executives, bring credibility and clout to new ventures, while operating sponsors, who are drawn from particular businesses, divisions, or groups, contribute organisational savvy and foster acceptance. Together, they are likely to give the right mix of freedom and discipline to new business, and to balance identity with integration (Garvin & Levesque, 2006:109). Such sponsorship helps overcome the problem of a long and uncertain gestation period. Organisations with dual sponsorship, signal that the new business is a long-term commitment and that they have already given thought to its transition to maturity.

For the purpose of this study the variable *sponsor for project* refers to whether resources are made available in pursuance of new projects; whether the organisation has set aside funds for research and development, which will encourage entrepreneurial employees to be involved in new projects.

2.4.4 Tolerance for risks, mistakes and failure

Underlying various definitions of risk is the notion of decision making under uncertainty. The South African Society of Risk Managers (1994:3) defines risk as 'the presence of uncertainty measured as a variation from present outcomes of a given situation'. It is the exposure to the possibility of economic or financial loss or gain, physical damage or injury, or delay as a consequence of the uncertainty associated with pursuing a particular course of action.

Risk allocation is the process whereby each potential and major risk in a project is identified in a project and allocated to one of the participants in the project (The South African Society of Risk Managers 1994:3).

Bulut and Alpan (2006:66) cited that allowance and encouragement of employee risk taking requires more than delegation of autonomy; mutual trust and commitment depend

heavily on the emotional attachment of the entrepreneurs to their organisation, in addition to their ability and integrity.

There's no faster way to stop employee initiative dead in its tracks than to punish employees who makes honest mistakes when they try something new, or run into unforeseeable barriers. There should be no penalties for failure, unless they are repeated. As long as they do their homework, use sound business reasoning and try to benefit the organisation, employees shouldn't be penalised for taking risks on new things, they should be supported and applauded (Cohen, 2004:3).

For the purpose of this study the variable *tolerance of risk, mistakes and failure* includes whether the organisational environment has been built to support taking of calculated risks at the right time and whether the organisation valued the management of projects involving risks and unpredictability.

2.4.5 Innovation and creativity (new ideas encouraged)

High demands are made on organisations in turbulent economic environments – they continually have to innovate to remain competitive and maintain the organisation's wellbeing (Van Wyk & Adonis, 2008:392).

Innovativeness at the corporate entrepreneurial level is closely linked to the market orientation and flexibility of the organisation. An organisation's market orientation refers to the organisation's implementation of the marketing concept through its intelligence generation, dissemination and responsiveness; and market orientation is defined as the effective and efficient management of the organisational culture that promotes behaviours leading to superior value which is received by customers (Christensen, 2006:1161).

This implies superior performance by the business, and such performance is based on customer oriented inter-functional, competitor-oriented and long-term-oriented inter-

functional coordination with profit as its goal. An organisation's market orientation refers to the culture in an organisation that most effectively and efficiently develops the kind of behaviour that are necessary for the creation of superior value for buyers and thus for continuous superior performance of the business (Van Wyk & Adonis, 2008:392).

Christensen (2006:1161) commented that over the years entrepreneurs have shown that new ideas can form a basis for new organisations and that these organisations can sometimes grow rapidly and be highly profitable. While, many organisations have been successful in maintaining innovativeness, creativity, and an entrepreneurial spirit, many organisation have great difficulty in maintaining their initial recklessness, to which established organisations are often vulnerable.

The ability to continuously innovate, also for well established organisations, is thus becoming increasingly important, not only for organisations' competitive advantage, but also for their survival. Thornberry (2001:1) indicates that many large organisations are seeking ways of reinventing or revitalising their entrepreneurial roots. In doing so the organisations often long for some of the spark, innovation, speed and risk taking that they once had, but which have slowly eroded under the weight of size, bureaucracy, complex processes and hierarchy.

McFadzean (2005:353), as quoted by Christensen (2006:1161), highlighted that a number of process models have been developed in the literature suggesting that innovation consists of a variety of different phases: idea generation, research design and development, prototype production, manufacturing, marketing and sales. However theorists have suggested that there is more to innovation than the process. Consideration must be given to the product so that the organisations can evaluate their success (or failure). The most important, as well as consistent, factors to emanate from innovation literature focus on the product, that is, new ideas and the potential for improvement through change .

For the purpose of this study *innovation and creativity (new ideas encouraged)* refers to whether the organisation allows employees to become innovative and creative; and whether the organisation provide such employees necessary support (resources) to investigate and implement such new ideas.

2.4.6 Appropriate rewards and reinforcement

Reinforcement theory states that behaviour is a function of its consequences. Positive consequences are referred to as reward, and negative consequences are referred to as punishment. The basic principle of reinforcement state that behaviour followed by pleasant consequences is more likely to be repeated and that the behaviour followed by unpleasant consequences is less likely to be repeated (Hellriegel, Jackson & Slocum, 2003:380).

Some common positive reinforce used by the organisation are praise, recognition of accomplishment, promotion and salary increase. Most people regard these consequences as desirable. Staying really late, meeting a deadline that seemed impossible, and helping a colleague when it wasn't required are examples of the good citizenship that the organisation encourages. It rewards such behaviour by sending the employee a thank you card and enclosing a cash bonus of a few hundred dollars (Hellriegel *et al.*, 2003:382).

Cummings and Worley (2001:394-395) quoted that based on value, rewards depend on these six expectancy theory, the ability of rewards to motivate desired behaviour factors:

- **Availability.** For rewards to reinforce a desired performance, they must be not desired but also available. Too little of a desired reward is no reward at all, e.g. pay increase are often highly desired but unavailable. Moreover, pay increase that are below minimally accepted standards may actually produce negative consequences (Cummings & Worley, 2001:394).

- **Timeliness.** Like effective performance feedback, rewards should be in a timely manner. A reward's motivating potential is reduced to the extent that it is separated in time from the performance it is intended to reinforce (Cummings & Worley, 2001:394).
- **Performance contingency.** Rewards should be closely linked with particular performances. If the goal is met, the reward is given; if the target is missed, the reward is reduced or not given. The clearer the linkage between performance and rewards, the better able rewards are to motivate desired behaviour (Cummings & Worley, 2001:395).
- **Durability.** Some rewards lasts longer than other. Intrinsic rewards, such as increased autonomy and pride in workmanship, tend to last than extrinsic rewards. Most people who have receives a salary increase realise that it gets spent rather quickly (Cummings & Worley, 2001:395).
- **Equity.** Satisfaction and motivation can be improved when employees believe that the pay policies of the organisation are equitable or fair. Internal equity concerns comparison of personal rewards to those holding similar jobs or performing similarly in the organisation. Internal inequities typically occur when employees are paid a similar salary or hourly wages regardless of their performance. External equity concerns comparison of rewards with those of other organisation in the same labour market. When organisation's reward level does not compare favourably with the level of other organisation, employees are likely to feel inequitably rewarded (Cummings & Worley, 2001:395).
- **Visibility.** To leverage a reward system, it must be visible. Organisation members must be able to see who is getting the rewards. Visible rewards, such as placement on a high-status project, promotion to a new job, and increased authority, send signal to employees that rewards are available, timely, and performance contingent (Cummings & Worley, 2001:395).

For the purpose of this study, the variable *appropriate rewards and reinforcement* refers to whether innovative employees receive extra rewards for completed projects and are compensated for ideas and efforts beyond the standard reward system,

2.4.7 Vision and strategic intent

Teng (2007:119) explained that the past decade has witnessed high rates of change in the market place, in areas such as technology, globalization, and industry boundaries. To be successful, an organisation must have the capacity to innovate faster than its best competitors. Essentially, this capacity is about identifying new ways of doing business, developing new technologies and products, and entering new markets in new form.

While entrepreneurship has been traditionally viewed as being individual-level activities related to creating new organisations, the notion of corporate entrepreneurship extends the idea of being bold, proactive and aggressive to established organisations. Thus, corporate entrepreneurship becomes an integral part of strategic management of an organisation (Burgelman, 1983:1350).

Strategic renewal is an organisation's transformation in terms of changing its scope of business or strategic approach. The success of strategic renewal critically depends on obtaining new resources and capabilities. According to Guth and Ginsberg (1990:6), strategic renewal is 'the creation of new wealth through new combinations of resources'. To re-deploy existing resources towards a different approach for doing business, an organisation often needs to introduce new elements into its resource profile. While tangible resources may be needed to carry out new activities or develop a new image, intangible resources such as knowledge may be needed to formulate a turnaround or restructuring strategy (Teng, 2007:135).

A large, diversified organisation needs both order and diversity in strategy for their continual survival. The role of entrepreneurial activity is to provide the required diversity. Whereas order in strategy can be achieved through planning and structuring, diversity in

strategy depends on experimentation-and-selection. The task of strategic management is to maintain an appropriate balance between these fundamentally different processes. These insights have implications for the design of organisational arrangements and for the development of strategic managerial skills (Burgelman, 1983:1350).

Organisations also are likely to generate a certain amount of autonomous strategic behaviour. From the perspective of the organisation, autonomous strategic behaviour provides raw material- the requisite diversity for strategic renewal. As, such, autonomous strategic behaviour is conceptually equivalent to entrepreneurial activity generating new combinations of productive resources in the organisation. It provides the basis of radical innovation from the perspective of the organisation (Burgelman, 1983:1350).

Even with the support from the directors and senior executives, not all corporations are able to enhance corporate entrepreneurship efficiently. As a matter of fact, the corporate strategic entrepreneurial management is very important in efficiently heightening the corporate entrepreneurship. In practice, it's a vital element in cultivating corporate entrepreneurship because the entrepreneurial activities depend on the corporate strategic entrepreneurial management (Burgelman, 1983:1350).

For the purpose of this study the variable *vision and strategic intent* refers to whether the organisation vision and strategy are inspired and supported by corporate entrepreneurship and whether the strategy of the organisation are clarified and communicated to all.

2.4.8 Resource availability

An organisation's corporate entrepreneurship activities have significant resource implications, which usually include a resource gap. The reason is that an entrepreneurial organisation pursues opportunities, regardless of resources currently controlled. The whole point of corporate entrepreneurship is to seek opportunities to stretch the

resource base of the organisation without entirely breaking with the resource base (Teng, 2007:122).

Barringer *et al.* (1998), Dougherty (1995), as quoted by Teng (2007:122), also highlighted that an entrepreneurial organisation often focuses on expanding as quickly as possible, although it may not possess all needed resources. Such organisations are viewed as risk taking and aggressive, precisely because its action is not limited by its current resources (Teng, 2007:122).

Organisational support in terms of resource availability has been identified as an important driver of entrepreneurial activities of established organisations and most managers agree that the term entrepreneur refers to entrepreneurial activities that receive organisational sanction and resource and resource commitment for the purpose of innovative results (Antoncic & Hisrich, 2004:526).

For a new and innovative idea to thrive, individuals should have time to incubate their ideas. Organisations should be reasonable in assigning the workload of their employees to work with others on solving long-term problems. In entrepreneurial work environments, employees are allowed to conduct creative, entrepreneurial experiments in a limited portion of their work time (Antoncic & Hisrich, 2004:526).

For the purpose of this study the variable *resource availability* refers to whether the organisation makes resources available for the implementation of innovative and creative ideas and whether resources are available and accessible at the right time when needed.

2.4.9 Discretionary time and work

Work discretion refers to the degree of autonomy given for entrepreneurial effort (Bhardwaj *et al.*, 2006a:136), therefore, there is a need for creating autonomous work units for encouraging independent action. However, their effectiveness may be

jeopardised by a lack of coordination and sustained support from upper management. Excessive decentralisation may create inefficiencies such as duplication of effort and wasting of resources on projects with questionable feasibility.

Work discretion has been measured by autonomy in work method, judgment, abilities and decision making (Hornsby, Naffziger, Kuratko & Montagnor, 2002:51). Time availability is defined as evaluating workloads to ensure that individuals have the time needed to pursue innovation and their job are structured in ways that support efforts to achieve short- and long-term organisational goals. Availability of time has been measured by the design of work method and workload.

For the purpose of this study the variable *discretionary work and time refers* to whether innovative employees are given extra time to work on innovative and creative ideas and whether they receive enough support and guidance from management.

2.4.10 Empowered team, multi disciplined teamwork and harnessing diversity

Katzenbach (1992), as quoted by Caccioppe (1999:322), commented that there is an increasing shift to the use of teams in developed countries. First, organisations are downsizing and using teams as a way to make better use of the skills of the workforce. Secondly, there is a marked shift away from directive, hierarchical leadership structures to more participative equality among group members. Thirdly, technology, competition and customer expectation require that organisations are highly adaptive to customer requirements (Cacioppe, 1999:322).

Using empowered front-line staff that functions in teams is the best way to provide rapid response changes in customer needs as they occur. Organisations therefore need to take a holistic approach to teams. The organisation's business strategy and goals need to be supported by the team culture, the team roles and key competencies, and reward systems.

It is important, therefore, that the reward strategies are regularly modified and aligned to meet business strategies and goals in keeping with the culture and the competencies required (Cacioppe, 1999:323).

Johnson and Johnson, (1997) discussed five characteristics that lead to high team performance. These are:

- “We instead of me” positive interdependence. This occurs when each team member perceives that he or she is linked in such a way that they cannot succeed without the other members of the team. This can occur through outcome interdependence on goals or rewards or the use of resources, roles or tasks that are dependent on each other.
- Personal responsibility/accountability. Each member has to have a sense of personal responsibility for contributing an effort to accomplish the group’s goals. This involves completing one’s share of the work and facilitating the work of other group members. This is best made tangible when the performance of each person is assessed and the results given back to the individual and the group.
- Interpersonal and group skills. Research also shows the level of interpersonal and small group skills of members greatly influences the level of team achievement and productivity. Good interpersonal skills provide more feedback to team members and build more positive relationship between team members.
- Promotive personal interaction. In high performing teams, individuals go beyond just having good interpersonal and team skills. They also promote, encourage and facilitate one another’s efforts and wellbeing in order to achieve success. Promotive personal interaction occurs when a team member:
 - Provide others with efficient and effective members.
 - Exchange resources and information effectively.
 - Provide one another with useful feedback.

- Challenging one another's conclusions and reasoning in order to provide deeper insight into the problem and high quality decision making.
- Encourage one another to make more effort to achieve mutual goals.
- Acting and trusting in trustworthy ways and
- Feels less anxiety and stress with one another.
- Review of team process. The last element in successful team performance is that a team makes time to reflect on:
 - What member actions were helpful and unhelpful in achieving the group's goals and maintaining working relations; and
 - Make decision about what actions to continue or change.

The key aspect to successful team processing are allowing sufficient time for the review to take place, making the review specific rather than vague, maintaining member involvement in processing, reminding members to use their interpersonal and group skills and ensuring the purpose of the team processing is clear (Cacioppe,1999:324).

The crucial role played by teams of top management and middle management in building coalition to support innovation ideas and creative individuals, entrepreneurial teams must create an environment of trust and loyalty for improving team commitment. Additionally, entrepreneurs should collectively formulate an agreed-upon system of team interaction that not only would ensure that each member proposed different approaches, points of views, alternatives, among others, but would also encourage members to compare the diverse alternatives and approaches and weighs them against each other (Chowdhury, 2004:728).

For the purpose of this study the variable *empowered team, multi disciplined teamwork and harnessing diversity* refers to whether the organisation empower teams to start and

finish projects on their own without going through elaborative justification, approval procedures and stringent supervision methods.

2.4.11 Workplace autonomy and freedom

Enhancement of autonomy allows the entrepreneurs who are intent on innovation to pursue risky but innovative projects and with the support of organisational resource including time allocated specifically for these types of projects, to enliven an entrepreneurial climate within the organisation. Allowance and encouragement of employee risk taking requires more than the delegation of autonomy, mutual trust and commitment depend heavily on the emotional attachment of the entrepreneurs to their organisation, in addition to their ability and integrity (Hornsby *et al.*, 2002:29).

The other organisational factor nurturing corporate entrepreneurship activities is the degree to which employees are empowered and function autonomously in their job. This factor refers to the discretion with which, and the extent to which, employees are empowered to make decisions about performing their own work the way they believe is most effective. In entrepreneurial work environments, employees are allowed to make the innovative process (Hornsby *et al.*, 2002:29). This tolerance of failure should breed innovative, proactive and risk taking behaviours among employees.

For the purpose of this study the variables *workplace autonomy and freedom* refers to whether individual employees are given to freedom and autonomy to carry out his or her job to the best of his or her ability without stringent supervision.

2.4.12 Customer orientation

Customer orientation believes that customer's needs and satisfaction are the priority of an organisation. It focuses on dynamic interaction between the organisation and customers as well as competitors in the market and its internal stakeholders. Moreover,

Deshpande *et al.* (1989), treat customer orientation and market orientation as interchangeable concepts (Liu, Lou & Shi, 2001:369).

Marketing's role in an organisation has been considered from cultural perspective. Other scholars have also asserted that market orientation is a particular form of business culture and it may lead to a high level of organisational learning.

Liu *et al.* (2001:369) commented that when controlling for various organisational cultures, such as market, adhocracy, clan, and hierarchy, find that customer orientation and innovativeness are key determinants for business performance. When examining the issue in the china context, Sin *et al.* (2000:39) indicate that only the component of customer orientation of the market orientation has a positive and significant association has a positive and significant association with performance variables (Liu *et al.*, 2001:369).

For the purpose of this study the variable *customer orientation* refer to whether a great deal of resources are spent in determining customer needs and satisfaction.

2.4.13 Continuous learning and cross-functional learning

According to Dodgson (1993:377), organisational learning can be described as the ways organisations 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 workforce.

Organisational learning refers to organisational acquisition and retention of knowledge, and improvement in organisational routines. This can be viewed as routine-based, history-dependent and target oriented and plays an important role in the development of dynamic capabilities.

According to Zahra *et al.* (1999:173), organisational learning can be classified into two types: acquisitive and experimental. Acquisitive learning occurs when the organisation acquires and internalises knowledge that pre-exists external to its boundaries. Although this knowledge may not provide an immediate distinctive advantage to the organisation, its absence can cause sub-par organisational performance. Even through acquisitive learning can improve the organisation, it does not always offer a basis for building or extending its competencies. Learning activities identified by Hurber (1991) as “vicarious,” ‘grafting,’ and “‘search and notice’ falls within acquisitive learning.

Experimental learning, however, happens largely internally and generates new knowledge that is distinctive to the organisation. It usually involves individuals (or groups) who have the discretion to experiment and a process that translates individual (group) experiences into organisational knowledge. Despite the importance of acquisitive learning it is clearly within experimental learning that corporate entrepreneurship activities may have the greatest potential to create or reinforce the organisation’s competitive advantage (Zahra, 1999:173).

For the purpose of this study the variable *Continuous learning and cross-functional learning* refers to whether employees are given the opportunity to learn continuously to keep them abreast with the ever changing technology and turbulent external environment.

2.5 ESTABLISHING CORPORATE ENTREPRENEURSHIP IN AN ORGANISATION

2.5.1 The necessity of corporate entrepreneurship

Aloulou and Fayolle (2004:24) indicate that the need for corporate entrepreneurship has arisen from a variety of pressing problems among larger organisations, including stagnation, decline, weakness of managerial practice and turnover of innovative-inclined employees who were constrained by the bureaucratic inertia of their organisations. Pursuing corporate entrepreneurship at the established organisations

level create a serious challenges for large organisations as well as small ones intending to prosper and flourish in competitive environment. Corporate entrepreneurship is recognised as a potentially viable means of promoting and sustaining competitiveness, and transforming corporation and industries into opportunities for value-creating innovation.

The technological development and the scarcity of the resources alone endanger the stability and predictability of the market. To face fierce competition, organisation must review practices and actively search for new ways of practicing flexibility, increasing their capacity of innovation and showing more competitiveness. The strengthening of entrepreneurship is an important objective for any organisation that is building its responsiveness to a globalised and changing environment. Drucker (1995) indicates in Aloulou and Fayolle (2005:22) that today's organisations will not even survive in this time of rapid mutation and innovation if they do not maintain an entrepreneur's efficiency (Van Vuuren *et al.*, 2009:332).

Corporate entrepreneurship and the proactive, entrepreneurial behaviour through which it is practiced is used in established organisations for a host of purposes in addition to innovation, including increased profitability, strategic renewal, gaining knowledge to develop future revenue streams, international success and the effective configuration of resources as a pathway to developing competitive advantage and as a separate identifiable strategy (Kuratko, Ireland, Coven & Hornsby, 2005:699).

2.5.2 Developing and implementing corporate entrepreneurship in an organisation

Antoncic and Zorn (2004:7) point out that one important organisational element is beneficial to corporate entrepreneurship is organisational and management support for entrepreneurial activities. This support includes top management involvement, encouragement, commitment and style as well as the staffing and rewarding of venture activities. Organisational support has been seen as an important predecessor of

corporate entrepreneurship. In particular, support in terms of training and trusting individuals in the organisation to detect opportunities and in terms of resource availability has been proposed to ensure a positive influence on organisational entrepreneurial activities and behaviour.

Recently there has been a growing interest in the use of corporate entrepreneurship as a means for organisations to enhance the innovative abilities of their employees and, at the same time, increase corporate success through the creation of new corporate ventures. However, the creation of corporate entrepreneurship activity is difficult since it creates a newer and potentially more complex set of challenges on both a practical and theoretical level (Hornsby, Naffziger, Kuratko & Montagno, 1993:29).

On practical level, organisations need guidelines to direct or redirect resources toward establishing effective corporate entrepreneurship strategies. On theoretical level, researchers need to continually reassess the components or dimension that predict, explain, and shape the environment in which corporate entrepreneurship flourishes. While there have been numbers of studies focusing on various factors contributing to or enhancing the establishment of corporate venturing (Hornsby *et al.*, 1993:29).

The findings of the research conducted by Antoncic and Zorn (2004:11) indicate that corporate entrepreneurship (new organisation formation, product/service and process innovation) can be considered a potent mediator in the organisational support-performance relationship. Organisational support can probably be viewed as an important predecessor, or even a necessary condition, for developing corporate entrepreneurship activities and subsequent improvement in organisational growth and profitability. Both corporate entrepreneurship activities and organisational support of these activities are important for subsequent performance improvements. In order to foster corporate entrepreneurship, managers need to ensure that they encourage other members of the organisation; enable worker discretion about work-related decisions; ensure the permeability of job boundaries, training, rewards and reinforcement; and

promote the availability of time and financial resources for pursuing new ideas or projects (Van Vuuren *et al.*, 2009:333).

Kuratko and Hodgetts (2004:63) suggest that to structure the organisation for a corporate entrepreneurial climate, organisations need to invest heavily in entrepreneurial activities that allow new ideas to flourish in an innovative environment as a way for organisations to develop key environmental factors for entrepreneurial activity, a corporate entrepreneurship training programme often induces change needed in the work atmosphere.

Toftoy and Chatterjee (2005:15), as quoted by Kuratko and Hodgetts (2004:63) stated that corporate entrepreneurship training within the organisation will separate organisations from their competitors. The corporate entrepreneurship training programme is a way of launching intrapreneur teams, via intrapreneurship workshops or seminars. A typical workshop could include idea creation and nurturing the idea, researching the specific target market, competitor analysis, ways of developing funding support, selling tips, organising an intrapreneurial team and business planning.

2.6 PERCEIVED SUCCESS OF THE ORGANISATION

Corporate entrepreneurship can make a significant difference to an organisation's ability to compete. It can be used to improve competitive positioning and transform organisations, their markets, and industries when opportunities for value-creating innovations are developed and exploited. The key benefit of corporate entrepreneurship may be to push organisation employ a range often in unique combination. By doing so, organisations build layers of advantage by combining distinctive bases for competitive superiority (Ramachandran, Devarajan & Ray, 2006:87).

2.6.1 Financial measures

Big companies are turning towards corporate entrepreneurship because they are not getting the continual innovation, growth and value creation they once had. Organisations usually want cadre of corporate entrepreneurship to identify and develop spin-ups (innovation in current businesses that can lead to substantial growth opportunities) or to create an environment where more innovation and entrepreneurial behaviour is evidenced (Thornberry, 2001:526).

Financial returns resulting from 'new things' are predicted to be better than the returns resulting from current resources. Otherwise, organisations would turn their assets into cash and put money in savings accounts or secure investment instruments. Current interest in corporate entrepreneurship from its potential usefulness as a means for renewing established organisations and increasing their ability to compete in their chosen market.

Covin and Slevin (1991), as quoted by Zahra and Covin (1995:46), suggest that the growing interest in the study of corporate entrepreneurship is a response to the belief that such activity can lead to improved performance in established organisations. It was also suggested by Schollhammer (1992:210) as quoted by Zahra and Covin (1995:46) that corporate entrepreneurship is the key element of gaining competitive advantage and consequently greater financial rewards; and undertaking corporate entrepreneurship activities improves an organisations' financial performance.

From a theoretical perspective, there are at least two reasons for expecting a positive and increasing relationship between corporate entrepreneurship activities and subsequent organisation performance. First, consistent with the arguments made by Miller and Friesen (1984), Pinchot (1985) as quoted by Zahra and Covin (1995:47), innovativeness can be a source of competitive advantage for an organisation. Innovative organisations frequently develop strong, positive market reputations that ensure

customer loyalty. They also monitor market changes and respond quickly, thus capitalising, thus capitalising on emerging opportunities.

Importantly, sustained innovation can increasingly distance entrepreneurial organisations from their industry rivals, thereby resulting in positive and growing returns to the entrepreneurial organisations. Second, the fact that organisations which pursue corporate entrepreneurship are proactive by definition often allows them to exploit an additional basis for competitive advantage that is, quick market response or the availability of a market offer ahead of competitors (Zahra & Covin, 1995:47).

2.6.2 Customer/market measures

The external environment has historically been viewed as a determinant of entrepreneurial activity at both the individuals as well as the organisational level. Researchers building contingency models or using frameworks to explain and predict corporate entrepreneurship and its outcomes tend to incorporate, in addition to internal variables, a set of external environmental variables ((Zahra & Covin, 1995:47).

2.6.3 Process measures

Corporate entrepreneurship processes refers not only to creation of new business ventures, but also to other innovative activities such as development of new products, services, technologies, administrative techniques, strategies and competitive postures of Corporate entrepreneurship entail several steps including the discovery and recognition of opportunities, information search and the acquisition and accumulation of resources (Bhardwaj *et al.*, 2006a:134).

This suggests that a focus on the discovery, acquisition and accumulation of various kinds of resources is likely to improve our understanding of the process of new value creation by organisations. This view on the creating process is intrinsically linked to the assets, processes and performance perspective since it emphasises organisation specific

assets and capabilities ('assets') as fundamental determinants of different instances of organisations value creation. The more valuable, rare, imperfectly imitable and non-substitutable these assets are, the more important the competitive advantage built on these resources will be (Bhardwaj *et al.*, 2006a:134).

2.6.4 People development

Personal growth and career may often go hand in hand. Defining how someone's career may change often is dependent on personal circumstances, as opposed to typical career path planning. Management's role in career development has undergone significant changes in recent years. It has gone from paternalism in which organisations took responsibility for managing its employees' careers, to supporting individuals as they take personal responsibility for their future (MacDonald, 2005:163)

However, Ravasi *et al.* (2004:166) believe that the specific type of learning that underlies and sustains the development of a new way of connecting resources, technologies and needs in a value-generating way is a distinctive feature of entrepreneurship. Entrepreneurial innovation is about discovering and exploiting opportunities for new valuable combinations of resources that lead to the introduction of new products or services, new production processes or new ways to serve the market.

The exploration of new combinations of resources is a qualifying feature of entrepreneurial action. Learning in an entrepreneurial venture has a creative component that goes beyond repetition and incremental optimization; it occurs in ambiguous contexts and often involves the development of completely new solutions or radically innovative products. Successful entrepreneurial innovation requires an increasing understanding of context of use and functional implications of alternative solutions (MacDonald, 2005:168).

Many of the positions and managerial processes constructs were originally developed in an era when physical, financial and labour resources ('tangible assets') were the key

resources to create entrepreneurial advantage. Intangible resources (e.g. information, trust, reputation, knowledge of customer preference) have received far less attention in empirical research. Focusing exclusively on tangible resources leads to passing over the importance of knowledge-related or competence-based resources (such as human, social and intellectual capital) in attaining competitive advantage (Bhardwaj *et al.*, 2006:135).

2.7 SUMMARY

The concept of entrepreneurship has sparked in-depth research and has touched many schools of thought. Entrepreneurship within established organisations has been researched for a few decades, and the impact of entrepreneurial behaviour for the future existence of an organisation, is dependent on people within the organisation.

People who can see an opportunity where others see chaos, people who take calculated risk to make an idea work, people who act as catalyst to makes things work during times when others wait for things to happen. Different definition of entrepreneurship and corporate entrepreneurship have seen light over the years, but the golden thread that weaves these definitions together is doing thing differently to achieve a different and a more successful outcome.

The importance of entrepreneurship in an economy is unanimously accepted, although some variation in opinion exists regarding the exact mechanism through which entrepreneurship influences an economy and the measurable influence thereof.

Purely by looking at the definition and dimensions of corporate entrepreneurship, the observer might distinguish it with confidence from other initiatives such as product diversification, organisational learning or even simply effective management. Therefore some authors prefer to contrast corporate entrepreneurship with other prevalent corporate endeavours in order to aid in clarifying the concept. It is held that corporate entrepreneurship shows a large degree of similarity with other management concepts,

but can be discerned on the key principles in order to stand alone as an independent and important concept.

Finally, it was found that corporate entrepreneurship cannot be regarded as a fix-all corporate remedy, but should be managed judiciously to ensure that unintended negative consequences do not outweighs the benefits of corporate entrepreneurship.

CHAPTER 3

AN OVERVIEW OF THE GOLD MINING INDUSTRY IN SOUTH AFRICA.

3.1 INTRODUCTION

Gold was discovered in the Witwatersrand in 1886, and it soon became evident that the area covered the world's largest and richest gold deposit. Despite the mining of over 50,000mt of gold, approximately one third of the gold in existence on the world's surface, reserves remaining in the Witwatersrand area are estimated to be some 40 000 million tons (mt), of which between 8 000 million tons and 10 000 million tons are thought to be economically recoverable, depending on the gold price and cost scenarios applied.

The discovery of gold in the Witwatersrand changed the face of mining in South Africa. No longer could gold be recovered by simple panning, as the gold was embedded in deep level rock and high level technology was needed to be able to extract and recover it. This meant that mining gold required huge sums of capital, and only large-scale mining companies could continue mining under these conditions (Short & Radebe, 2008:3).

A major challenge facing the South African mining industry continues to be the attainment of sustainable improvements in health and safety performance. Falls of ground and transportation accidents are still major causes of fatalities despite a gradual decrease over recent years. However, fatalities have increased within transportation and machinery, explosives and in general mining operations. Occupational diseases amongst mineworkers remain unacceptably high and include silicosis (pneumoconiosis), mesothelioma, tuberculosis, and asbestosis. Noise-induced hearing loss continues to be a serious affliction amongst mineworkers (Mine Health and Safety Council, 2008:2).

South Africa has since become the largest gold exporter worldwide. Despite declining production volumes, the gold mining sector still contributes over 8% of the country's export earnings and 1.1% of GDP. Gold mining has played a major role in the establishment of infrastructure in South Africa, on foreign exchange and on employment and has led to the establishment of metropolitan centres such as Johannesburg, Welkom, Orkney, Springs, Benoni, Witbank and Klerksdorp. The South African gold mining industry employs substantially more people than in other gold mining countries because it is engaged in deep-level, hard rock, underground mining which is labour intensive (Short & Radebe, 2008:3).

Even so, there have been considerable job losses in mining as a result of mine closures and changing work patterns in the sector. In the last five years, numbers employed in the gold mining industry fell by around 8% per year on average. Job losses have been specific to gold mining and have not occurred to the same extent in other extractive mineral industries. Employment in the gold mining sector declined from 180 039 employees in 2004, to 160 634 in 2005, and then to 159 984 in 2006. This is in comparison with a high of 530 622 reached in 1987. Despite the declining employment levels, gold mining still accounts for the largest proportion of employees by far in the gold value chain (95.33%) (Short & Radebe, 2008:31)

Production in 2005 and 2006 was dominated by five publicly listed gold mining entities, namely AngloGold Ashanti, Gold Fields, Harmony, DRDGOLD and Western Areas, (Short & Radebe, 2008:30).

South Africa is the third largest gold producer in the world behind China and USA but only marginally ahead of fourth placed Australia. According to the Who Owns Whom report on Mining of Gold and Uranium Ore – SICC 23000, the Chamber of Mines reported that the output of South Africa's gold mines dropped 13.6% to 220 127kg in 2008 the lowest level of production since 1922. The closure of the country's gold mines between January 24, 2008 and January 31, 2008, owing to electricity supply problems,

marked the first closure of the gold mining sector since the Anglo Boer War between 1900 and 1902 (Who owns whom, 2009:2).

3.2 CHALLENGES FACED BY MINING INDUSTRIES

In South Africa, industry had to contend with the energy crisis, which curtailed not only production but also prospects for growth. While the effect of the global financial crisis is perhaps more muted in the southern hemisphere, its impact has been felt in a massive contraction in demand for product and consequently in plummeting metals prices; in tightening debt and equity markets; and a clear aversion to perceived risk in developing economies and to smaller exploration projects. This has had a knock-on effect and projects have been delayed, mines and smelters have had their operations curtailed or suspended and jobs have been lost, some permanently (CSMI Annual Report, 2008:6)

The communities that rely on mining projects have also been affected. At times like these the issue of sustainability, in the truest sense of the word, becomes more important than ever. It underscores the importance of equipping people with the skills for lifelong employment and the development of the local economy in the areas where mining takes place so that communities can continue to flourish when mining contracts ceases altogether (CSMI Annual Report, 2008:6)

In addition it is the exclusive power source for vital health and safety related applications such as the pumping of water, ventilation and refrigeration. Most underground mines experience an inflow of groundwater. This water has to be pumped out to maintain safety in the workings. Some gold mines in South Africa are situated in an area where the ore body is overlain by water bearing dolomite strata. One such mine pumps some 70 mega litres of groundwater per day to the surface (Chamber of Mines, 2009:3).

The workings of mines are ventilated to remove dust and fumes and provide healthy atmospheres for workers. A survey of South African gold mines indicated that the average quantity of ventilating air circulated was some 6 cubic metres per second per

1000 ton of rock mined per month. A mine producing 200 000 tons per month would therefore circulate 1 200 cubic metres of air per second. That is 1.2 tons of air per second. The virgin rock temperature increases with depth. The rate of temperature increase, or the geothermic gradient, varies according to the type of rock and therefore differs from place to place (Chamber of Mines, 2009:3).

In the working places of the mine heat flows from the exposed rock surfaces to heat up the air. In order to provide a safe environment for workers in deeper mines it is necessary to cool the ventilating air. This is achieved by refrigeration plants which supplies chilled water that is in turn used to cool the air. A survey conducted in 1993 indicated that the installed refrigeration capacity in South African gold mines exceeded 1 400 mega watts (MW) of cooling power. In underground gold operations these health and safety applications may consume in excess of 55% of the total electricity used. On the average the cost of electricity in gold mines amounts to some 11. 4 % of the total working cost. In 1999 the mining industry consumed 31 352 giga watt hours (GWh) or 18. 4% of the electricity sold in South Africa (Chamber of Mines, 2009:3).

Through the years Eskom and the mining industry have developed a thorough understanding of each other's needs and concerns that resulted in formal agreements, negotiated through the Chamber of Mines, which provide benefits to both parties. For example Eskom will, in the case of shortages of electricity, as far as is reasonably possible, allocate the available electricity to the pumping, winding and ventilation requirements of mines. In return mines agree to shed load when Eskom experiences under-frequency conditions in its system (Chamber of Mines, 2009:3).

Because mines can control their electricity demand to some extent they are able to make use of tariff options that minimise their cost of electricity. These tariff options are Eskom's Mega flex time-of use tariff and Night save, a tariff that does not impose a demand charge during off-peak times, i.e. at night (Chamber of Mines, 2009:1).

Gold and platinum mines receive potable water from bulk providers, e.g. Rand Water, into reservoirs from where it is reticulated through the mining area. Wastewater is collected, treated and re-used or disposed of. Most mines undertake extensive treatment and recycling of water used for dust allaying, cooling and metallurgical processes. Only sufficient water is purchased to make up losses (Chamber of Mines, 2009:3).

The major industrial applications of potable water on mines are:

- Drinking water in the workings
- Dust allaying for occupational health purposes. This water must be clean so as not to pollute the atmosphere.
- Air cooling to prevent heat stress in workings. This water must be of sufficient purity to prevent fouling of heat exchangers.
- Metallurgical processes. The water must be sufficiently pure not to interfere with the process.

In addition most mines also distribute potable water to hostels and villages for drinking, cooking, ablution and sanitation. It is estimated that some 30% of the water purchased from Rand Water by mines is distributed for such domestic applications. These mines are therefore also water service providers as envisaged in the Water Services Act. (Chamber of Mines, 2009:5).

3.3 SHORT HISTORY OF ANGLOGOLD ASHANTI (AGA)

AngloGold Ashanti, as it conducts business today, was formed on April 26, 2004 following the business combination of AngloGold Limited (AngloGold) with Ashanti Goldfields Company Limited (Ashanti). AngloGold, formerly Vaal Reefs Exploration and Mining Company Limited, was incorporated in South Africa in 1944.

AngloGold Ashanti, headquartered in Johannesburg, South Africa, is a global gold company with a portfolio of long-life; relatively low-cost assets and differing ore body types in key gold producing regions. The company's 21 operations comprising open-pit

and underground mines and surface metallurgical plants are located in ten countries (Argentina, Australia, Brazil, Ghana, Guinea, Mali, Namibia, South Africa, Tanzania and the United States of America), and are supported by extensive exploration activities. The combined proven and probable Ore Reserves of the group amounted to 63.3 million ounces as at December 31, 2005.

3.4 AGA MANAGEMENT STRATEGY

The vision of AngloGold Ashanti is as follow:

*“To be **the leading mining company.**”*

“The single most important thing to understand about our business is that it is not about grades, processing plants and head gear. It is actually about people: People are the business... our business is people.”

The mission statement of AngloGold Ashanti:

“We create value for our shareholders, our employees and our business and social partners through safely and responsibly exploring, mining and marketing our products. Our primary focus is gold and we will pursue value creating opportunities in other minerals where we can leverage our existing assets, skills and experience to enhance the delivery of value.”

The vision and mission statement quoted from AngloGold Ashanti are supported by the following values also quoted from the charter:

- **Safety is our first value** – We place people first and correspondingly put the highest priority on safe and healthy practices and systems of work. We are responsible for seeking out new and innovative ways to ensure our workplaces are free of occupational injury and illness. We live each day for each other and

use our collective commitment, talents, resources and systems to deliver on our most important commitment – **to care**.

- **We treat each other with dignity and respect** – we believe that individuals who are treated with respect and who are entrusted to take responsibility respond by giving their best. We seek to preserve people's dignity, their sense of self-worth in all our interactions, respecting them for who they are and valuing the unique contribution that they can make to our business. We are honest with ourselves and others, and we deal ethically with all of our business and social partners.
- **We value diversity** – we aim to be a global leader with the right people for the right jobs. We promote inclusion and team work, deriving benefit from the rich diversity of the cultures, ideas, experiences and skills that employees brings to the business.
- **We are accountable for our actions and undertake to deliver on our commitments** – We are focused on delivering results and we do what we say we will do. We accept responsibility and hold ourselves accountable for our work, our behaviour, our ethics and our actions. We aim to deliver on our commitments to our colleagues, business and social partners, and our investors.
- **The communities and societies in which we operate will be better off for Anglogold Ashanti having been there** – we uphold and promote fundamentals where we do business. We contribute to building productive, respectful and mutually beneficial partnership in the communities in which we operate. We aim to leave host communities with a sustainable future.
- **We respect the environment** – We are committed to continually improving our processes in order to prevent pollution, minimize waste, increase our carbon

efficiency and make efficient use of natural resources. We will develop innovative solutions to mitigate environmental and climate risks.

3.5 ANGLOGOLD ASHANTI'S SYSTEMS FOR PEOPLE

AngloGold Ashanti is a significant employer in many of the countries in which it operates. The majority of the group's employees (including contractors) are in South Africa (59%), followed by Ghana (11%), Brazil (7%) and Tanzania (5%). AngloGold Ashanti employed some 63 364 people globally at the end of 2009, including 49 908 employees and 13 456 contractors (2008:50206 employees and 12 689 contractors (Anglogold Ashanti Sustainability Review, 2009:1).

3.5.1 Management approach

AngloGold Ashanti seeks to be a people-cantered business which has taken significant steps in 2009 to ensure that it is positioned to address the challenge of engaging its workforce across the broad range of cultural and socio-economic contexts in which it operates.

Through its internal change programme ONE, AngloGold Ashanti is in the process of rolling out a people management system, the System for People, to provide a framework through which the business can address its need to develop a competent and engaged workforce – ensuring that it has 'the right person in the right role at the right time' and enabling each employee to reach their full potential. Through the System for People, the group is implementing a structured, common approach for working together to support long-term business improvements and value creation (Anglogold Ashanti Sustainability Review, 2009:1)

The System for People is based on AngloGold Ashanti's organisational values and philosophy, and 10 managerial leadership practices, which define the criteria for interactive working relationships between managers and their subordinates. Six

subsystems define effective and sustainable human resources management and managerial leadership systems, in areas such as talent pool development, recruitment, selection and induction and performance management. The System for People aims to enable effective working relationships based on trust and a sustainable culture of accountability across all levels of the organisation (Anglogold Ashanti Sustainability Review, 2009:1)

Central to the model is organisational design, which ensures that the structure of the organisation is the most effective and efficient to get work done and that the accountabilities of each employee are clearly defined. In 2009 the design phase of the System for People was completed and roll out of the system began. This process will continue during 2010 and 2011. Accountability for implementation of the System for People rests with line management, supported by a small team at the company's corporate office in Johannesburg, under the Executive Vice President: Human Resources (Anglogold Ashanti Sustainability Review, 2009:2)

As part of the process of implementing the System for People and in order to ensure alignment and focus on delivering AngloGold Ashanti's strategy, accountability for the development of human resource policy has been centralized at the company's corporate office in Johannesburg. Transformation and local labour legislation, including requirements for local employment, are key challenges for AngloGold Ashanti in some regions in which it operates. The System for People addresses these transformation needs explicitly by acknowledging that flexibility in the implementation of the system will be required in order to meet local needs (Anglogold Ashanti Sustainability Review, 2009:2).

3.5.2 Addressing skills development and retention

The mining industry experienced an unprecedented boom and related skills shortage from 2006 to late 2008. During this period, the retention of key technical skills was a significant challenge for the company. With the global financial crisis, this pressure

eased considerably in those areas which had been most affected. Total turnover, at 9.7%, was in line with the 10% target set by the company. Turnover amongst female employees was low across the group at 0.4% in 2009 (2008: 0.5%) (Anglogold Ashanti Sustainability Review, 2009:48).

Despite relatively low turnover levels, the development and retention of skills in certain disciplines remains a concern for AngloGold Ashanti. Without critical skills, business efficiency and productivity is diminished and future growth can be compromised. By addressing issues such as education and training, talent pool development and recruitment and selection in a holistic framework, the System for People provides the framework for structuring an appropriate response to skills development and retention in each operating region. (Anglogold Ashanti Sustainability Review, 2009:48).

Measures which have been introduced to diminish the risk to the business of skills shortages and to position the company to better manage skills shortages in future include:

- Scholarship programmers and bursaries;
- Regular benchmarking of salaries and employment conditions to ensure that these remain competitive and
- Greater focus on talent management and succession planning.

3.6 AN OVERVIEW OF MPONENG MINE WITHIN ANGLOGOLD ASHANTI

AngloGold Ashanti's Mponeng mine in the North- West province of South Africa is one of the world's deepest and richest gold mines with grades at over 8 g/t. It is one of three AngloGold projects in the West Wits area. The name means 'look at me' in the local Sotho language.

Formerly the Western Deep Levels South Shaft, or Shaft No 1, Mponeng is the most recently sunk of the three former Western Deep Levels mines. Sinking of Mponeng

shafts began in 1981, and the main shaft was completed in 1986, with the sub shaft completed in 1993. Production at Mponeng declined by 2% to 587 000 ounces in 2007 compared to 596 000 ounces in 2006. This was due in the main to the various planned and unplanned work stoppages and safety initiatives conducted towards the end of the year, as well as a decline in grade and reduced face advance.

Currently all production is sourced from the VCR (Ventersdorp Contact Reef), however, work is underway to extract ore from the Carbon Leader Reef (CLR) below it. The CLR below 120 projects is aimed at accessing the CLR located about 900m below the VCR. The other major project, VCR below 120, entails accessing the mineral reserves below 120 levels. AngloGold Ashanti estimates that this project will add 2.5 million ounces (Moz) to production at a cost of R2.03bn (\$252m). The project was approved by the board in February 2007, following which construction began. On-reef development and thus the start of production are scheduled for 2013 with full production due in 2015. Some 5126 people were employed full time at Mponeng in 2007 with 435 contractors. This is around 250 more than were on the books in 2006.

3.6.1 Geology and reserves

Mponeng is located on the north-western rim of the Witwatersrand Basin. There are seven gold bearing conglomerates within the lease area, of which two are economically viable at present. The VCR is a gold-bearing quartz-pebble conglomerate of intermediate grade, capping the last angular Witwatersrand non-conformity.

Proved reserves at the Ventersdorp Contact Reef are currently at 653 000 ounces with 5.5 million ounces probable reserves. The yet-to-be-mined CLR below it contains an estimated 4 million ounces in probable reserves.

3.6.2 Mining

The South shaft deepening project commenced in 1996 and as a result Mponeng mines the Ventersdorp Contact Reef (VCR) to the 120 level, which is some 3.4km below

surface. Mponeng mines on average at deeper than 2.7km below the surface. The VCR reef that Mponeng mines dips at 22° and has an average channel width of 78cm.

The deepest operating stope is at a depth of 3.37km below surface. The grade at this operation varies considerably, therefore a sequential grid mining method is used which allows for selective mining and increased flexibility in dealing with changes in grade ahead of the stope. The mine utilizes a twin-shaft system housing two vertical shafts and two service shafts.

3.6.3 Ore processing

Ore mined is treated and smelted at Mponeng gold plant. The ore is initially ground down by means of semiautogenous milling after which a conventional gold leach process incorporating liquid oxygen injection is applied. The gold is then extracted by means of carbon-in-pulp (CIP) technology. The plant conducts electro-winning and smelting (induction furnaces) on products from Savuka and TauTona as well.

3.7 MPONENG MINE MANAGEMENT STRATEGY

The vision and mission statement quoted from AngloGold Ashanti are supported by the following values specific to Mponeng mine:

- ***“We will have no accidents at our mine”*** – At Mponeng we place a high value on safety, acknowledging the fact that we are here to produce gold safely.
- ***“It is your choice to work at Mponeng”*** – Working here is a choice the employee makes. Nobody is forced to work at Mponeng, therefore Team Work and a positive contribution is expected of all.
- ***“Have fun in what we do”*** – By having fun in what we are doing not only creates an environment whereby people want to belong to, but also stimulates innovation and creativeness.

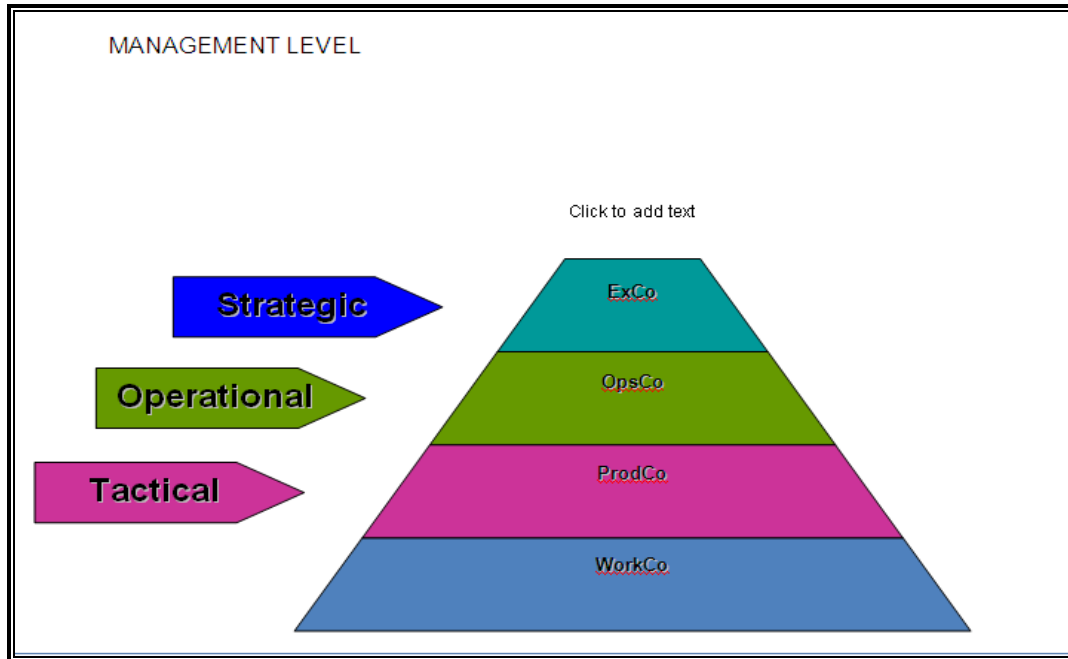
- ***“We have a CARE culture”*** – Employees see each other as family rather than colleagues. This enables people *wanting* to perform rather than *having* to perform. We CARE from the heart.
- ***“We take Pride in our work through Honesty & Integrity”*** – Pride, Honesty and Integrity are the driving forces that motivates employees to perform at their peaks in terms of cost, production and safety. As employees we “walk the talk” and speak things as they appear
- ***“People are important”*** – At Mponeng we understand that people are our greatest asset. By managing them well, not only do we retain them, but also encourage them to break boundaries undreamed of.
- ***“Community upliftment”*** – Enriching the community is a token of our appreciation for us being there.

3.8 LEVELS OF MANAGEMENT

The following levels of management apply in the organisation as depicted by figure 3.1 below:

- **Strategic level** – at this level management is involved in the process of deciding on the mission, strategic guidelines and policies that will govern the operational level of the organisation.
- **Operational level** – at this level management is involved In the process of setting goals, objectives and ensuring that resources are obtained and used effectively to support action plans and programmes for physical services delivery and the mustering of resources required.
- **Tactical level** – at this level management is involve in the specific tasks that need to be carried out. The focus in the physical services delivery and norms, standards and performance criteria that apply to the resources conversion into output.

Figure 3.1: Management levels at Mponeng Mine



Source: [http://www.anglogoldashanti.com/annual report](http://www.anglogoldashanti.com/annual%20report)

3.9 MANAGEMENT PROCESS

The Mponeng way is a focused process where the stakeholder expectations are translated into manageable plans ready for implementation. Although different planning, organizing, directing and controlling activities take place at different levels in the organisation the emphasis is on the integrated approach. The broad outline of the process is illustrated in figure 3.2 below

Organogram -The Management Process

The diagram illustrates the management process across four levels: CORPORATE, EXCO, OPSCO, and PRODCO. The process is divided into three main functional areas: Policy, Operational, and Project.

- CORPORATE:** External Inputs on policy and strategy.
- EXCO:** Develop Strategic guidelines & policy, Performance Review.
- OPSCO:** Build / update operational and tactical plan, Control & Report (Performance feedback).
- PRODCO:** Execute Action Plans (projects), Resources, Outcome operations.

The process flow is as follows:

- Policy:** External Inputs on policy and strategy (CORPORATE) → Develop Strategic guidelines & policy (EXCO) → Policy inputs to external stakeholders (EXCO).
- Operational:** Develop Strategic guidelines & policy (EXCO) → Build / update operational and tactical plan (OPSCO) → Control & Report (Performance feedback) (OPSCO).
- Project:** Build / update operational and tactical plan (OPSCO) → Execute Action Plans (projects) (PRODCO) → Outcome operations (PRODCO).
- Feedback:** Outcome operations (PRODCO) → Control & Report (Performance feedback) (OPSCO) → Performance Review (EXCO) → Develop Strategic guidelines & policy (EXCO).
- Support:** Requirement for change (OPSCO) → Execute Action Plans (projects) (PRODCO). Incentives (OPSCO) → Execute Action Plans (projects) (PRODCO).

The process is ongoing, as indicated by the arrow labeled "Ongoing process" at the top right.

3.9.1 Management defined: “the Mponeng Way”

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achievement of the objectives with the smallest deviations. It is in fact the process which managers follow to achieve the organisations objectives. This management process includes the following:

Planning – it entails the analysis of the external environment, the determination of the strategy and the establishment of the required implementation plans. Planning refers to determining the direction of the organisation, departments and people by establishing goals and objectives, as well as developing and implementing the strategies necessary to attain the stated goals and objectivities (Anglogold Ashanti: Mponenng – Planning: The Mponeng Way, 2005:5) .

Organising – it has as its aim the creation of inter-dependency between component organisational elements. This entails structure, lines of authority, responsibility, performance requirement, operational systems, processes and administrative procedures. Organising refers to determining precisely what activities and resources are necessary to implement the planned strategies, as well as making decisions about how work authority, work responsibility and work assignments should be distributed (Anglogold Ashanti: Mponenng – Planning: The Mponeng Way, 2005:5) .

Directing – it aims at positively promoting an ethos for commitment, competence and conviction to achieve the organisation's mission. Directing refers to communicating to others just what their responsibilities are in aligning and attaining organisational and departmental goals, as well as providing an environment that will stimulate employee motivation and commitment (Anglogold Ashanti: Mponenng – Planning: The Mponeng Way, 2005:5) .

Controlling – it involves establishing and utilizing appropriate information systems to ensure that all actions occur in conformity with established rules, procedures and expresses demand. Controlling refers to guiding, monitoring and modifying work activities in order to ensure the organisational and the departmental performance

correspond with performance expectations and the overall needs of the organisation(Anglogold Ashanti: Mponenng – Planning: The Mponeng Way, 2005:5).

3.10 SUMMARY

In this chapter an overview has been given of the establishment of gold mining industry in South Africa, challenges faced by the mining industry. A brief overview of Anglogold Ashanti, starting with the establishment of the organisation (Vaal Reefs Exploration) in 1944.

A detailed Anglogold Ashanti management process was presented together with the high level organisational structure (Mponeng Mine) to understand how gold mining process are carried out by different department within the organisation.

Anglogold Ashanti (Mponeng Mine) has been considered to be the flagship of the organisation producing more than 40% of gold produced in the South Africa region; and its success and growth is evident just by looking at the rate at which it is expanding over the past few years and the excellent returns shareholders got and still getting on their investments.

Internal measurements indicate that a very aggressive interactional style is favoured in Mponeng Mine, with low threshold for mistakes. Conversely, few of the employees of the mine reported feeling actively engaged in the outcomes of the organisation.

The conclusion is drawn that a number of factors seem to suggest the lack of a suitable culture in which corporate entrepreneurship might be fostered.

CHAPTER 4

RESULTS AND DISCUSSION OF EMPIRICAL RESEARCH

4.1 INTRODUCTION

The primary objective of this study was to assess the level of corporate entrepreneurship in the South African mining environment, with specific reference to AngloGold Ashanti (Mponeng Mine) and to make recommendations on the encouragement and promoting of a climate conducive to corporate entrepreneurship in the shaft.

The empirical study was conducted by means of a self-administered questionnaire administered to managers down to supervisors in Mponeng Mine. 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). The questionnaire was divided into 3 sections. Section A assessed thirteen 13 constructs that should be evident in an organisation perceived to have an entrepreneurial climate. In section B of the questionnaire 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, whilst section C focused on gathering demographical information from respondents.

Refer to Annexure A for an example of the questionnaire.

A target population includes 446 employees within Mponeng Mine from OPSCO level to the PRODCO level.

4.2 RESEARCH METHODOLOGY, DATA GATHERING AND STATISTICAL ANALYSIS

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 and the presentation and discussion of the research results.

4.2.1 Gathering of data

A questionnaire developed by Oosthuizen (2006) and adapted by Jordaan (2008) was used to measure corporate entrepreneurship within AngloGold Ashanti Mponeng Mine. Responses were given using a five-point Likert-type questionnaire, varying between 1 (for “strongly disagree”) to 5 (“strongly agree”). Data was gathered by distributing questionnaires via e-mails to individuals identified as part of the study population. Electronic mail messages were distributed to the whole study population (446) to explain the purpose of the study. Preceding the circulation of the questionnaires, electronic mail messages were sent to participants to assure them of the confidentiality with which the information would be handled and to request their support to the completion of the questionnaire by a determined target date. A total of 103 usable questionnaires were returned from the initial 446 distributed.

4.2.2 Study population

A target population includes 446 employees within AngloGold Ashanti (Mponeng Mine) from EXCO level to the PRODCO level. A list was obtained from the Human Resource department, this included all employees from all departments including Human resources, Production, Engineering, Mineral Resource Management, Finance, Health and Safety and Asset protection.

The levels of management in Mponeng Mine encompass:

- Top management (EXCO) salary bands E (Patterson grading).
- Senior management (Senior OPSCO) salary band D-Upper (Patterson grading).
- Middle management (OPSCO) salary band D-Lower (Patterson grading).
- Supervisors (PRODCO) salary band C- Upper (Patterson grading).

4.2.3 Questionnaire used in the study

Oosthuizen (2006) developed a questionnaire to determine the entrepreneurial climate within the organisation (See Annexure A). The questionnaire was specifically developed to measure the perception of middle managers on the entrepreneurial climate within the organisation. In section A of the organisation, Oosthuizen (2006) identified thirteen constructs that should be evident in an organisation perceived to have entrepreneurial climate. For each of the construct five items were identified to evaluate that specific construct. The questionnaire uses a five-point Likert scale as measurement tool and middle managers have to indicate the degree of agreement or disagreement with a specific question or statement. The questionnaire was adapted by Jordaan (2008).

In section B of the questionnaire, 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.

Section C of the questionnaire is devoted to gathering demographical information from the individual correspondents. Information sought includes age, gender, management level and highest academic qualification.

4.2.4 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.

4.2.5 Statistical analysis of the data

Data collected during the survey was analyzed by the Statistical Consultation Services of the North-West University (Potchefstroom-Campus) using Statistica (Statsoft, 2009) and SPSS (SPSS, 2009). 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. Thereafter, the association between selected demographic variables and the 13 constructs was explored by means of paired tests and effect sizes.

4.3 RESULTS AND DISCUSSION

4.3.1 Demographical Information

For this part of the questionnaire respondent had to indicate amongst others, their gender, age, and highest academic qualification.

4.3.1.1 Respondents by gender

In this question the split between male and female participating middle managers was determined as indicated in table 4.1.

Table 4.1: Gender of respondents

Gender	Frequency	Percentage
Male	85	82.5%
Female	18	17.5%
Total	103	100%

Of the 103 respondents who completed the item, 85 (82.5%) were male respondents and 18 (17.5%) were female respondents.

4.3.1.2 Respondents by age group

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 4.2 below.

A total of 38% of the respondents are in the age group 40 to 49, whilst 29% are in the age group 50 to 59 and 28% are in the age group 30 to 39. Ages younger than 29 years contributed 3.88% of the total.

Table 4.2: Respondents by age group

Age group	Frequency	Percentage
≤ 29	4	2.88%
30-39	29	28%
40-49	30	38%
50-59	40	29%
60+	0	0%
Total	103	100%

4.3.1.3 Racial group classification of respondents

Respondents were requested to indicate their racial group according to the South African racial group classification. Table 4.3 indicates the frequency distribution per race group.

Table 4.3: Race group classification of respondents

Racial group	Frequency	Percentage
Black	23	22.33%
White	75	72.82%
Coloured	4	3.88%
Indian	1	0.97%
Missing	0	0.00%
Total	103	100%

The majority of the respondents are white 75 (72.82%) while 23 (22.33%) respondents are black. Only four (3.88%) coloured and one (0.97%) Indian middle managers and or first line supervisors participated in this study.

4.3.1.4 Highest academic qualifications

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 4.4 presents the highest academic qualification achieved by the participating respondents.

Table 4.4: Highest academic qualification achieved by respondents

Qualification group	Frequency	Percentage
Lower than grade 12	2	1.94%
Grade 12	37	35.92%
National Certificate	10	9.71%
National Diploma	21	20.39%
Degree	10	9.71%
Post graduate degree	23	22.33%
Missing information	0	0.00%
Total	103	100%

The largest group (35.92%) of respondents had obtained grade 12, 20.39% had a National diploma qualification and 22.33% had a post graduate degree. A total of 9.71% had either a national certificate or degree.

4.3.1.5 Distribution of management level

For the purpose of this study, participating managers were classified as being top (E and D-upper band Patterson grading), middle (D –lower band Patterson grading) or lower level (C5 Patterson grading) managers. Table 4.5 presents the management level of the participating respondents.

Table 4.5: Management level of respondents

Management level	Frequency	Percentage
Top Management (D-upper and E Band)	12	11.65%
Middle management (D lower)	52	50.49%
Junior Management (C5)	39	37.86%
Total	103	100%

Questionnaires were only distributed to employees on middle management level and

supervisory level according to the employee information lists received from the human resources department. Half of the respondents (50.49%) indicated their management level as middle management, 37% are in the lower management whilst 11.7% are in top management.

4.3.1.6 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 and first line supervisors work for as indicated in table 4.6.

Table 4.6: Department where respondents are working

Functional department	Frequency	Percentage
Production	10	9.71%
Health & Safety	9	8.74%
Human resources	20	19.42%
Engineering	18	17.48%
Rock Engineering	3	2.91%
MRM Dept	22	21.36%
Exco	1	0.97%
Finance	12	11.65%
Missing	8	7.77%
Total	103	100%

From the total 103 respondents, 12.62% are from production, 8.74% are from Health and Safety, 19.42% are from Human Resource, 17.48% are from Engineering, 2.91% are from Rock Engineering, 21.36% are from MRM, 5.83% are from EXCO whilst 11.65% are from the Finance department.

4.3.2 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 4.7 indicates the Cronbach Alpha coefficients of the constructs measuring the entrepreneurial climate and perceived success of the organisation.

Table 4.7: Cronbach Alpha coefficients of constructs

No	CONSTRUCT	n
CONSTRUCTS MEASURING ENTREPRENEURIAL CULTURE		
1	Entrepreneurial leadership	0.811
2	Management support	0.756
3	Sponsors	0.689
4	Tolerance of risks, mistakes and failure	0.544
5	Innovation & creativity/ New ideas encouraged	0.757
6	Appropriate rewards and reinforcements	0.809
7	Vision and strategic intent	0.834
8	Discretionary time and work	0.475
9	Empowered teams/ multi-disciplined teamwork & diversity	0.866
10	Resources availability and accessibility	0.718
11	Continuous and cross-functional learning	0.740
12	Strong customer orientation	0.782
13	Flat organisational structure with open communication & strong sense of belonging	0.707
PERCEIVED SUCCESS OF THE ORGANISATION		
1	Financial measures	0.731
2	Customer/market measures	0.694
3	Process measures	0.719
4	People development	0.690
5	Future (long term) success	0.278

The results as indicated in table 4.7 suggest that the research instrument used in this study to access the corporate entrepreneurial climate within AngloGold Ashanti (Mponeng mine) has acceptable reliability, since only two of the constructs, i.e. **discretionary time and work** (0.475), **tolerance of risks, mistakes and failure** (0.544) and **sponsors** (0.689) had a lower Cronbach Alpha coefficient than 0.7.

On the face value, it seems as if proposition 2 (P^2) would have to be rejected. However, the Cronbach Alphas shown in table 4.7 were discussed with statistical consultation services of the North West University (Potchefstroom campus). It seems that the resulting alphas are not consistent with this study. It was suggested that the reliability of the measuring instrument should be accepted with the Cronbach Alpha ranging from 0.5 and above. Field (2005:688) notes that questionnaire designed to measure attitudes may have a lower alpha (< 0.70) and still be acceptable.

For the purpose of this study, the **discretionary time and work, sponsors** and **the tolerance of risks, mistakes and failure** constructs will be included in the research as supported by Field (2005:688).

In terms of the constructs measuring the perceived success of the organisation, one of the variables i.e. **future (long term) success** (0.273), had a lower Cronbach Alpha coefficient than 0.7. For the purpose of this study, future success variable will be excluded from the rest of this study since the Cronbach Alpha coefficient is too low.

4.3.3 Assessment of the 13 constructs of entrepreneurial climate

4.3.3.1 Variables measuring entrepreneurial climate

As mentioned earlier in this chapter, Oosthuizen (2006) identified thirteen dimensions or constructs that needs to be present for an organisation to be conducive to an entrepreneurial climate. Five statements for each dimension were formulated, in total sixty -five statements, were put in random order. Respondents had to indicate their degree of agreement or disagreement with each statement (1 = strongly disagree and 5 = strongly agree). 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, Stephan, Krehbiel & Berenson, 2006:118). The results of the means analysis for the 13 constructs are presented in table 4.8.

Table 4.8: Entrepreneurial climate survey results

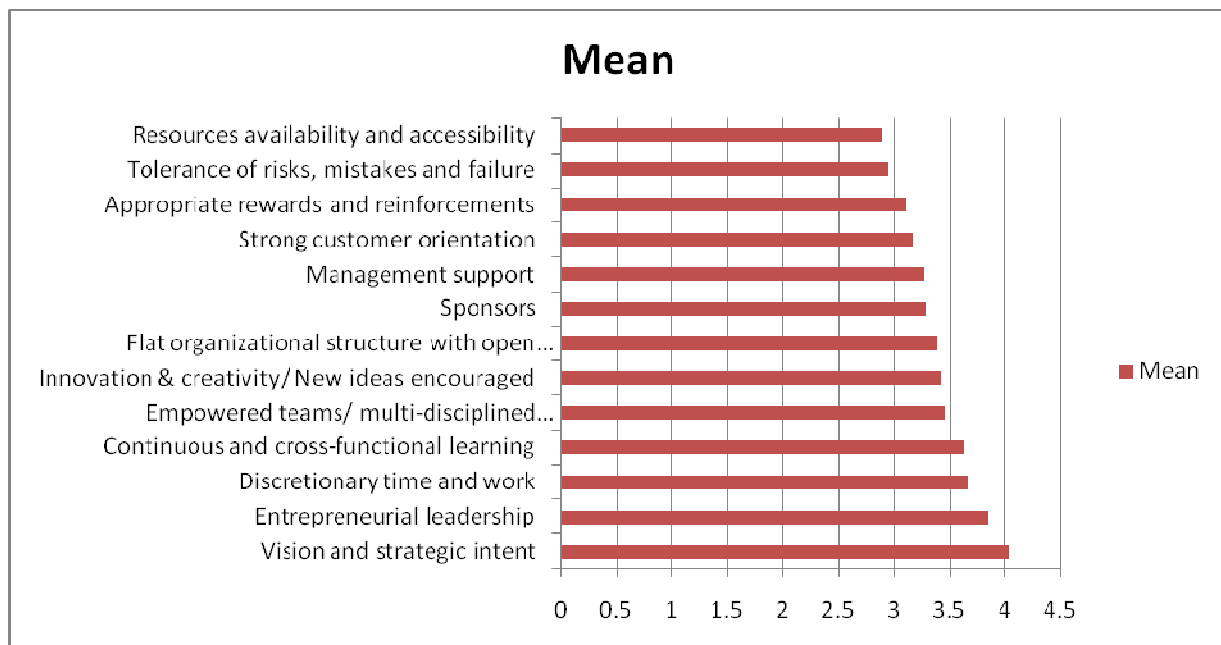
CONSTRUCTS	N	Mean	s
Entrepreneurial leadership	103	3.846	0.794
Management support	103	3.276	0.757
Sponsors	103	3.293	0.676
Tolerance of risks, mistakes and failure	103	2.946	0.728
Innovation & creativity/ New ideas encouraged	103	3.419	0.755
Appropriate rewards and reinforcements	103	3.125	0.869
Vision and strategic intent	103	4.044	0.749
Discretionary time and work	103	3.665	0.637
Empowered teams/ multi-disciplined teamwork & diversity	103	3.455	0.805
Resources availability and accessibility	103	2.896	0.717
Continuous and cross-functional learning	103	3.638	0.832
Strong customer orientation	103	3.172	0.687
Flat organisational structure with open communication & strong sense of belonging	103	3.391	0.767
Total (average of climate survey items)	103	3.397	0.603

The average mean of all constructs as evaluated by managers was $\bar{x} = 3.397$, indicating that the prevalence of corporate entrepreneurship constructs within Mponeng Mine as being almost 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 construct with the highest mean are **vision and strategic**

intent and **entrepreneurial leadership**, indicating that middle managers perceive these construct to have a strong presence.

The results of the survey are graphically represented in a clustered bar chart in figure 4.1 that compare the values across the constructs ranked from the lowest to the highest mean score.

Figure 4.1: Entrepreneurial climate analysis – clustered bar, ranked from lowest to highest mean



From the clustered bar chart, the construct with the highest mean values are **vision and strategic intent** ($\bar{x} = 4.04$), **entrepreneurial leadership** ($\bar{x} = 3.846$), **discretionary time and work** ($\bar{x} = 3.665$), **continuous and cross-functional learning** ($\bar{x} = 3.638$). This indicates strong agreement with the statements. The constructs **innovation and creativity** ($\bar{x} = 3.455$), **empowered teams** ($\bar{x} = 3.419$), **flat organisational structure with open communication & strong sense of belonging** ($\bar{x} = 3.391$), **sponsors** ($\bar{x} = 3.293$), **management support** ($\bar{x} = 3.275$), **strong customer orientation** ($\bar{x} = 3.172$), **appropriate rewards and reinforcements** ($\bar{x} = 3.125$), also have an average mean above 3 and this also indicates strong agreement with the statement.

The constructs **tolerance of risks, mistakes and failure** ($\bar{x} = 2.946$) and **resource availability and accessibility** ($\bar{x} = 2.896$) were the only constructs with the mean below 3 but still above the average mean.

4.3.4 Assessment of perceived success of the organisation

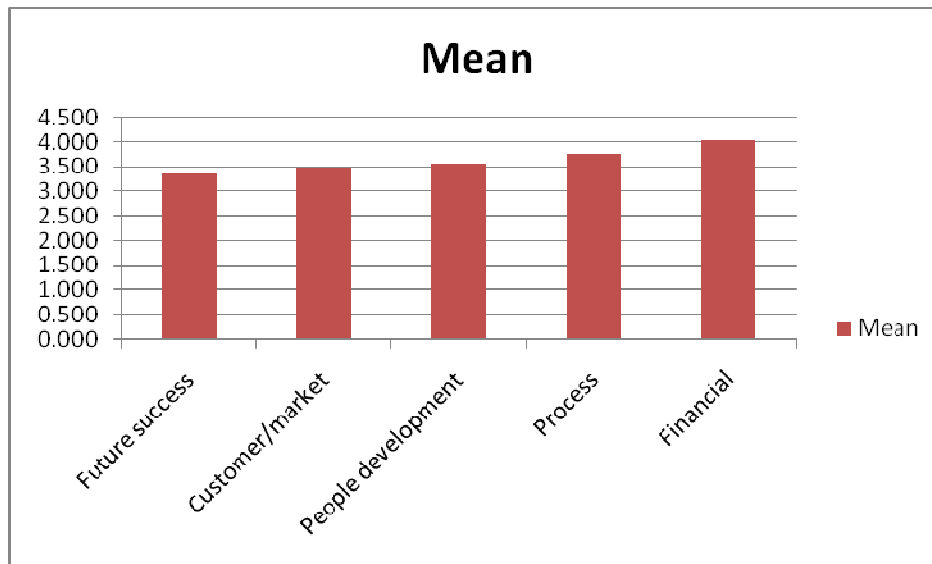
The results of the means analysis of the variables determining the perceived success of an organisation are presented in table 4.9. The variable future success was excluded due to a too low Cronbach Alpha coefficient as discussed in section 4.3.2.

Table 4.9: Perceived organisational success survey results

	VARIABLE	n	mean	s
1	Financial	98	4.044	0.698
2	Customer/market	98	3.485	0.609
3	Process	98	3.762	0.794
4	People development	98	3.563	0.799
Total		98	3.643	0.593

The results of the survey are graphically represented in a clustered bar chart in figure 4.2 that compare the values across the constructs ranked from the lowest to the highest mean score.

Figure 4.2: Perceived success of the organisation



All five of the variables measuring the perceived organisational success were reported by respondents to have a mean above 3.5. The average mean is $\bar{x} = 3.64$. The construct **customer/ market measures** ($\bar{x} = 3.485$) have 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 customer/market measures.

The constructs **financial measures** ($\bar{x} = 4.044$), **process measures** ($\bar{x} = 3.762$) and **people development** ($\bar{x} = 3.563$) with 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 ($\bar{x} = 4.044$; $s = 0.698$). 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 ($\bar{x} = 3.762$; $s = 0.794$). 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 ($\bar{x} = 3.485$; $s = 0.609$). Due to the nature of Mponengs' product customer involvement is limited, but strong focus exists on internal service. For example, the production department is considered as a customer to different service department. Therefore the production department as a customer is relatively satisfied with the organisation's service offerings. This may lead to relative loyal customers (production staff).

People development ($\bar{x} = 3.563$; $s = 0.799$). 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.

4.3.5 Relationship between the demographic variables and entrepreneurial constructs

4.3.5.1 The relationship between the constructs and the demographic variable gender

In this study, the p-values and effect sizes were calculated between the mean values to examine the relationship between the constructs and some of the demographic variables. Table 4.10 indicated the reliability between the constructs and the demographic variable gender.

Table 4.10: The reliability between the constructs and the demographic variable gender

		GENDER							
		Male			Female			Comparison	
Construct		n	$\bar{x}$	s	n	$\bar{x}$	S	p	d
1	Leadership	85	3.876	0.809	18	3.700	0.724	0.394	0.14
2	Support	85	3.242	0.748	18	3.433	0.798	0.333	0.22
3	Sponsor	85	3.321	0.669	18	3.161	0.714	0.366	0.24
4	Risk tolerance	85	2.921	0.735	18	3.067	0.696	0.442	0.20
5	New ideas	85	3.402	0.749	18	3.500	0.798	0.618	0.12
6	Rewards	85	3.194	0.888	18	2.800	0.706	0.081	0.44
7	Vision	85	4.041	0.770	18	4.056	0.661	0.941	0.02
8	Discretionary time	85	3.795	0.735	18	3.653	0.758	0.460	0.19
9	Teams	85	3.690	0.637	18	3.544	0.643	0.381	0.23
10	Resources	85	2.884	0.757	18	2.956	0.502	0.701	0.10
11	Cont. learning	85	3.688	0.844	18	3.400	0.745	0.183	0.34
12	Customer service	85	3.126	0.718	18	3.389	0.473	0.141	0.37
13	Flat structure	85	3.422	0.756	18	3.244	0.825	0.374	0.22

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 measuring 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).

4.3.5.2 Relationship between entrepreneurial constructs and demographic variable management level

Table 4.11 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 4.11: The relationship between the constructs and the demographic variable management level

		MANAGEMENT							
		Middle			Lower			Comparison	
Construct		n	$\bar{x}$	S	n	$\bar{x}$	S	p	d
1	Leadership	52	3.946	0.777	39	3.659	0.833	0.094	0.34
2	Support	52	3.258	0.678	39	3.272	0.869	0.931	0.02
3	Sponsor	52	3.265	0.678	39	3.327	0.692	0.672	0.09
4	Risk tolerance	52	2.733	0.771	39	3.219	0.665	0.002	0.63
5	New ideas	52	3.477	0.778	39	3.436	0.759	0.802	0.05
6	Rewards	52	3.192	0.799	39	3.006	0.997	0.326	0.19
7	Vision	52	4.067	0.704	39	3.913	0.808	0.334	0.19
8	Discretionary time	52	3.838	0.751	39	3.776	0.767	0.698	0.08
9	Teams	52	3.693	0.667	39	3.692	0.647	0.995	0.00
10	Resources	52	2.913	0.683	39	2.913	0.801	0.997	0.00
11	Cont. learning	52	3.715	0.895	39	3.649	0.728	0.705	0.07
12	Customer service	52	3.111	0.731	39	3.390	0.577	0.052	0.38
13	Flat structure	52	3.371	0.760	39	3.405	0.843	0.841	0.04

Table 4.12 indicates the reliability between the construct and the demographic variable management level. As indicated by table 4.11, there is a statistical significance ($p < 0.05$)

in the mean values between the management level in relation to the **construct tolerance of risks, mistakes and failure** ($p = 0.0022$).

The variable management level has a medium effect on the construct **tolerance of risks, mistakes and failure** ($d = 0.63$). This means in practice that lower management are visible more positive with regard to the construct risk tolerance in direct comparison with their middle management counterparts. When taking the d -values for other constructs 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).

4.3.6 Relationship between demographic variables and perceived success factors of the organisation

4.3.6.1 Relationship between perceived success factors and the gender of respondents

Table 4.12 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 4.12: 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	96	4.008	0.710	18	4.204	0.638	0.286	0.28
2	Customer market	96	3.465	0.607	18	3.574	0.627	0.495	0.17
3	Process	96	3.717	0.769	18	3.963	0.892	0.236	0.28
4	People develop	96	3.602	0.745	18	3.389	1.011	0.309	0.21

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

4.3.5.1 Relationship between perceived success factors and the management levels of respondents

Table 4.13 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 4.13: Relationship between the factor measuring the perceived organisational success and the demographic management levels

		MANAGEMENT							
		Middle			Lower			Comparison	
Factor		n	$\bar{x}$	s	n	$\bar{x}$	S	p	d
1	Financial	50	4.180	0.564	38	3.939	0.638	0.076	0.35
2	Customer market	50	3.525	0.583	38	3.546	0.627	0.872	0.03
3	Process	50	3.880	0.669	38	3.684	0.892	0.225	0.23
4	People develop	50	3.650	0.729	38	3.465	1.011	0.278	0.31

None of the p -values are smaller than 0.05. This indicates that middle management is not statistically significantly more positive than lower management 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 = 0.35) had a small to medium effect, and the factor **Process measures** (d -value = 0.23) had a small effect.

4.4 SUMMARY

Quantitative empirical research was done for this study. A questionnaire was administered in order to measure whether an entrepreneurial climate exist at Mponeng mine. Self administered questionnaire measuring 13 entrepreneurial construct was then administered to the study population consisting of first line supervisors (C-5) to EXCO level (D- Upper and above).

The average mean of all constructs as evaluated by managers was $\bar{x} = 3.397$, indicating that the prevalence of corporate entrepreneurship constructs within Mponeng mine as being almost 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 construct with the highest mean are **vision and strategic intent** and **entrepreneurial leadership**, indicating that middle managers perceive these construct to have a strong presence.

The effect of gender and management level on the responses regarding the 13 corporate entrepreneurial constructs as well as the variables measuring the perceived organisational success was analyzed 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 were even close to the medium effect (d -value = 0.5).

With reference to entrepreneurial climate within Mponeng Mine, the conclusion is that even though the average mean of the entrepreneurial construct was above 3, the

climate is not optimally entrepreneurial and initiatives implemented that should stimulate entrepreneurial behaviour, might fall short. All construct measured are evidently present, but not to the level one would expect of an organisation that is considered to foster an entrepreneurial climate.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Anglogold Ashanti (Mponeng Mine) has been considered to be the flagship of the organisation producing more than 40% of gold produced in the SA region; and its success and growth is evident just by looking at the rate at which it is expanding over the past few years and the excellent returns shareholders got and still getting on their investments.

Organisations with well developed entrepreneurial capabilities are able to sustain growth and innovation, which are critical competitive advantages in the twenty first century. Many business executives concur that the ability to drive business growth and implement new and innovative ideas are several of the top priorities of organisations in the twenty first century. However, the management of innovation and corporate entrepreneurship (CE) is complex, challenging and subject to risk (Scheepers *et al.*, 2008:50).

Mponeng Mine realised the importance of supporting innovation and giving employees the opportunity to be innovative should be part of their strategy, if they wanted to stay abreast of their competitors. Various initiatives programmes that support innovation were implemented to align themselves with the Anglogold Ashanti strategy and to ensure their success in the organisation and global economy.

Innovation and corporate entrepreneurship go hand in hand, but merely implementing initiatives and programmes that support innovation, is not enough to ensure that a true entrepreneurial climate will grow and exist within the organisation.

5.2 CONCLUSIONS

Conclusions from the empirical research findings follow.

5.2.1 Demographic information

From the total of 103 respondents, 85 (82.5%) are males and 18 (17.5%) are females. The lower female percentage can be attributed to the late introduction of “woman in mining programme” and the fact that mining operations is a very harsh male dominated environment. More women are introduced more in services department and slowly in the production department.

5.2.2 Conclusion on entrepreneurial climate

A more detailed look at each of the thirteen constructs reveals the following about the entrepreneurial climate and behaviour within Mponeng Mine.

- **Vision and strategic intent.** More effort has been in strategy development, with even more effort to communicate and roll out the strategy to the lowest level. In conclusion the study population knows and understands the strategic intent and this guide them to set priorities.
- **Entrepreneurial leadership.** Mponeng have a long term view of the organisation and effort is made to communicate the vision and longer term plans to all levels of employees. The balance between production on the one hand and safety, health and environment on the other is good. Opportunities are created in a very structured way, for employees to think in innovative ways and are challenged to bring their ideas for improvement to the table. Management proactively seeks to maximize value from opportunities generated, even though some constraints do exists regarding the availability of resources.

- **Innovation and creativity/ new ideas encouraged.** As mentioned, opportunities for employees to be innovative are created through different programmes and management structures. The process is further encouraged by setting idea generation as a key performance indicator for individuals and teams at lower levels. The organisational structure was adopted to make specific persons available to assist with the idea generation process and to track process.
- **Strong customer orientation.** Due to the nature of the Mponeng product, external customer involvement is limited, but strong focus exists on internal customers; production department is considered as customers. Departments such as Health and Safety, Human Resources, MRM, Rock Engineering are providing a service to the production department. For example MRM department must guide the production department on which ground to develop in order to access the gold bearing material. Rock Engineering is responsible to advice the production crew how to support the rock to prevent rock fall and seismicity. The Health and Safety department has to ensure that there is enough ventilation provided in all working places and all hazards which might affect the health and safety of employees are removed and controlled.
- **Sponsors.** A structured approach exists to manage ideas generated by employees. Ideas implementers are identified and results and progress are discussed in project management meetings. Periodic feedback is given to employees who generated the ideas to keep them informed about their progress.
- **Continuous and cross-functional learning.** Ample opportunities for learning and growth exist. Employees are encouraged to stay abreast of developments in their functional field 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.

- **Discretionary time and work.** Some autonomy and freedom is allowed for people to do their own work and safely divert from assigned tasks to explore new ideas, without having to ask permission. Spending excessive time on developing ideas however can be regarded as only marginally acceptable.
- **Management support.** As stated, formal structure exists to ensure management is aware of new ideas generated and gives support for the implementation of these ideas. Some employees however sometimes feel that they are not supported, because the ideas they have generated are placed on hold, maybe due to a lack of funds and other resources. In some instances an idea might not be viable and is then discarded.
- **Flat organisational structure with open communication and strong sense of belonging.** Having to make a decision without having to go through some justification and approval is still a challenge. Open communication structures are established through the business process framework, but even though these structures exist, employees still experience some barriers to open communication. Resignations are becoming an increasing problem, especially with the shortage of skilled workers.
- **Tolerance of risks, mistakes and failure.** As Mponeng is the world deepest mine, mining at depth is inherently dangerous and calculated risks are taken from time to time. A rigorous risk assessment process is in use and keyword to any experiment, or new task, or idea is to ensure that proper risk assessments are conducted and mitigating actions are implemented to keep the risk as low as reasonably practicable.

- **Empowered teams/ multi-disciplined teamwork and diversity.** Functional teams are empowered through the business process framework programme. Within their teams they have some freedom in deciding on how the team will be managed – teams can decide to take disciplinary action against team members that do not comply with the expectations as set out by the pact agreement. Cross-functional teams are formed within the organisation comprising of members from different departments.
- **Appropriate rewards and reinforcement.** Recognition and rewards with specific reference to innovations and new ideas through the business process framework exists. Employees performing exceptionally are rewarded for their performance through the Bonus system.

The highest mean score in the range of 4.04 and the lowest 2.92, this indicates that the overall climate at Mponeng mine is not optimally entrepreneurial and initiatives implemented that should stimulate entrepreneurial behaviour might fall short. All constructs measured are evidently present, but not to the level one would expect of an organisation that is considered to foster an entrepreneurial climate.

5.2.3 Conclusion on factors measuring the perceived organisational success

Conclusions following the measuring of the perceived success factors of the organisation are discussed below.

- **Financial success**

Both the male ($\bar{x} = 4.00$) and the female ($\bar{x} = 4.2$) mean were above 4. Therefore, in general, it can be viewed that both males and females believed that the organisation is doing well and hence having high financial success. Therefore Mponeng is perceived to be having financial success by both males and females.

- **Customer/ market measures**

Customer/market measures was rated fourth out of five with a mean score of $\bar{x} = 3.485$; Due to the nature of Mponengs' product customer involvement is limited, but strong focus exists on internal service. For example, the production department is considered as a customer to different service department. Therefore the production department as a customer is relatively satisfied with the organisation's service offerings. This may lead to relative loyal customers (production staff).

Service departments therefore strongly agreed that taking care of customers (production department) is the organisation's top priority; the organisation will therefore develop systems/services with customers' needs in mind which results in the customers being satisfied with organisation's service offerings.

- **Process measures**

With the mean score of $\bar{x} = 3.762$, 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.

- **People development**

The mean score of the variable people development ($\bar{x} = 3.563$) was ranked as the second lowest of the five perceived 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 respondents agreed that employees are viewed as a relative important asset of the organisation.

5.3 RECOMMENDATIONS AND ACTION PLANS

- **Vision and strategic intent.** The vision and strategic intent is clear to all levels and departmental objectives are aligned with organisational objectives. It is important though to ensure that employees take ownership of the announced visions and strategies and that they embrace it. The next step needed might be to take the current innovation activities and combine them in a formal strategy for entrepreneurship. It is therefore recommended that all the current loose standing entrepreneurial activities are developed into a focused strategy. Entrepreneurial training needs should be identified and communication and training strategy developed to roll out the entrepreneurial strategy.
- **Entrepreneurial leadership.** Employees are involved with innovative initiatives, by making them responsible for programmes and initiatives such as business process framework process, including idea generation. Entrepreneurial leadership can be improved by developing the entrepreneurial competencies of all employees on a supervisory level and by establishing entrepreneurship as a dominant logic to improve business. A training company can be sourced that will be able to do the required training and arrange the training. The training and competency matrixes should be updated with relevant information after completion of the training.
- **Innovation and creativity/ new ideas encouraged.** The organisational structure was adopted to make specific persons available to assist with the idea generation process and to track progress and contributions from ideas generated. The leadership development programme should, however, include innovation as a central topic. The organisation should develop a system that will enable managers to share their experiences and give training to employees.
- **Strong customer orientation.** Due to the nature of Mponengs' product (gold), external customer involvement is limited. But strong focus exists on internal

customer service. For example the production department is considered as customers to different support service departments.

- **Sponsors.** As discussed in chapter 3, a structured approach exists to manage ideas generated by employees. Idea implementers are identified and results and progress management meetings are used to give feedback on progress. Periodically feedback is given to employees who have generated the ideas to keep them informed about the progress.
- **Continuous and cross-functional learning.** Ample opportunities for learning and growth exist. Employees are encouraged to stay abreast of developments and different organisations within Mponeng mine, especially by production units. Cross functional teams are used for the implementation of business process framework which integrates functions of all departments. Therefore top management do encourage cross-functional teams, although the team does not really have a choice in selection and recruitment of team members.
- **Discretionary time and work.** Some autonomy and freedom is allowed for people to do their own work and safely divert from assigned tasks to explore new ideas, without having to ask for permission. Spending excessive time in developing ideas however can be regarded as only marginally acceptable.
- **Management support.** As stated, formal structures do exist to ensure management is aware of new ideas generated and gives their support for the implementation of these ideas. Some employees however sometimes feel that they are not supported, because the ideas they generated are placed on hold, maybe due to a lack of funds and other resources available for immediate implementation, or their ideas are discarded as not being viable.

Management Support is a measure of the manager's willingness to facilitate and promote entrepreneurial activity in the organisation. This support can take many forms, including championing innovative ideas, providing necessary resources or expertise, and institutionalizing the entrepreneurial activity within the organisation's system and processes (Bhardwaj *et al.*, 2007a:134).

- **Flat organisational structure with open communication and strong sense of belonging.** Having to make a decision without having to go through some justification and approval is still a challenge. Open communication structures are established, but even though these structures exist; employees still experience some barriers to open communication. Resignation is becoming an increasing problem, especially with the shortage of skilled labour. Mponeng mine has a development programme that allows employees to improve themselves continuously but lacks the organisation's retention programme that assist them in placing employees after training them, hence the high level of resignation of skilled labour.
- **Tolerance of risks, mistakes and failure.** As Mponeng is the deepest mine in the world and mining at depth is inherently dangerous due to seismicity and falls of ground, calculated risks are taken from time to time. There is however a rigorous risk assessment process is conducted and mitigating actions have been implemented to keep the risk as low as reasonably practicable. Bulut and Alpan (2006:66) cited that allowance and encouragement of employee risk taking requires more than delegation of autonomy; mutual trust and commitment depend heavily on the emotional attachment of the entrepreneurs to their organisation, in addition to their ability and integrity.
- **Empowered teams/ multi-disciplined teamwork and diversity.** Functional teams are empowered through the business process framework process. Within their teams they have some freedom in deciding on how the team will be managed –

teams can even decide to take disciplinary action against team members that do not comply with the expectations as set out by the pact agreement.

- **Appropriate rewards and reinforcement.** Recognition and rewards with specific reference to innovations and new ideas through the business process framework does exist. Bonus system exists that caters for rewards and reinforcement of performing and innovative employees. However the evaluation of the possibility to reward employees for contribution towards the idea generation process should the idea be implemented successfully, should be investigated.

5.4 STUDY OBJECTIVES ACHIEVED

The primary objective set out in chapter 1, was to assess corporate entrepreneurship within Mponeng mine. Recommendations will also be made on how to foster an entrepreneurial climate.

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

- To define corporate entrepreneurship and entrepreneurial climate;
- To obtain insight into corporate entrepreneurship and entrepreneurial climate by means of a literature review;
- To gain insight into the business environment of Mponeng mine as an organisation as part of AngloGold Ashanti;
- To validate the reliability of the questionnaire by means of statistical analysis;
- To assess the entrepreneurial climate within Mponeng mine by means of a questionnaire;
- To determine if there is any relationship between the demographic variables, i.e. gender and management levels and functional department with regard to the constructs measuring the entrepreneurial climate and the perceived success of the organisation; and

- To suggest recommendations to foster an entrepreneurial climate in the organisation.

The first and second objectives were achieved in chapter 2 by means of a comprehensive literature review. The third secondary objective was achieved in chapter 3 where a comprehensive study was done on AngloGold Ashanti (Mponeng mine).

The fourth secondary objective was to measure AngloGold Ashantis' (Mponeng mine) 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 4. Both the fourth and fifth objectives were achieved.

The sixth objective which was to determine if there is any relationship between the demographic variables, i.e. gender and management levels and functional department with regard to the constructs measuring the entrepreneurial climate and the perceived success of the organisation. The sixth secondary objective was discussed in chapter 4.

The last objective which was to propose the recommendations to ensure and promote an entrepreneurial climate in AngloGold Ashanti (Mponeng mine) was attained in chapter five with specific focus in section 5.3.

5.5 OPPORTUNITIES 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 higher level employees within AngloGold Ashanti (Mponeng mine). A lower supervisory level was excluded. The views of lower

supervisory level should be included in future studies since they play a significant role in managing groups of employees/teams. The junior supervisors play an integral part in the day to day operations within the organisation.

Further studies to include the whole AngloGold Ashanti as the population group could be beneficial to align the organisation'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.

Mponeng mine goes to great lengths to ensure that corporate strategy and the values of the organisation are implemented and internalized by all other mines within the organisation, down to the lowest level. Innovation, giving employees the opportunity to offer ideas for improvement, is one of the focus points within Mponeng mine strategy.

5.6 SUMMARY

The aim of this chapter was to conclude on the results obtained from the study and to give practical recommendations on how to foster an entrepreneurial climate within the organisation

After the basic demographic information age, gender, race, highest academic qualification, management level were addressed, the reliability of the questionnaire was discussed. Using the Cronbach Alpha coefficient, it was established that the questionnaire was reliable for all the constructs measured in the questionnaire except for the construct **Future or long term success** measuring the perceived success of the organisation.

The level of corporate entrepreneurship within the organisation was discussed based on 13 constructs measuring the entrepreneurial climate. The perceived success of the

organisation was addressed after which the relationship between the demographic information and the constructs measured in the questionnaire were addressed.

In section 5.3 practical recommendations were made on how to develop a strategy to incorporate corporate entrepreneurship in AngloGold Ashanti (Mponeng mine).

The chapter concluded by evaluating the success of the study based on the achievement of the primary and secondary objectives and by suggesting possible future research that could be done on corporate entrepreneurship.

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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 Gold mining industries in the world as we face dynamic competition unleashed by globalisation as well as by local competitors. Internal environmental factors play a crucial role in translating entrepreneurship into performance. Corporate entrepreneurship (intrapreneurship) with concomitant creativity and high rates of responsiveness should be the preferred mode of operations in the AngloGold Ashanti as a whole.

AngloGold Ashanti is the largest gold producer in SA and is responsible for 40% gold production for AngloGold Ashanti worldwide. The world's deepest mine (Mponeng) forms part of AGA SA. SA mining industry is faced with an increase in production cost due to the increase in virgin rock temperature as we mine deeper and the electricity cost increase faces SA as a whole. The role of middle management therefore becomes crucial as the responsibility lies with them to move the bottom line.

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.

Very little to no research has been conducted on corporate entrepreneurship in any mining sector in South Africa. Corporate entrepreneurship in AngloGold Ashanti should therefore emphasise the establishment of business models, processes and structures in the corporate retail sector so as to increase the level of corporate entrepreneurship in the various departments.

The focus of this research study is on middle management in AngloGold Ashanti SA region.

This questionnaire attempts to measure the intrapreneurial climate in your department in order to determine whether it is conducive to foster an intrapreneurial 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).

		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).

		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).

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 EXCO AND D- UPPER	Middle management D-LOWER	Lower management C-UPPER)
	Other: (Specify):			

C06	Indicate your functional department				
	Production	Health & Safety	Human Resources	Engineering	Rock Engineering
	MRM Dept	EXCO	Finance		

THANK YOU VERY MUCH FOR YOUR VALUED INPUT.