

# **An assessment of corporate entrepreneurship in the finishing units of steel manufacturer**

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# ABSTRACT

Corporate entrepreneurship is examined with specific reference to the Finishing units of the Vanderbijlpark site of ArcelorMittal South Africa. The objective of the study is to assess the level of intrapreneurship within middle to upper employee levels in order to make recommendations regarding the encouragement of an entrepreneurial climate.

The evaluation starts with a historic overview of ArcelorMittal South Africa, followed by an assessment of the current operational characteristics of the company. An evaluation of ArcelorMittal's interaction with its stakeholders is combined with the outcomes of two previous internal surveys of corporate culture to arrive at the causal factors to the study.

A literature review is conducted to explore entrepreneurship and the attributes of an entrepreneur. Subsequently, corporate entrepreneurship is investigated in order to outline the characteristics, pivotal agents, importance and dangers of the concept. The establishment of a climate of corporate entrepreneurship was found to be dependent on the presence of 14 important constructs. If proposed steps are followed to promote corporate entrepreneurship in a company, five identified success factors will improve as a result.

A questionnaire is adapted to test for the presence of the 14 constructs of a climate of corporate entrepreneurship which were identified and to verify current perceptions regarding the organisational success of the company among B to G role respondents functioning in the Finishing units of ArcelorMittal Vanderbijlpark.

A target group of 325 employees was identified and questionnaires were routed to all persons in the group. A total of 180 usable responses were received on which statistical analysis was based. The validity of each construct is individually determined by calculating a Cronbach alpha coefficient and tests for both statistical and practical significance are performed to determine the effect of demographical variables on each construct.

An analysis is made of perceptions regarding the presence of constructs of a climate of corporate entrepreneurship as well as constructs indicating the success of the

organisation. Furthermore, the effect of demographical variables on recorded perceptions is interpreted. Recommendations, based on the analysis made as well as the literature review, are made on actions to improve the climate of corporate entrepreneurship in ArcelorMittal South Africa.

The study concludes with a measurement of the achievement of objectives and suggestions for further research.

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# CHAPTER 1

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## NATURE AND SCOPE OF THE STUDY

### 1.1 Introduction

Almost all economic activity in a capitalistic system has its roots in entrepreneurial activity. The entire economy is vitalised by the creation of new ideas, starting of enterprises and offering of jobs (Heinonen & Poikkijoki, 2006:80). Not only does entrepreneurial activity create new jobs, but it also creates new industries into which the economic activity of a country expands (Timmons & Spinelli, 2007:55).

However, according to the 2006 Global Entrepreneurship Monitor, early-stage entrepreneurial activity in South Africa is comparatively slow (Maas & Herrington, 2007:7). Adding the dire effects of the global economic crisis on South Africa (Zini, 2008) and on the steel industry specifically (Pamuk, 2008), a company manufacturing steel in South Africa is faced with multiple challenges if it wants to survive or indeed prosper.

Entrepreneurship constitutes the engine of economic growth and prosperity in developing (Gurol & Atsan, 2006:26) and developed (Timmons & Spinelli, 2007:51) countries alike. Established firms wishing to triumph over difficult economic conditions need to tap into their entrepreneurial roots by promoting corporate entrepreneurship (or intrapreneurship) in order to stimulate internal self-renewal and subsequently growth (Heinonen, 2007:310).

### 1.2 Problem statement

ArcelorMittal was established (under the then-used name of Iscor) in 1927, as a state-owned strategic asset to function as both an independent domestic producer of steel as well as a provider of jobs to favoured constituents of the political party in power. In 1989 the company was privatised and in 2004 the predecessor of the current parent company took control (SAISI, 2007).

From struggling beginnings after privatisation, the company applied determined cost-cutting exercises and exhibited sterling financial returns from the year 2000 onwards (Young, 2009). Over a five-year period investor returns grew by an annual compounded rate of 89.58%, making it the top performing company on the Johannesburg Stock Exchange (JSE) when viewed over the period September 2001 to September 2006 (Smith, 2006). However, these results should be seen against a backdrop of a massive global surge in demand for commodities and it is uncertain how much of ArcelorMittal's returns during this period can be ascribed to favourable market conditions.

The global economic crisis did not spare ArcelorMittal and share prices dropped from a height of R265 during June 2008 to the level of R59 at the start of 2009 as the company saw demand for its products drop dramatically while prices offered in the market were slashed (ArcelorMittal, 2009).

No previous studies were performed to judge the level of corporate entrepreneurship in any site of ArcelorMittal South Africa. An unpublished study performed by Human Synergistics indicated that employees in ArcelorMittal Vanderbijlpark have a very aggressive and defensive (as opposed to a constructive or passive) interactional style, with little or no tolerance for faults (Source: Unpublished report commissioned on behalf of ArcelorMittal South Africa).

In view of the fact that demand for ArcelorMittal's products fell drastically while internal management styles were shown to be inflexible and intolerant of deviations from the norm, the question arises whether the company's personnel are at all prepared to face the challenges of the most drastic global economic crisis since the company's inception more than 70 years ago (BBC, 2009).

By gauging the level of corporate entrepreneurship in the Finishing units of ArcelorMittal Vanderbijlpark, the degree to which internally driven change will be nucleated and implemented in order to thrive in drastically changing market conditions can be determined.

## **1.3 Objectives of the study**

### **1.3.1 Primary objective**

The primary objective of the study is to assess the level of intrapreneurship within upper to middle employee levels of the Finishing units of ArcelorMittal Vanderbijlpark and to make recommendations regarding the encouragement of an entrepreneurial climate within these business units.

### **1.3.2 Secondary objectives**

The secondary objectives, which support the primary objectives, are the following:

- Defining entrepreneurship and its importance in an economy by means of a literature review.
- Defining corporate entrepreneurship and the vital role it plays in ensuring corporate sustainability by means of a literature review.
- Defining a culture of corporate entrepreneurship inside an organisation and describing the constructs that underpin such a culture, by means of a literature review.
- Describing ArcelorMittal South Africa and its relationship with its main stakeholders, by means of a review of both published and unpublished literature.
- Using the body of knowledge garnered from the literature reviews to adapt a questionnaire in order to measure the level of entrepreneurship in the B to G role levels of the Finishing units of ArcelorMittal Vanderbijlpark.
- Validating the reliability of the questionnaire by means of statistical analysis.
- Using collected data in order to present prevalent perceptions regarding both the climate of corporate entrepreneurship and success of the company.



- Examining the influence of select demographical variables on the observed levels of corporate entrepreneurship and perceptions of the success of the company.
- Determining the shortcomings in the corporate entrepreneurship culture of the assessed business unit and to make recommendations to improve thereon.

## 1.4 Scope of the study

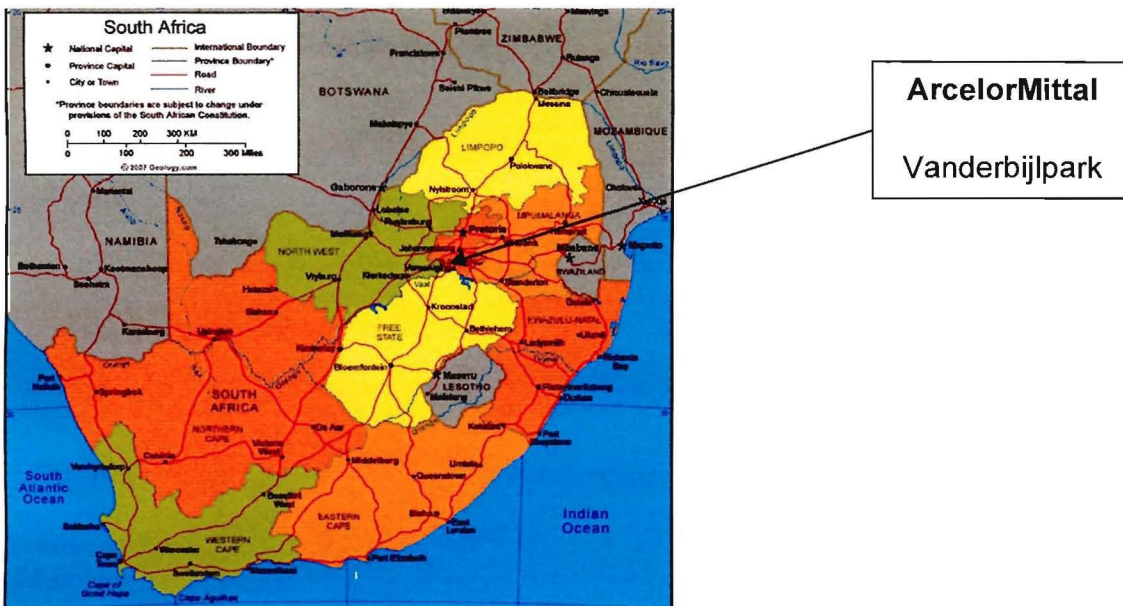
### 1.4.1 Field and sector of the study

The field of study falls within the subject discipline of entrepreneurship and more specifically corporate entrepreneurship.

### 1.4.2 Geographical demarcation

The study is limited to the Vanderbijlpark site of ArcelorMittal, located in the Gauteng province of South Africa. The site is located in Vanderbijlpark, South Africa (see Figure 1.1 for geographical location of site within Southern Africa).

**Figure 1.1: Geographical location of ArcelorMittal Vanderbijlpark**



Source: Global Exchange (2009).

Within the manufacturing site, the primary and finishing production units cannot be clearly segregated in geographical terms because site developments over time caused different functions to be physically intertwined to a large extent.

## **1.5 Research methodology**

A literature review was conducted to secure the definition and background related secondary objectives. A subsequent empirical study was conducted to complete the study objectives.

### **1.5.1 Literature review**

In order to gain a thorough understanding on the subject of corporate entrepreneurship, a literature review was conducted. The specific aim of the review was to explore the various definitions and underlying constructs of entrepreneurship, corporate entrepreneurship and a climate of corporate entrepreneurship, in addition to information relating to the corporate profile of ArcelorMittal South Africa.

Categories of literature which are included in the literature study comprise journal articles, textbooks, internet publications, newspaper articles, dissertations as well as unpublished internal reports from ArcelorMittal South Africa.

### **1.5.2 The empirical study**

The six steps proposed by Welman, Kruger and Mitchell (2005:12-13) were followed in the research process:

1. Determination of the research topic
2. Definition of the research problem
3. Planning the research design
4. Collecting data
5. Analysis and interpretation of data
6. Reporting with conclusions and recommendations

Steps one and two were discussed supra under the relevant headings and steps three to six will be discussed in more detail below.

### Research design

The aim of the research design is to present a method to gauge the level of corporate entrepreneurship in the organisation. This will then be measured by the level by which specific attributes generally associated with corporate entrepreneurship are exhibited.

Quantitative research was facilitated by means of a structured questionnaire, which was developed based on criteria highlighted during the explorative literature survey. The questionnaire was then used to perform a descriptive research in order to determine the level to which respondents indicated that they agreed with the presence of the corporate cultural attributes listed in the questionnaire.

### Study population

All B to G role persons operating in the Finishing units of ArcelorMittal Vanderbijlpark's Finishing units were targeted. While a B role employee represents the highest level of management in a business unit, the lowest graded employee working in the company is classified as an L role.

The persons identified in the group above were selected for the following reasons:

- The group comprises all managerial and skilled technical functions.
- All persons have access to email and the corporate intranet and have some discretionary time in which to complete a survey.

A total of 325 respondents were identified in the target population. Surveys were routed in hardcopy format via human resource consultants functioning in the areas of the respondents.

### Gathering of data

Data was collected by routing of the structured questionnaire in hardcopy to all persons in the study population and by capturing all responses by the Statistical Consultation Services of the North-West University

### Measuring instrument

A structured questionnaire was used as measuring instrument. The purpose of a questionnaire is to assimilate relevant data and to compare it within a sample group (Tustin, Lighthelm, Martins & Van Wyk, 2005:387).

It was decided to adapt a questionnaire that was initially developed by Oosthuizen (2006) and subsequently adapted by Jordaan (2008). The advantages of basing measurement on an existing questionnaire are the following:

- Validity and reliability of the questionnaire have already been tested and established.
- The results from this study can be compared to the results of other studies in other industries where this questionnaire was employed.
- The questionnaire has a strong correlation with the findings of this study's literature survey.

The questionnaire was initially developed by Oosthuizen (2006) and refined by Jordaan (2008). For the purpose of this study, the questionnaire was further adapted to include additional demographical data, introduce dependent variables relating to the perceived success of the organisation and to include a test for the presence of a proposed climatical construct which was not recognised by Oosthuizen or Jordaan.

### Statistical analysis

Completed questionnaires were processed by the Statistical Consultation Services of the North-West University. The data collected were statistically analysed, using Statistica (Statsoft, 2008) and SPSS (SPSS, 2005). The reliability of the questionnaire

was assessed by calculating Cronbach alpha coefficients and both p-tests and d-tests were performed on every construct to quantify the effect of demographical variables thereupon.

## **1.6 Limitations of the study**

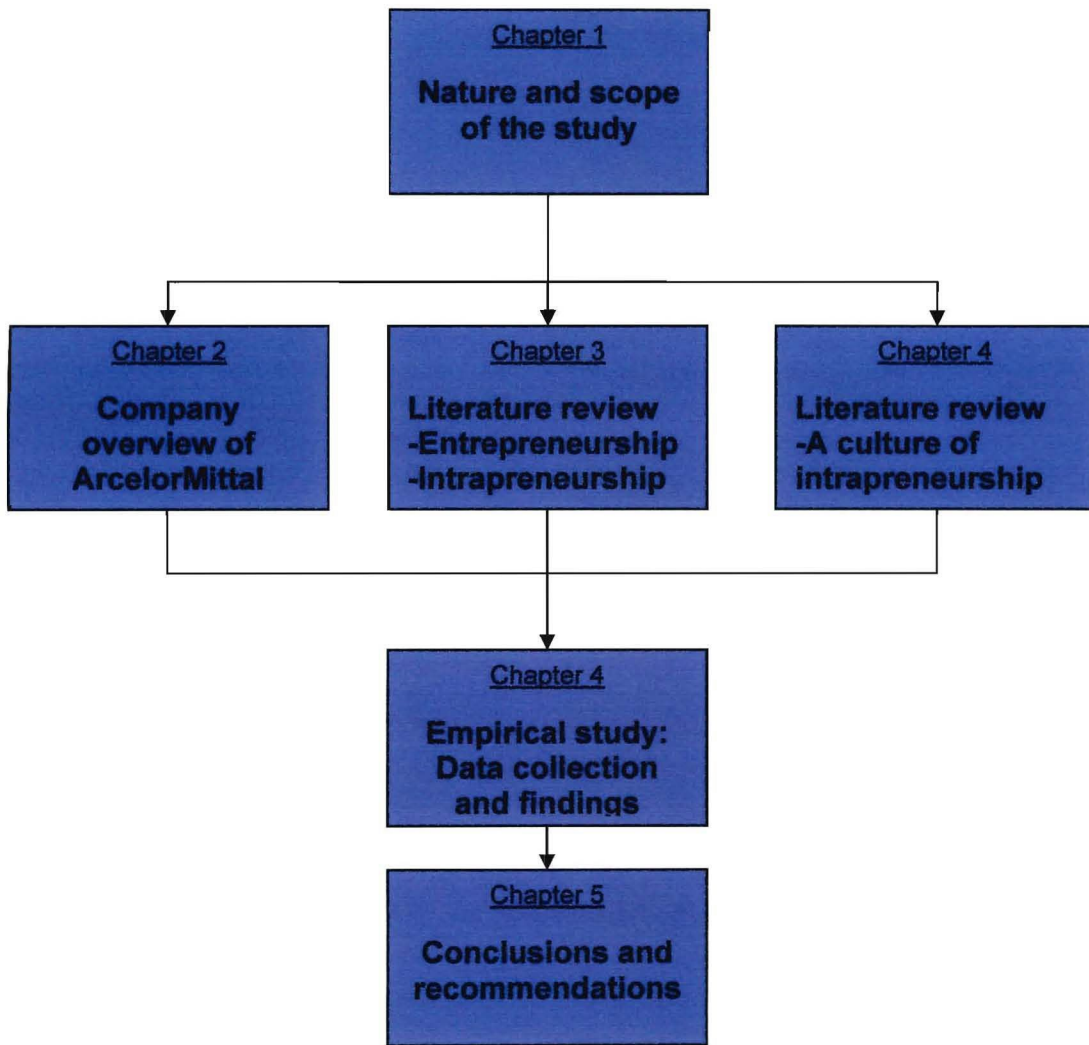
The population targeted by the study is limited in a number of ways:

- Only the Finishing units of the Vanderbijlpark site were targeted. The reason for this was that a similar study was being conducted in the primary units of the site. In addition, internal management practices in the international ArcelorMittal company tends to totally separate primary and secondary units in terms of management and this has to some extent distilled into practices at the local site.
- Only higher-level employees were targeted. While the ideal would be to obtain responses from employees at all levels, it would necessitate adaption of the questionnaire to account for 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 incisive questionnaire targeted at higher-level employees.

## **1.7 Layout of the study**

The layout of the study is graphically represented in Figure 1.2.

Figure 1.2: Graphical representation of the study



Source: Author's own view.

The layout of the study will be discussed per chapter below.

## Chapter 2: Overview of ArcelorMittal Vanderbijlpark

The establishment and evolution to the present day of the company will be examined, as well as its operational structure and the demographical profile of its workforce. An assessment of the company's interaction with its stakeholders – seen in this context as the market, its labour force, its customers, the competition authorities, environmental protection authorities and suppliers of the company– will be made. Together with the results of internal surveys of corporate culture, the company's relationship with its stakeholders will be used to arrive at the causal factors to the study.

## Chapter 3: Literature review on corporate entrepreneurship

Entrepreneurship will be discussed by examining the origin of the concept, definitions of the term and the importance thereof in an economy. Subsequently, corporate entrepreneurship will be studied by reviewing various definitions of the subject and the dimensions that are recognised to underlie the concept. Corporate entrepreneurship will be contrasted with other corporate concepts, its value will be highlighted and lastly the dangers of incautious implementation will be examined.

## Chapter 4: Literature review on a climate of corporate entrepreneurship

A climate of corporate entrepreneurship will be reviewed by considering definitions penned to define it and furthermore by identifying constituent constructs which underpin an intrapreneurial climate. In addition, methods to implement and champion corporate entrepreneurship will be investigated.

## Chapter 5: Results of empirical research

The methodology of the empirical study will be outlined and tests used to ensure validity and verify will be discussed. Both the sections of the questionnaire dealing with constructs of an entrepreneurial climate as well as perceived success of the organisation will be presented in terms of validity achieved, results obtained and size effects observed.

## Chapter 6: Conclusions and recommendations

A discussion on the results of the analysis of data in Chapter 5 will be held, interpreting the measured state of corporate entrepreneurship and perceptions regarding success of the company. The results of the empirical study will be incorporated into the literature review in order to make recommendations on ways to improve the climate of corporate entrepreneurship in ArcelorMittal South Africa. Finally, adherence to the objectives of the study will be revisited and recommendations on future research will be made.



## CHAPTER 2

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### OVERVIEW OF ARCELORMITTAL VANDERBIJLPARK

#### 2.1 Introduction

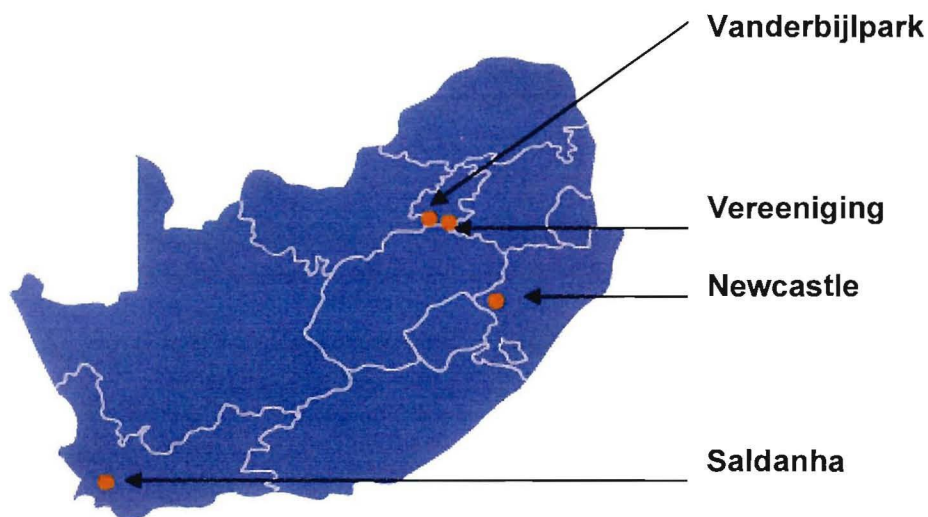
ArcelorMittal South Africa is a producer of low-carbon steel in flat and profiled form. The company has the capacity to produce 6.4 million tonnes of liquid steel per year and as such constitutes the largest producer of this commodity on the African continent (ArcelorMittal, 2009).

The vision of the company is to be the preferred supplier of steel solutions for the development of sub-Saharan Africa. The majority of the company's revenue (56%) is generated from sales of flat steel to sub-Saharan African markets, while profiled products (30%) and coking coal (14%) sold in the same markets account for the remainder of income. The company employs 8600 employees in all its South African operations (ArcelorMittal, 2009).

The corporation forms part of the global ArcelorMittal group, a producer of steel that has an industrial presence in 27 countries and 310 000 employees worldwide (ArcelorMittal, 2009).

The South African operation has four major sites in the country. From Figure 2.1, it can be seen that two sites are located close to one another in central South Africa, with two other sites being in Natal and Saldanha respectively.

**Figure 2.1: Geographical dispersion of ArcelorMittal sites in South Africa**



**Source:** ArcelorMittal (2009).

The four sites are characterised by the primary processes employed to manufacture steel, their total output capacity and the products on offer. A summary of these factors are presented in Table 2.1.

With the exception of Vereeniging, all sites have the capability to convert raw iron ore into steel. Furthermore, both Vanderbijlpark and Vereeniging utilise scrap steel as a major input. Broadly speaking, the final product from the Vanderbijlpark and Saldanha sites are in coiled form and is thus referred to as flat steel. Newcastle and Vereeniging focus exclusively on pipes, bars and other complex forms and are referred to as producers of profiled steel sections.

**Table 2.1: Summary of ArcelorMittal sites in South Africa**

| <b>Site</b>           | <b>Major steelmaking processes</b>                                 | <b>Total output tonnage (Million tons per annum)</b> | <b>Products offered</b>   |
|-----------------------|--|--|---|
| <b>Saldanha</b>       | Corex and Midrex continuous process                                | 1.25   | Hot rolled coil   |
| <b>Newcastle</b>      | 1 Blast furnace, 1 induction furnace, 2 basic oxygen furnaces      | 1.40   | Wire rod, profiles, billets, rebar and other.   |
| <b>Vereeniging</b>    | 1 Electric arc furnace   | 0.30   | Seamless tubes, profiles, forged steel.   |
| <b>Vanderbijlpark</b> | 2 Blast furnaces, 3 Electric arc furnaces, 3 Basic oxygen furnaces | 3.70   | Slabs, plates, hot rolled coil, cold rolled coil, galvanised coil, tinplated coil, coloured coil. |

**Source:** ArcelorMittal (2009).

All information in this section is sourced from ArcelorMittal (2009)

## **2.2 History of ArcelorMittal South Africa**

In the early 1900's, the Union government leading South Africa realised the need for indigenous production of steel. The government promulgated the Iron and Steel Industry Act (Act 11 of 1928) to provide for the establishment of the Iron and Steel Corporation of South Africa (IsCOR). The first site was erected in Pretoria and steel production commenced in 1934 (SAISI, 2007).

Demand for IsCOR's steel grew strongly into the late 1930s, prompting the company to begin construction on an integrated steelworks, heavy plate mill and flat product mills in

1943. In 1953 Iscor started a new iron mining operation in Sishen. By then, Iscor was supplying more than 70 percent of South Africa's steel needs (SAISI, 2007).

Through the 1960s, Iscor stepped up its production capacity in an expansion program and this culminated in the commissioning of the Newcastle works in 1976 (SAISI, 2007).

Faced with increasing competition, particularly with the entry of British mining giant Anglo-American into the South African steel market, Iscor restructured at the beginning of the 1970s. The enactment of the Companies Act of 1973 led Iscor to adopt a more corporate organization that allowed it to be run in the manner of a private company. When the South African government embarked on a large-scale privatisation program of state-held companies during the late 1980s, Iscor was earmarked as one of the first institutions to be listed on the Johannesburg Stock Exchange (JSE) because of its experience in being managed according to private principles (Funding Universe, 2009).

Iscor was privatised in 1989 and shortly thereafter South Africa experienced trade barriers against it being lifted because of the move toward the end of Apartheid during the early 1990s. This opened up markets for Iscor, but also forced it to become more competitive as it became more exposed to international competition. The company started its first work force reductions in 1994 by reducing 2000 primarily administrative positions. In 1995, a major re-engineering process was launched together with McKinsey management consultants. The outcome of the process was that 30 000 jobs were reduced and the company identified six strategic markets: steel, coal, iron ore, titanium, zinc and copper. After a short stint of producing stainless steel at its Pretoria mills, the plant was decommissioned in 1997 due to being outdated. However, a new production site in the form of Saldanha steel was developed together with the Industrial Development Corporation (IDC) and production from this site started in 1999 (Funding Universe, 2009).

In 1999 world steel demand fell sharply. Two of Iscor's major shareholders placed considerable pressure on the board to unbundle the company's mining and steel producing units into two separate companies and in 2001 Iscor was broken up into Kumba Mining and Iscor Steel (Funding Universe, 2009). From the time of the

unbundling, the world's second largest steel producer (the LNM group) started increasing its equity in Iscor steel and this culminated in the renaming of the South African firm to Ispat Iscor in 2004 when the LNM group attained a 51% shareholding in Iscor Steel.

In 2005 the company was renamed Mittal Steel South Africa in accordance with changes in the mother company's name and a third renaming was undertaken in 2007 to ArcelorMittal South Africa when the Mittal parent company merged with the Arcelor group (SASI, 2007).

## **2.3 Vanderbijlpark works of ArcelorMittal South Africa**

### **2.3.1 Operational description of the Vanderbijlpark works**

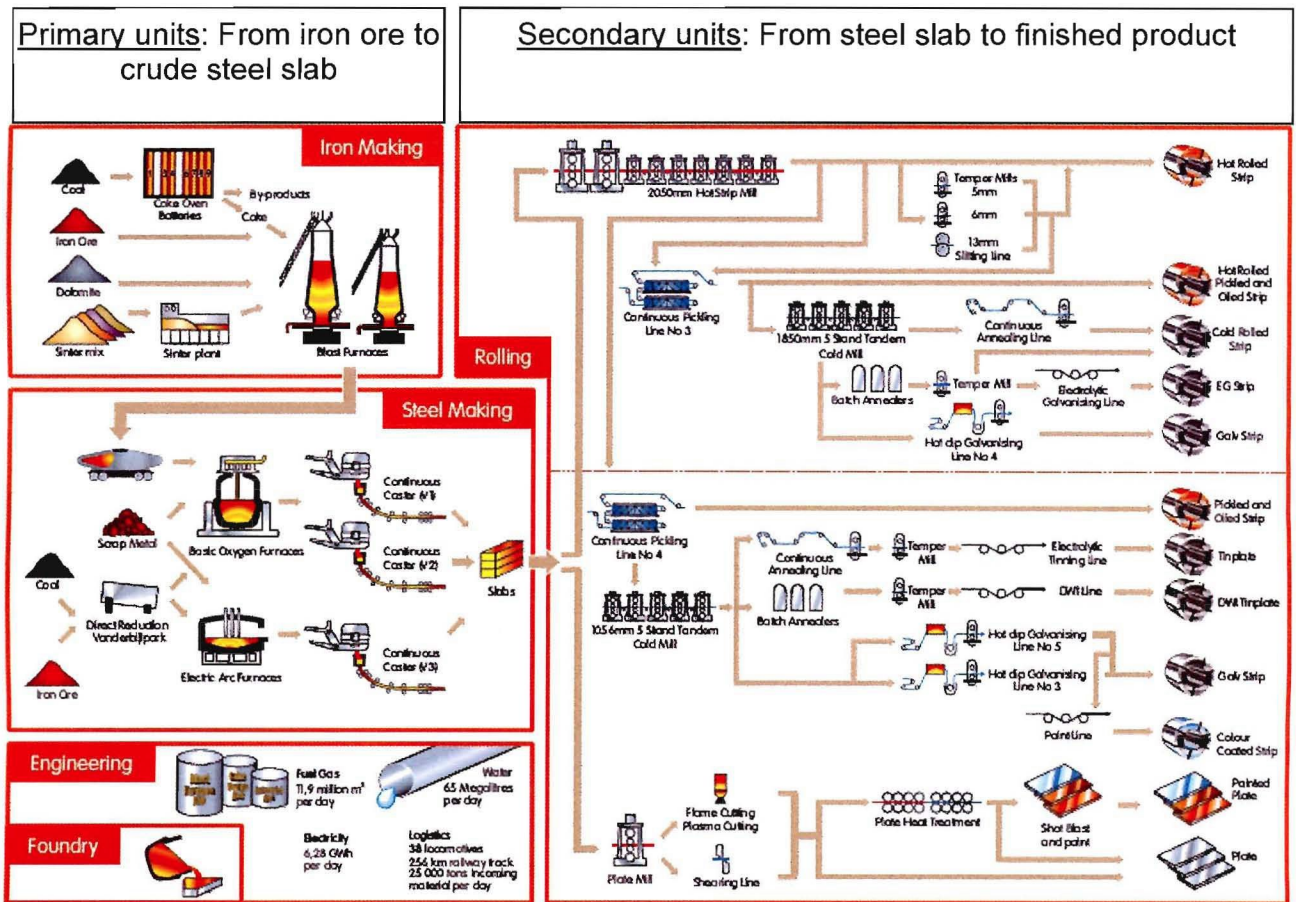
The Vanderbijlpark site is regarded as one of the world's largest inland steel mills and is the largest supplier of flat steel products in sub-Saharan Africa.

The plant's steel products are manufactured in an integrated process. Raw materials (iron ore, coke and dolomite) are charged to blast furnaces where they are converted to liquid iron. The liquid iron is refined in basic oxygen furnaces and electric arc furnaces to produce liquid steel. The liquid steel is cast into slabs, which are hot rolled into heavy plate in a plate mill, or into coils in a strip mill. The coils are either sold as hot rolled strip or processed further into cold rolled and coated products, such as hot dip galvanized, electro galvanised, pre-painted and tinplate sheets.

The process flow of the Vanderbijlpark plant is presented in Figure 2.2. The first major component of the Primary units is represented by the Iron Making section where two blast furnaces are used to convert coal, iron ore and other raw material into crude liquid iron. Steel Making represents the consecutive step in primary steel making, where either an arc furnace or BOF (Basic oxygen furnace) process is employed to refine crude iron by various metallurgical processes in order to arrive at liquid steel. The newly produced liquid steel is then converted to solidified slabs by casting the material using one of three continuous casting processes included in the Steel Making process.

All Secondary processes have the common property that they receive steel in cold (viz. solidified) form and convert them into a final product. From Figure 2.2 it can be seen that a plethora of alternative processes exist in order to produce various end-products but in general most processes use an initial step to reduce the thickness of the steel followed by various processes to impart the correct mechanical properties and coating to the finished product.

**Figure 2.2: Process flow of Vanderbijlpark works**



**Source:** Internal unpublished document of ArcelorMittal.

The Engineering and Foundry sections provide support to the entire site and also manufacture small-scale niche products and are both considered to form part of the Secondary units.

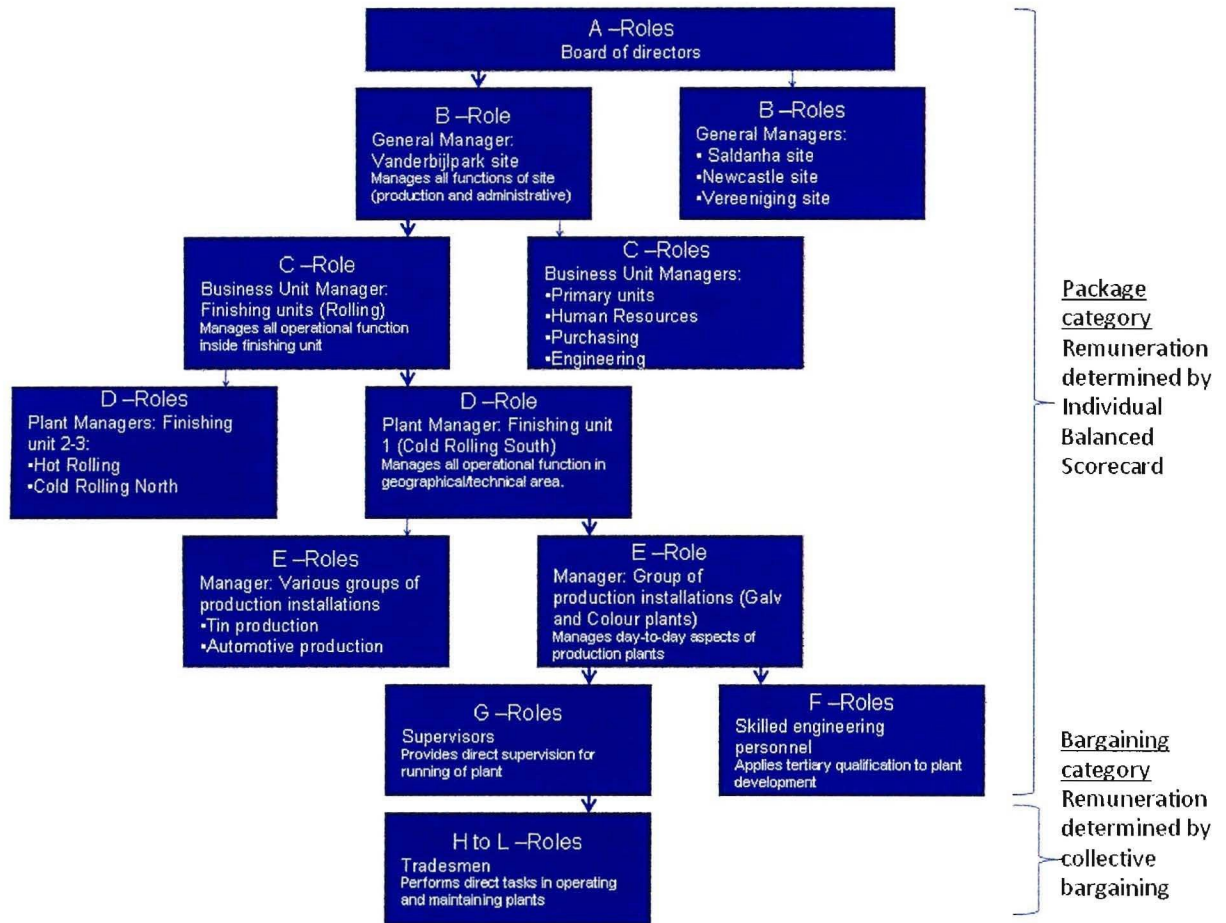
All information in this section is sourced from ArcelorMittal (2009), as well as

unpublished internal documents of ArcelorMittal.

### **2.3.2 Operational structure of Vanderbijlpark works.**

The organisational structure in Vanderbijlpark works follows a traditional top-down approach with A role employees being in top management and salary levels as well as management responsibilities (if any) decreasing as role level denominations progress in the alphabet. A to E roles are mostly managerial functions, with some overlapping afforded for technical employees functioning in the E to G roles. The lowest supervisory level is G role and positions lower than this are predominantly occupied by operational and maintenance tradesmen with no supervisory responsibilities. A simplified representation of the organisational structure is given in Figure 2.3, with the detail provided for the structure of the Galvanising and Colour coating subsection.

**Figure 2.3: Simplified organisational structure of ArcelorMittal.**



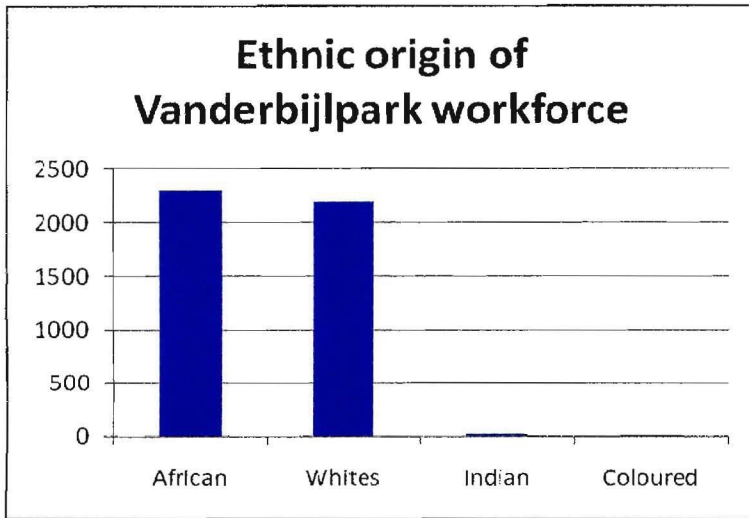
**Source:** Author's own presentation of investigation results.

### 2.3.3 Demographics of workforce at Vanderbijlpark site

The Vanderbijlpark site employs 4550 workers in both operational and administrative functions. This section presents some basic demographic data regarding the workforce of the site in terms of racial composition, gender distribution, length of service and job grading. All data is sourced from the author's own analysis of the employee record database of the Vanderbijlpark works.



**Figure 2.4: Ethnic origin of Vanderbijlpark workforce**



From Figure 2.4, it can be seen that the Vanderbijlpark site is made up of almost equal amounts of African and White employees, with Indians and Coloureds being in the minority.

**Figure 2.5: Gender distribution of Vanderbijlpark workforce**

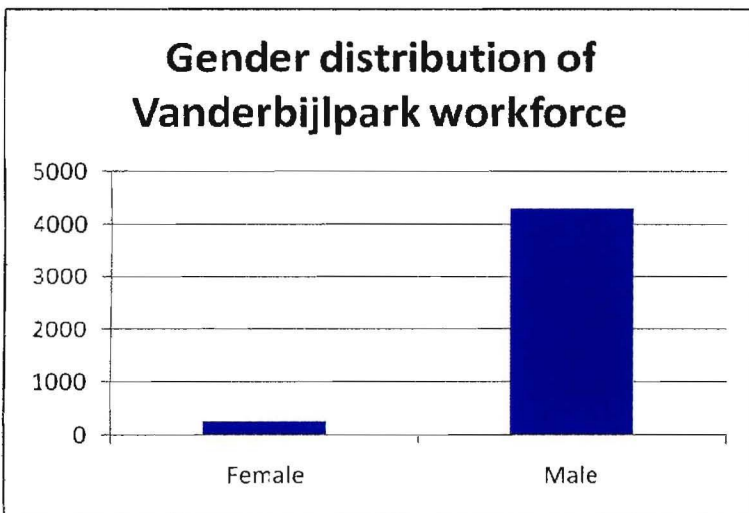
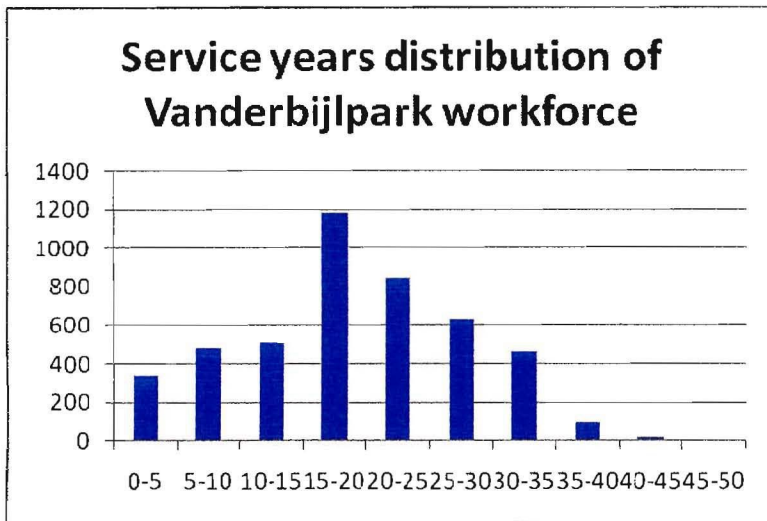


Figure 2.5 indicates that the workforce of the Vanderbijlpark site is heavily biased towards males, with a very small number of females being employed.

**Figure 2.6: Service years distribution of Vanderbijlpark workforce**



The majority of employees fall into the category of those with 15 to 20 years of service (Figure 2.6). The marked discontinuity evidenced between the 10-15 years and the 15-20 years service groups can be attributed to the company's deliberate reduction in workforce strength and intake of new employees since the middle of the 1990s (see discussion under "History of ArcelorMittal South Africa").

**Figure 2.7: Job grading distribution of Vanderbijlpark workforce**

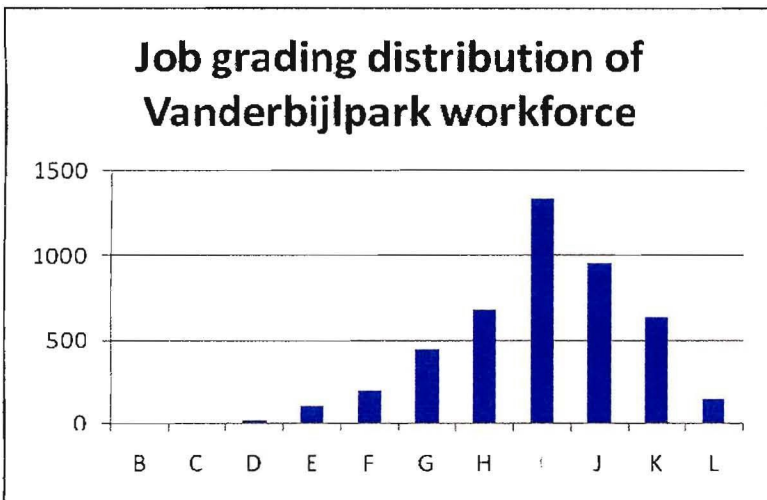


Figure 2.7 indicates that the majority of employees function on an I-grading position, which is regarded as the highest skilled operational position which does not have any

factor of supervisory or leadership components.

#### **2.3.4 Policies and plans pertaining to intrapreneurship**

ArcelorMittal's Vanderbijlpark plant has a volume of policies dealing with human resources and industrial relations. However, these policies were found to deal almost exclusively with day-to-day initiatives to improve employees' safety and wellness and to ensure a stable and content workforce. No policy could be found by the author that outlines actions or directives to improve intrapreneurship.

At the time of investigation, the site was busy re-organising its B to F role labour force in terms of an initiative called Change of Operational Script (COS). A recognised shortcoming of the traditional structure employed in the company was that technical persons reported directly to line managers. This leads to specialists being involved to an ever-increasing degree in day-to-day matters and also to the fact that skilled technical persons had to move to management in order to progress in terms of role grading and remuneration. The sought effect of COS was to free specialists such as engineers from day to day actions so that they could focus more on applying their knowledge in projects and to present an advancement path that did not necessarily lead to management.

One of the stated purposes of the COS initiative was to improve innovation in the company. However, when examining the proposed implementation plan of the initiative it was unclear whether it would lead to a fostering of an entrepreneurial climate (as discussed in Chapter 4), or rather to just a more focussed adherence to strictly technical execution of projects by personnel.

## **2.4 Assessment of company performance and its relationship with stakeholders**

Mair and Rata (2004:4) argue that an assessment of the effect of corporate entrepreneurship on a company cannot be made by purely considering financial performance, but that a stakeholder-based approach should be followed to construct a multidimensional performance measure that takes both financial and non-financial aspects (such as customer satisfaction) into account. Atkinson and Waterhouse

(1997:26) define two groups of stakeholders: environmental (customers, owners and the community) and process (employees and suppliers) participants who need to be considered for the purpose of performance.

The stakeholder approach will be followed to assess the current performance of the company in terms of both financial results as well as its interaction with environmental and process stakeholders.

#### **2.4.1 Market returns**

Shortly after the company's unbundling from its mining operations, Iscor posted a loss for the financial year of 2001. However, vigorous restructuring as well as a buoyant demand for its product saw the company become the darling of the Johannesburg Stock Exchange (JSE). In 2006, it posted an annual profit of R5.08 billion and its stock was shown to be the best investment of all stocks on the JSE when viewed over the then-previous five years (Bain, 2006).

In 2006, when the company was shown to be the top performer on the JSE, its share price rose to the levels of R70 per share from a level of R10 per share in 2001. The share price rose more or less steadily to a maximum of R265 in June 2008, before the effects of the worldwide economic crises took hold (ArcelorMittal, 2009). For the first quarter of 2009, the share price varied around levels of R75 per share despite forecasting (and eventually posting) a loss of R 237 million for the first quarter of 2009 (ArcelorMittal, 2009). It could be argued that the market's willingness during a period of loss making to tolerate a share price at levels similar to those in 2006 (when a profit in excess of R5 billion was posted), demonstrates confidence in the resilience of the company and its ability to exploit changing market conditions rapidly and effectively.

#### **2.4.2 Labour relations**

Relations with the company's unions appear to be strained at best, although few formal strikes have emerged. The International Labour Organisation's assessment of labour relations in 1997 showed a significant lack of trust from the side of all unions towards the company's management and few initiatives from the side of the company to improve communication and cooperation (International Labour Organisation, 1997:85). This

trend appears to have continued for the next decade, with Numsa - the largest union represented on ArcelorMittal's shop floors (Musgrave, 2009) - calling Mittal "the worst selfish entrepreneur, a union basher who has no interest of the country at heart, but wants to cream off more profits in the country at the expense of stability and job creation" (The Financial Express, 2006). Following the outbreak of the international economic crises towards the end of 2008, Numsa expressed the opinion that ArcelorMittal is aggravating the economic hardship of the country by its pricing policy and that the only redress would be to nationalise the company (Musgrave, 2009).

### **2.4.3 Customers**

During the peak of the economic cycle, ArcelorMittal South Africa struggled to keep up with demand from domestic customers (Spadavecchia, 2008). However, apart from the company's alleged uncompetitive behaviour (see discussion below), little evidence could be found to indicate that the needs of the local steel-consuming industry are not served in a satisfactory way.

### **2.4.4 Competition authorities**

In 2002 Harmony Gold brought a case of uncompetitive behaviour against ArcelorMittal South Africa (then Iscor) to the Competition Commission. When the Commission took no action and did not refer the case, Harmony as well as DRD Gold brought the case directly to the Competition Tribunal (Faurie, 2008).

The Competition Tribunal found the company guilty of uncompetitive behaviour, starting during the year 2000 and extending up to the period of ruling. It was ruled that the company misused its dominant position in the local steel industry by forcefully preventing its customers, who in turn export processed steel, from passing any savings on to the domestic market in South Africa. The high prices that were thus created in the domestic market were harvested by ArcelorMittal by setting its own prices in the domestic market at just below those of imported steel. An administrative fine of R690 million was imposed, as well as a set of regulations to adhere to (The Competition Tribunal, 2007).

ArcelorMittal proceeded with appeal against the finding (Bridge, 2007), but new charges brought by individual companies bolstered by the Competition Tribunal's ruling have pushed outstanding claims against the company to over R1.3 billion (Brown, 2008).

#### **2.4.5 Environmental record**

During an audit by the Green Scorpions during 2008, it was found that ArcelorMittal was in serious contravention of environmental legislation and criminal charges were considered after corrective instructions were repeatedly ignored at some of its sites. In response, the company has outlined the fact that most of the contraventions stem from inadequate designs made up to five decades ago and that R750 million has been spent and another R1 billion has been committed to correct these 'legacy faults' (Petros, 2008).

#### **2.4.6 Suppliers**

Prior to the economic crisis of 2008 onwards, ArcelorMittal was seen as having a strong and reliable payment history of its suppliers. However, the company took rapid and drastic measures during the onset of the economic crisis to preserve its own cash flow and refused payment for confirmed orders readied by its suppliers. This allegedly caused dire economic hardships for many of its suppliers who have invested large amounts of operating capital in completing ArcelorMittal's confirmed orders (Creamer, 2008).

### **2.5 Previous assessments of corporate culture**

No direct measurement of the entrepreneurial culture prevalent in the Vanderbijlpark works has been made. However, two surveys were performed to assess other cultural aspects. The first survey gauged to what extent employees perceived their culture to be task orientated, people orientated and/or satisfaction orientated (see discussion below). The second survey measured the extent to which employees feel connected to the outcomes of the company.

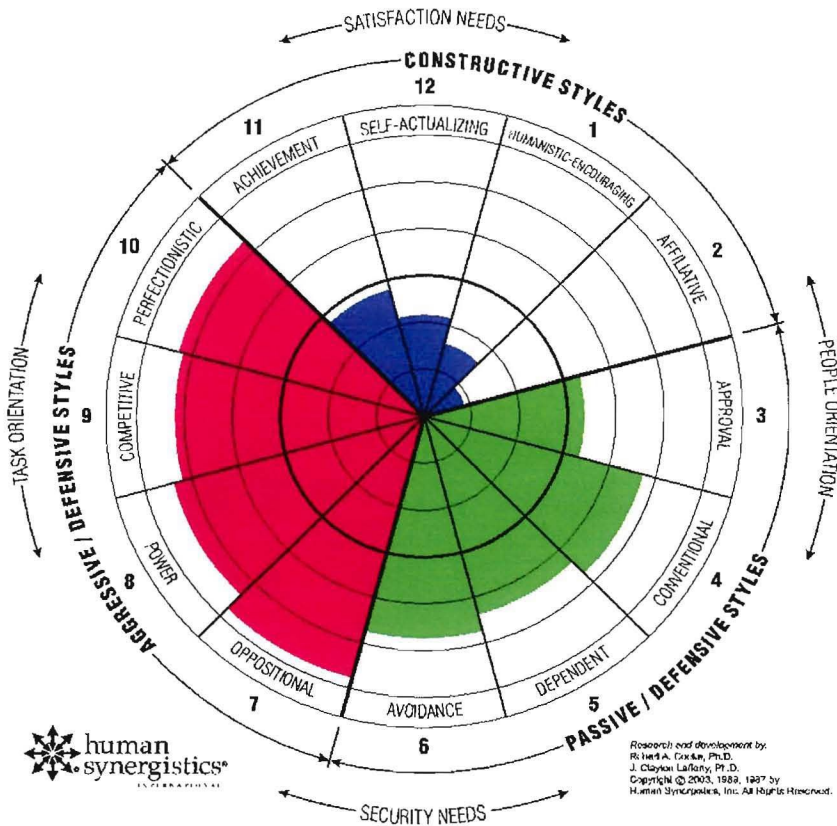
### 2.5.1 Human Synergistics Study among high-level employees

An unpublished study performed by a commissioned contractor among A to G role employees during 2008 gauged how employees in these roles perceived the corporate culture prevalent in their site of operation. The results of Vanderbijlpark Works' respondents are presented in Figure 2.8. The study's aim was to characterise corporate behaviour by measuring how strongly it scored on each of the following three styles:

- **Constructive styles:** Whether behaviour reinforced achievement and self-actualisation by employees, encourages behaviour centred on human interaction and values affiliation in making decisions
- **Defensive styles:** Whether behaviour focuses on avoiding confrontation and acting in a dependent way in order to minimise the change of being perceived as making a mistake. This type of behaviour values conventional, safe solutions and seeking approval for every step.
- **Aggressive styles:** Whether behaviour favours testing a person's power in the organisation as a first resort to resolving any situation and acting in competition rather than cooperating. It tends to expect perfectionistic behaviour with no mistakes being tolerated and generally resorts to oppositional rather than affiliative behaviour.

In Figure 2.8, the degree to which a sector is filled correlates to the extent to which the behaviour which is indicated by the sector's heading, was found to be exhibited.

**Figure 2.8: Results from study performed by Human Synergistics consulting**



**Source:** Unpublished study commissioned by ArcelorMittal South Africa.

From Figure 2.8 it can be seen that the culture is perceived to be very aggressive with little tolerance for faults. The corollary is that a passive/defensive reaction is perceived to be elicited among employees. It was roundly agreed that constructive styles of operation were either totally absent or very poorly represented.

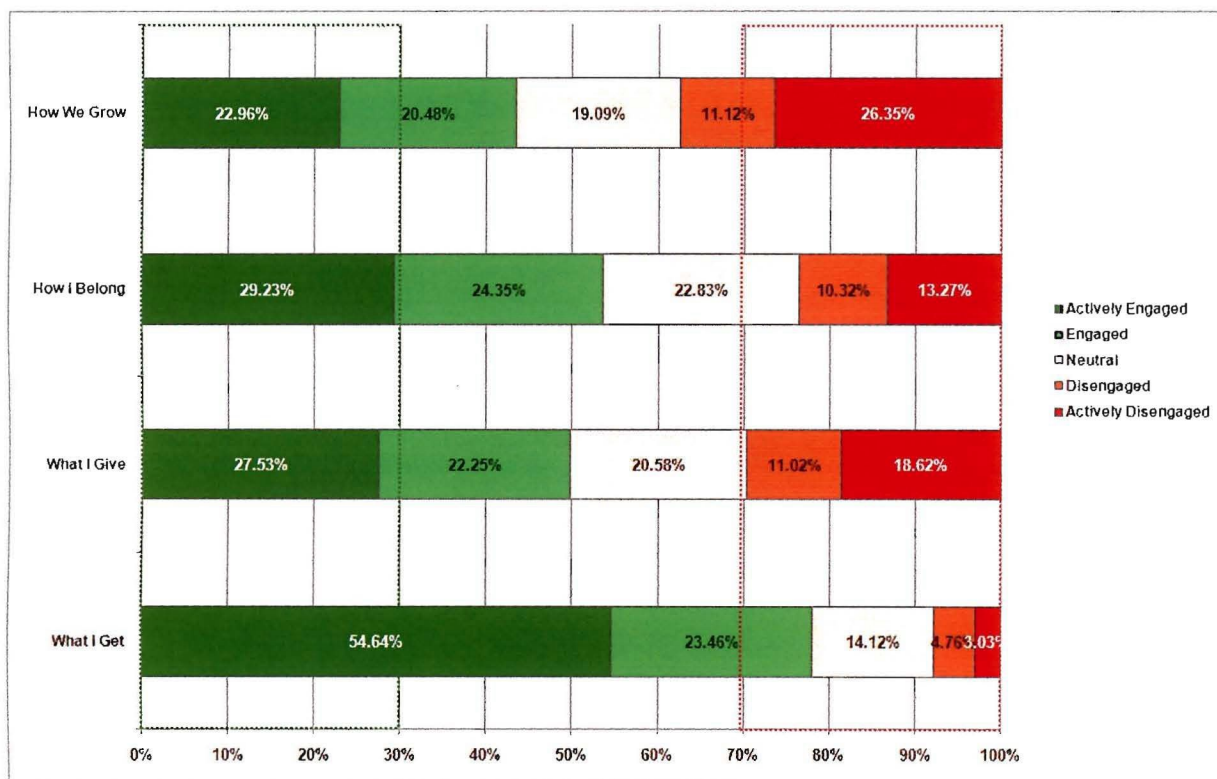
### 2.5.2 Gallup Study on engagement perceived by all levels of employees

An unpublished study performed during 2008 among employees functioning in A to K roles, gauged how employees amongst these roles perceived the level to which they felt to be engaged in ensuring the outcomes of certain factors. Respondents were questioned on twelve metrics that related to the quality of human interaction that a person experiences, how valued the person feels, how empowered a person feels and whether rewards reflect the effort that an employee makes. All findings are converted to represent the degree to which a person feels engaged in terms of the growth of the



company, his sense of belonging, what input he gives and what reward he receives. The findings of this study are presented in Figure 2.9. As explained in the key of the figure, darker shades of green represents the fraction of employees who feel actively engaged and darker shades of red those who feel actively disengaged, with shades in between depicting viewpoints between the opposites.

**Figure 2.9: Results from study performed by Gallup consulting**



**Source:** Unpublished study commissioned by ArcelorMittal South Africa.

From Figure 2.9, it can be seen fewer than 50% of employees feel that they are engaged when the growth of the team as well as the company is considered. Almost 80% of employees feel engaged in the process of determining reward, but only approximately 50% consider themselves engaged in the process of directing their inputs and reinforcing their sense of belonging to a team.

## **2.6 Determination of causal factors to the study**

When examining the history of ArcelorMittal, the overwhelming impression is that it has a record of being able to adapt to changing conditions for over 70 years. It moved from an integrated mining and manufacturing concern under state control with political as well as economic objectives, to a focussed privatised group with the ability to return very healthy market results.

However, when considering the company's relationship with entities sharing its operating environment (suppliers, customers, the broad steel market, the environment and the unions of its employees) a picture emerges of a determined company which does not wear gloves when dealing with anyone. The company is generally accused of abusing its position when an opportunity thereto presents itself and appears to not being in the habit of dwelling on the broad consequences of its strategy.

When examining the results of two internal surveys done by external contractors to determine the prevalent corporate culture and level of engagement of employees, one should be careful to interpret the findings in isolation due to the lack of benchmarking data available from other companies. However, the results do appear to indicate on the one hand a culture which demands slavish adherence to orders and which has little tolerance for faults and on the other hand employees who feel that they have little connection to the outcomes of the company.

In conclusion, the company outwardly appears to have an intolerant "we make the rules" attitude towards business, whilst inwardly the broad cross-section of its employees follows orders and does little to enhance the output of the company. These factors appear to suggest that a strong lack of corporate entrepreneurship amongst employees might be exhibited. The aim of this study is to investigate this suggestion and to draw conclusions on how to improve the level of corporate entrepreneurship in the company.

## **2.7 Summary**

ArcelorMittal South Africa forms part of the largest steel-producing group in the world and dominates the African landscape in terms of output of steel products. It has four

sites in South Africa and utilises integrated processes to manufacture a large variety of primary steel products.

The company was established over 70 years ago as a strategic government asset and was privatised in 1989. It was usurped by the forerunner of its current parent company in 2004 and a number of name changes reflected amendments in the status of both the South African and the international arm of the group.

The Vanderbijlpark site of ArcelorMittal South Africa uses a fully integrated process to manufacture steel from raw ore. It has a capacity of 3.7 million tons of steel per year, which is processed into various flat primary steel products. The site provides employment to a group of 4550 persons, which largely comprises almost equal numbers of black and white males who typically have 15 to 20 years of service.

Very healthy market returns were exhibited in the early part of the current century, although the onset of the global economic crises in 2008 affected ArcelorMittal to the same extent than the general market. When the relationship with its main stakeholders is examined, ArcelorMittal frequently appears to be at odds with entities such as its unions, environmental protection authorities and competition authorities.

Internal measurements indicate that a very aggressive interactional style is favoured in the Vanderbijlpark operations, with a low threshold for mistakes. Conversely, few of the employees of the site reported feeling actively engaged in the outcomes of the company.

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 3

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## LITERATURE REVIEW ON CORPORATE ENTREPRENEURSHIP

### 3.1 Introduction

The term “entrepreneur” can be traced back to its origins in the French language, in which it encompassed the term “to take between” (Deakins & Freel, 2006:3). In the early 1800s, Jean-Baptiste Say attributed certain behavioural traits to an entrepreneur by stating that such a person is the economic agent who combined others into a productive organism by estimating and exploiting demand for a product and the means to produce it (Vosloo, 1994:148).

Despite its long-standing recognition in economic theory, the exact nature and measurement of entrepreneurship and its prevalence is still being debated (Maas & Herrington, 2007:7). However, it is generally accepted that entrepreneurship extends beyond specific skills held by an individual, to “a way of thinking, reasoning and acting that is opportunity obsessed, holistic in approach and leadership balanced” (Timmons & Spinelli, 2007:79)

Entrepreneurial activity is generally regarded as vital to economic development and growth (Heinonen & Poikkijoki, 2006:80). Developed countries benefit from entrepreneurial activity because it provides a means of revitalising stagnated economies and presents new employment opportunities. At the same time, entrepreneurship is indispensable for developing countries because it represents the engine for economic progress, job creation and social adjustment (Gurol & Atsan, 2006:26). In the United States of America, studies have shown that small entrepreneurial firms consistently create more than 75% of all new jobs (Timmons & Spinelli, 2007:51). At the other end of the world, it has been empirically demonstrated that firms with a strong measured entrepreneurial bias in their management have achieved very rapid growth and acted as an important stimulus of the national economy of China (Zhang, Yang & Ma, 2008:676).

Corporate entrepreneurship is a specialised application of entrepreneurship, in which new and innovative opportunities are launched and managed from within existing (and often large) firms (Fattal, 2003:14). Corporate entrepreneurship, or intrapreneurship, is regarded as an indispensable tool to ensure innovation, business development and renewal in order to meet the challenges of a changing business environment (Bhardwaj, Agrawal & Momaya, 2007b:131).

The Global Entrepreneurship Monitor uses an index to measure the total number of economically active persons in a country involved in starting a new business and in its 2007 report it found that South Africa had the 31<sup>st</sup> highest rate of total entrepreneurial activity (TEA) of all the countries surveyed. While the same report points out that there is no direct correlation between a country's TEA and its performance in terms of GDP growth or competitiveness, it does show that South Africa does not rate very high globally in terms of entrepreneurial activities of its population (Maas & Herrington, 2007:12).

Previous studies on corporate entrepreneurship (Jordaan, 2008:108; De Villiers, 2008:130) focussing on individual firms in South Africa indicated that levels of corporate entrepreneurship are regarded as average by employees.

## **3.2 Definition and impact of entrepreneurship**

At the heart of corporate entrepreneurship (or intrapreneurship) lies the concept of entrepreneurship and the effect it has on regional economies. The current section explores this underlying construct.

### **3.2.1 Original views of an entrepreneur and development of the term entrepreneurship**

The word entrepreneur is thought to have Gallic roots and originally indicated a kind of intermediary (Deakins & Freel, 2006:3) that used unique or 'different' techniques to effect economic transactions (Long, 1983:52). According to others (Stevenson & Jarillo, 1990:17), the origin of the term stems from 16<sup>th</sup> century economist Richard Cantillon, who defined an entrepreneur as someone who bore the risk of buying at certain prices

and selling at uncertain prices. Cantillon regarded the entrepreneur as such a pivotal agent in balancing supply and demand in an economy that he even extended his definition to include chimney sweepers and robbers (Herbert & Link, 1988:56).

The concept of entrepreneurship and the term entrepreneur developed over centuries and a summary of the evolution process is given in Table 3.1.

**Table 3.1: Evolution of the concept of entrepreneurship**

| <b>Period</b>       | <b>View</b>  |
|---------------------|--|
| <b>Unknown</b>      | French word meaning 'go-between': person's function is to facilitate transactions on trade routes  |
| <b>Middle ages</b>  | A person entrusted with resources to manage large government projects  |
| <b>1600s</b>        | A person who contracted with government, but who would carry the risk of profit or loss  |
| <b>1700s</b>        | The concepts of an originator and a backer or investor of the originator were separated  |
| <b>1800-1950s</b>   | An entrepreneur was equated to today's concept of a manager, in that he organised and operated an enterprise for his benefit                   |
| <b>1950s</b>        | An entrepreneur could not simply be a manager, but had to have contributed a new innovation to the process to be differentiated from a manager |
| <b>Current view</b> | Entrepreneurship encompasses both business acumen, managerial skills as well as a personal perspective   |

**Source:** Hisrich, Peters and Shepherd (2008:6-8).

### **3.2.2 Definition of an individual entrepreneur**

Various definitions build forth on the function-based characterisation originated by Cantillon (see supra) by defining an entrepreneur as a person who conceptualises, organises, launches and nurtures a business opportunity through innovation into a potentially high growth venture amid complex and unstable circumstances (Rwigema & Venter, 2004:6).

Schumpeter (1934:85) defines entrepreneurs by the role they play in an economy. He echoes the importance of innovation as an entrepreneurial attribute in his work "The theory of economic development". He goes on to assign entrepreneurs the role of modifying and developing new markets, maximising the benefits of technological advance and adjusting organisational structures to enhance their production department. The Austrian School of economic development (Kirzner, 1973:50) also defines an entrepreneur by characterising his role in an economic system. The school views an economy as a fickle collection of changes in perceptions that continuously experiences waves of disequilibria within markets as players adjust what they perceive to know. The role of the entrepreneur in this system is to be sensitive to price signals emanating from the market which would indicate the need for resource reallocation and then to act on it in order to fulfil demand while making profit (Kirzner, 1973:50). Drucker (1985:25) corroborates this view by stating that the entrepreneur is a person who 'always searches for change, responds to it and exploits it as an opportunity'.

Carland and Carland (1997:38) define an entrepreneur by attempting to combine the abovementioned views to some extent by providing a framework for classifying entrepreneurs. Their classification is presented in Table 3.2.

**Table 3.2: Classification of entrepreneurs**

| <b>Classification</b>            | <b>Self-actualisation method</b>              | <b>Personal measurement of success</b>                          | <b>Personal attributes or outlook</b>  |
|----------------------------------|---|---|--|
| <b>Macro Entrepreneur</b>        | Being at the helm of a business               | Effecting change to the world through innovation                | -High tolerance of risk<br>-Innovative<br>-Never complacent even when being successful |
| <b>Micro Entrepreneur</b>        | Having large degree of freedom                | Financial rewards that facilitate freedom                       | -Value business only as means to support lifestyle                                     |
| <b>Conventional Entrepreneur</b> | Recognition and financial success in business | Combination of enjoyment of life and work and financial rewards | -Enjoys challenges of business, but not prepared to take undue risks to achieve goals  |

**Source:** Carland and Carland (1997:38).

It is accepted that entrepreneurs can be described by traits that they exhibit (Clifford & Cavanagh, 1985:3) and that these qualities are both the result of inborn characteristics as well as skills acquired and practised (Timmons, 1973:85).

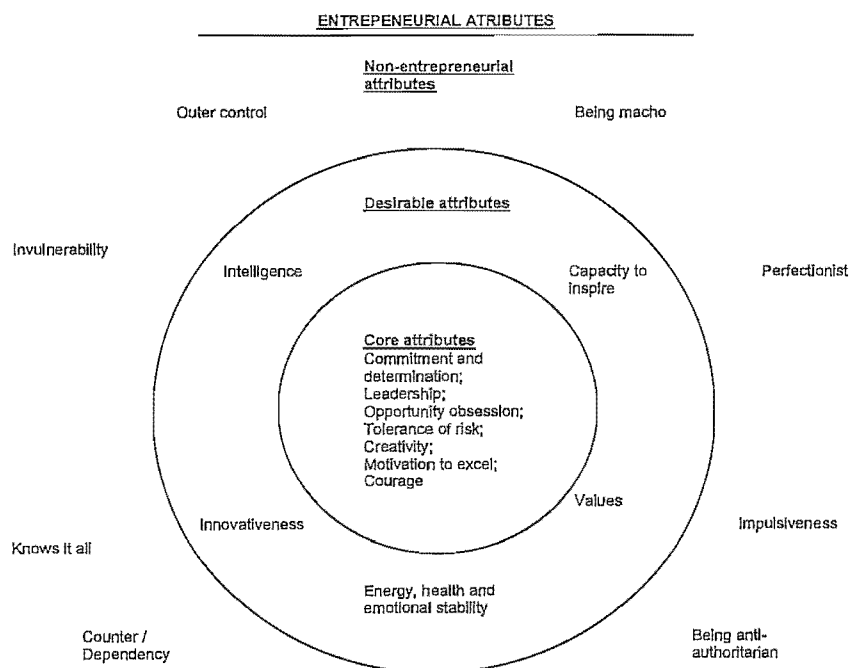


Timmons and Spinelli (2007:8) identify six dominant attributes that a true entrepreneur should have:

- Commitment and determination.
- Leadership skills.
- Obsessed with opportunity.
- Tolerant of risk, ambiguity and uncertainty.
- Motivated to excel.
- Innovativeness, self-reliance and adaptability.

In addition to valuing the essential qualities that act as a sine qua non for entrepreneurship, Timmons and Spinelli (2007:9) also identified traits that are not essential but nonetheless desirable (such as intelligence and innovativeness). A third set of traits are regarded as strongly undesirable in an entrepreneur and will undermine long-term entrepreneurial success. These are presented in Figure 3.1 below.

**Figure 3.1: Typical entrepreneurial characteristics**



**Source:** Timmons and Spinelli (2007:9).

### **3.2.3 Definition of entrepreneurship**

One of the pioneers of entrepreneurship research in the twentieth century was Schumpeter, who placed high emphasis on innovation in entrepreneurship by viewing the entrepreneurial process as one of creative destruction that creates new combinations of production by driving dynamic economic disequilibrium (Sadler, 2000:26). Successive researchers (Darling, Gabrielson & Seristo, 2007:4; Stevenson, Roberts & Grousbeeck, 1985:16) supported the reliance on innovation as an essential component of entrepreneurship. The view was held that innovation often led to new discoveries or the uncovering of new needs through a process that involved some degree of risk. Morris and Kuratko (2002:23) repeat the importance of innovation, but warn that it is not an end in itself but should rather be the prelude to change, growth and the creation of value.

Entrepreneurship is primarily the process of creating something new that adds value. This is achieved by investing time and energy and running the hazard of financial, physical and social failure in the pursuance of rewards of a financial, personal and lifestyle related nature (Hisrich, Peters & Shepherd, 2008:8).

Drucker (1985:25) views entrepreneurship as perceptiveness to change and that the agent of entrepreneurship is a person who exploits this change to his or her own advantage. Oosthuizen (2006:25) elaborates on this with his assertion that entrepreneurship is a life orientation that recognises opportunity and exploits it by integrating all parts of the whole. Entrepreneurship is also a method of influencing the creative process so that it can ultimately result in the creation of value.

An encompassing view of entrepreneurship is formulated by Timmons and Spinelli (2007:79) by maintaining that entrepreneurship is a way of thinking, reasoning and acting that is opportunity obsessed, holistic in approach and leadership balanced.

Finally, entrepreneurship has been shown by various authors (Filion, 1991:272; McGuire, 1976:115) to be influenced by the characteristics of the period and place in which it takes place and that – despite the aforementioned definitions appearing to pin the concept down – the process can be a regional, temporal and strategic phenomenon

that varies according to its operating environment (Sadler, 2000:27).

### **3.2.4 The importance of entrepreneurship**

Schumpeter viewed entrepreneurship as the impetus of an economic system and believed that economic progress came almost exclusively from men (sic) who risked their fortunes to implement new ideas and who dared to innovate, experiment and expand (Heilbroner, 1955:256).

The role of entrepreneurship in developed countries is seen as one of revitalisation and job creation, as well as a nurturer for technological progress, product innovation and market innovation. In developing countries, this function is even more critical and entrepreneurship represents the driving force behind economic progress, job creation and social adjustment (Gurol & Atsan, 2006:25).

Heinonen and Poikkijoki (2006:80) concur that entrepreneurship is essential to economic growth and states that it nurtures an economy as a whole by creating new ideas, enterprises and employment.

## **3.3 Definition and impact of corporate entrepreneurship**

### **3.3.1 Definition of corporate entrepreneurship**

The terms corporate entrepreneurship, intrapreneurship, internal corporate entrepreneurship and strategic entrepreneurship are generally used interchangeably in prevalent relevant literature (Christensen, 2004:304) and in its simplest form means entrepreneurship within an existing organisation (Antoncic & Hisrich, 2003:9). Some proponents prefer the term corporate entrepreneurship to indicate that the fundamentals of entrepreneurship are still unchanged while the context merely changed (Morris & Kuratko, 2002:62). Advocates of the term intrapreneurship argue that the word 'corporate' tends to unduly narrow its application down to only large corporations, while the concept is equally important in small and medium-sized organisations (Stevenson & Jarillo, 1990:18).

For the purpose of this study, the terms “corporate entrepreneurship” and “intrapreneurship” will be treated as synonymous and will be used as it was applied in the publications referenced by this study.

Antoncic and Hisrich (2001:498) define corporate entrepreneurship as entrepreneurship within an existing corporation, irrespective of the size of the enterprise. It is a process inside an organisation and leads not only to new business ventures but also to other innovative activities and orientations such as development of new products, services, technologies, administrative techniques, strategies and competitive postures.

The abovementioned definition by Antoncic and Hisrich represents the broadest approach which was employed. It is in accordance with the view of Sharma and Chrisman (1999:12), whose stance is that any definition of corporate entrepreneurship should be as encompassing as possible because it better reflects the early stage of development of the field, avoids the need of excessive retrenchment of terms as new knowledge becomes available and provides considerable latitude for a theoretical and empirical process to emerge that will eventually permit the unique parts of the concept to be compiled in relation to the whole.

Various definitions do not follow a broad approach, but limit the playing field and outcomes of corporate entrepreneurship in some regard. For instance, Fattal (2003:14) defines corporate entrepreneurship as the launch and management of new and innovative opportunities within large and existing organisations, thus excluding small and medium firms. Morris and Kuratko (2002:62) exclude small organisations in their definition reading “a term used to describe entrepreneurial behaviour inside established mid-sized and large organisations”.

The requirement of the process of intrapreneurship to lead to similar tangible outcomes to those of conventional entrepreneurship is evident in the definition employed by Zahra (1991:262), which states that corporate entrepreneurship is a formal or informal activity aimed at creating new business in established firms through product and process innovations and market developments. Other views (Kanter & Richardson, 1991:210) tighten the scope even narrower than the formation of new products and market

developments and apply corporate entrepreneurship only to activities which would lead to the formation of new ventures. Carrier (1996:6) echoes this view by describing corporate entrepreneurship as a process of creating new business within established firms, in order to improve organisational profitability and enhance a company's competitive position.

By defining intrapreneurship as an innovative process driven by an individual or group of individuals in an organisation that results in either organisational renewal or the establishment of a new enterprise, Sharma and Chrisman (1999:18) accept both the creation of new business as well as improvement of current business as an aim. Dess, Lumpkin and McGee (1999:85) essentially concur with this point of view, by pronouncing that corporate entrepreneurship may be viewed as consisting of two types of phenomena and processes:

- The birth of new businesses within existing organisations, whether through internal innovation or joint ventures.
- The transformation of organisations through the creation of new wealth through the combination of resources.

Guth and Ginsberg (1990:6) classify corporate entrepreneurship into two strategic managerial choices, in that it allows both new business creation as well as the transformation of organisations through strategic renewal as an aim of the process. Strategic renewal is regarded in this instance as the transformation of an organisation through renewal of the key ideas on which it is built. Zahra (1993:321) agrees with this view and discerns innovation and venturing on the one hand and strategic renewal on the other, as two distinct but related dimensions of corporate entrepreneurship.

Various discussions on intrapreneurship focus on the ability to identify and exploit opportunities. Hayton and Kelly (2006:407) define corporate entrepreneurship as a set of firm-wide activities that centres on the discovery and pursuit of new opportunities through innovation, new business creation or the introduction of new business models. Vosloo (1994:147) emphasises the need for a corporate entrepreneur to be able to

explore the environment to identify possibilities and he recognises any person performing such a function in an established organisation as an entrepreneur.

### **3.3.2 Definition of the corporate entrepreneur**

Luschinger and Bagby (2001:12) define an intrapreneur (or corporate entrepreneur) by examining the parallels and contrasts between entrepreneurs and intrapreneurs. It is held that both agents stimulate productivity and efforts that add value. Each depends heavily on innovative processes, even though the setting differs. Yet, while entrepreneurs provide their own settings, the intrapreneur has to operate within the setting of an established organisation with its own structural and procedural constraints. Nevertheless, each relies heavily on teamwork and group innovation. Other contrasts include the fact that the intrapreneur has less control over his environment than an entrepreneur and has to report to a boss and therefore the behavioural style of the intrapreneur is even more crucial to obtaining the resources and support needed for corporate entrepreneurial success. However, a rather palpable point is that the intrapreneur often carries far less personal risk in the event of failure of an initiative inside a large established organisation and can therefore afford to be more experimental in approach than the entrepreneur (Luschinger & Bagby, 2001:12).

Morris and Kuratko (2002:63) agree with Luschinger and Bagby and outline additional dissimilarities between entrepreneurs and intrapreneurs. An entrepreneur is in the position to make fast decisions and aggressively pursue opportunities, while an intrapreneur has to subject initiatives to the approval processes of the corporation's management. However, being in command often means that the entrepreneur has few people to discuss ideas with, while the nature of an organisation typically provides an extensive network in which the intrapreneur can hone ideas.

Authors who prefer to define an intrapreneur by focussing on the individual traits of an intrapreneur include Muhanna (2006:63), who states that it is understood that intrapreneurship includes any behaviour with high scores on the dimensions of innovation, pro-activeness and risk-taking. Vosloo (1994:147) believes that any person, who has the ability to explore the business environment and single out opportunities

inside an established organisation, is an intrapreneur. Ireland, Kuratko and Morris (2006:10) describe an intrapreneur as an individual in an established firm who pursues entrepreneurial opportunities to innovate without regard to the level and nature of currently available resources. Du Preez (1992:86) incorporates the acceptance of uncertainty inherent to an entrepreneur in his definition that describes an intrapreneur as a person who identifies opportunities and reacts to them by creating new ideas, products and services within the existing business and accepts the risk of managing them.

Ross and Unwalla (1986:48) build on definitions of an intrapreneur, by describing the intrapreneurial personality as:

- Focussing on results, not activity.
- Questioning status quo.
- Being motivated by problem-solving, effecting change and innovation.
- Being frustrated by bureaucratic systems.
- Being ambitious and competitive.

### **3.3.3 Dimensions of corporate entrepreneurship**

Maes (2003:24) performed a comparative study to determine how different researchers utilise different interpretations to the term 'dimensions' when applied to corporate entrepreneurship. It was found that the following main departure points are found for defining dimensions of corporate entrepreneurship:

- **Content:** What the new value creation process is all about and how it manifests. This approach is followed by the majority of researchers.
- **Formality:** Whether the source of corporate entrepreneurial activities is formal (i.e. developed in pursuit of the organisation's established mission and goals), or informal (initiated by individuals or groups in pursuit of particular areas of interest).

- **Locus of creation process:** Internal intrapreneurship activities are conducted strictly inside an organisation's boundaries, while external activities transcend these borders by interacting with other players in the larger business arena.
- **Residence of newly created value:** Whether the outcome of intrapreneurship activity created products, processes or administrative innovations which are located inside or outside of the company.

The difference between the Locus and Residence measures as sources for dimensional distinctions in intrapreneurship is explained in Figure 3.2.

**Figure 3.2: Sources of dimensional distinction in intrapreneurship.**

|       |                 | RESIDENCE  |   |
|-------|-----------------|--|---|
|       |                 | <i>within</i>  | <i>outside</i>  |
| LOCUS | <i>internal</i> | A new product developed and marketed within organizations  | A spin-off company set-up by a university researcher  |
|       | <i>external</i> | A joint venture between a windmill company and a supermarket chain developed within the windmill company | A joint venture between a windmill company and a supermarket chain, developed outside the supermarket chain |

**Source:** Maes (2003:26).

For the purpose of this study, it is held that the sum of research based on the content-approach encompasses all the significant dimensions related to corporate entrepreneurship. While it is important to take note of the other departures identified by Maes, it can be argued that the content-based approach will implicitly outline the dimensions shown by other approaches and therefore only the content-based approach's findings by various researchers will be discussed in detail in this study.



Antoncic and Hisrich (2001:498) follow the content-based approach to identify four different dimensions of corporate entrepreneurship:

- **New business venturing:** Current products and markets can be redefined or expanded to form new business ventures. These new endeavours can take the place of external autonomous enterprises or semi-autonomous units within the existing firm.
- **Innovativeness:** Current services and products are augmented by new procedures, production methods or technology.
- **Self-renewal:** Strategic concepts, on which the firm is based, will be renewed through strategy reformulation, re-organisation and organisational adaptation. System-wide changes, which would require adaptability and flexibility, might be effected.
- **Pro-activeness:** The firm will endeavour to be the leader in its field and will be willing to take risks to pursue opportunities to maintain at the forefront. New products, services, technologies and administrative techniques will be introduced.

Vesala *et al.* (2007:52) implement the content-based approach from a different angle to that of Antoncic and Hisrich, to identify three key dimensions of intrapreneurship:

- **Risk-taking:** Any entrepreneurial activity poses risks and the hallmark of successful intrapreneurship is the ability to take calculated risks which the business can absorb, in order to maximise potential profits.
- **Growth orientation:** An entrepreneurial approach inside a firm dictates that it is not sufficient to merely defend the current market share, but to always aim to grow a firm.
- **Innovativeness:** Opportunities are pursued and new markets, products and methods are explored.

A comparative study performed by Antoncic and Hisrich (2003:16) establishes a group of eight major dimensions identified by respective researchers and is presented in Table 3.3.

**Table 3.3: Intrapreneurship dimensions**

| <b>Dimension</b>                        | <b>Definition</b>  | <b>Theoretical background</b>   |
|---|--|---|
| <b>New ventures</b>                     | Creation of new autonomous or semi-autonomous units or firms                       | Schollhammer (1981)<br>Hisrich and Peters (1984)<br>MacMillan <i>et al.</i> (1984)<br>Vesper (1984)<br>Kanter and Richardson (1991)<br>Stopford and Baden-Fuller (1994)<br>Sharma and Chrisman (1999) |
| <b>New business</b>                     | Pursuit of and entering into new businesses related to current products or markets | Rule and Irvin (1988)<br>Zahra (1991)<br>Stopford and Baden-Fuller (1994)   |
| <b>Product / Service innovativeness</b> | Creation of new products and services  | Schollhammer (1982)<br>Covin and Slevin (1991)<br>Zahra (1993)<br>Damanpour (1996)<br>Burgelman and Rosenblom (1997)<br>Knight (1997)<br>Tushman and Anderson (1997)                                  |
| <b>Process innovativeness</b>           | Innovations in production procedures and techniques                                | Schollhammer (1982)<br>Covin and Slevin (1991)<br>Zahra (1993)<br>Damanpour (1996)<br>Burgelman and Rosenblom (1997)<br>Knight (1997)<br>Tushman and Anderson (1997)                                  |
| <b>Self-renewal</b>                     | Strategy reformulation, reorganisation and organisational change                   | Vesper (1984)<br>Guth and Ginsberg (1990)<br>Zahra (1991, 1993)<br>Stopford and Baden-Fuller (1994)<br>Muzyka <i>et al.</i> (1995)<br>Sharma and Chrisman (1999)                                      |

|                                   |  |   |
|-----------------------------------|--|---|
| <b>Risk taking</b>                | Possibility of loss related to quickness in taking bold actions and committing resources in the pursuit of new opportunities | Mintzberg (1973)<br>Khandwalla (1977)<br>Miles and Snow (1978)<br>Covin and Slevin (1986, 1991)<br>Stopford and Baden-Fuller (1994)<br>Dess <i>et al.</i> (1996)<br>Lumpkin and Dess (1996, 1997)<br>Lumpkin (1998) |
| <b>Proactiveness</b>              | Top management orientation for pioneering and initiative taking  | Covin and Slevin (1986, 1991)<br>Venkatraman (1989)<br>Stopford and Baden-Fuller (1994)<br>Lumpkin and Dess (1996, 1997)<br>Dess <i>et al.</i> (1997)<br>Lumpkin (1998)   |
| <b>Competitive aggressiveness</b> | Aggressive posturing towards competitors   | Covin and Slevin (1986, 1991)<br>Miller (1987)<br>Covin and Covin (1990)<br>Lumpkin and Dess (1996, 1997)   |

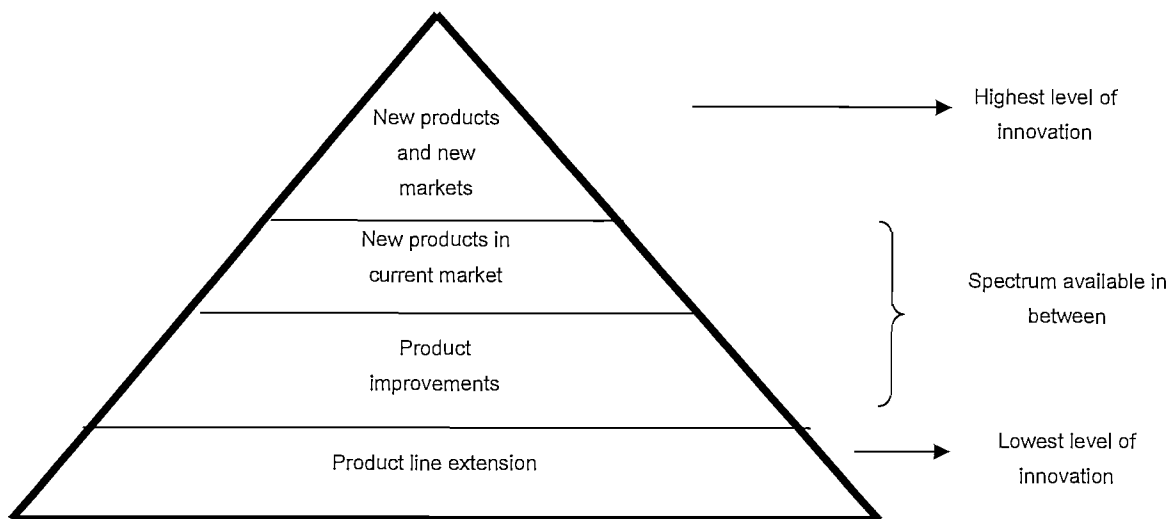
**Source:** Antoncic & Hisrich (2003:16).

A selection of salient dimensions listed in Table 3.3 will be discussed in more detail below.

### Product and process innovation

Product as well as process innovation is viewed as a way in which new knowledge is generated and new ways of doing things are discovered (Teng, 2007:131). McFadzean *et al.* (2005:353) define innovation as a process of new ideas, with the focus being on the potential for improvement through change. Four stages are identified and are presented in Figure 3.3.

**Figure 3.3: Levels of product innovation**



**Source:** Adapted from McFadzean *et al.* (2005:353).

New products in new markets represent the highest level of innovation and according to the summary presented in Table 3.3, this can be accomplished by creating new business ventures. In Christensen's (2004:307) view the main reason for setting up business ventures in entities separate whence its inception came, would be to isolate and nurture innovative ideas that could not survive in the bureaucratic structures and formal procedures of a large company. Chesbrough (2000:47) argues that this type of corporate venturing is one of the main roads to innovation in the future economy, as markets become more and more saturated.

### Risk-taking

Risk-taking can be exhibited in one of three forms (Lassen, Gertsen & Riis, 2006:361):

- Venturing into unfamiliar territory, with the sense of uncertainty it would entail.
- Assigning significant assets towards an initiative with an uncertain outcome.
- Increasing financial leverage significantly in order to fund a new undertaking.

### Self-renewal

A firm wishing to obtain new resources and capabilities to create wealth will use corporate entrepreneurship as a tool for self-renewal. This process can involve re-

application of existing resources, but can also engage new components into the business process (Teng, 2007:135).

#### Pro-activeness

Pro-activeness refers to the extent to which an organisation attempts to lead rather than follow competitors in key business areas such as the introduction of new products or services, operating technologies and administrative techniques (Covin & Slevin, 1986:631). It can be manifested in the way a company seizes initiatives in the marketplace (Cooper, Alvarez, Carrera, Mesquita & Vassolo, 2006:89), or can refer to a unique way of spotting opportunities (Lowe & Marriott, 2006:288). According to Kaya (2006:2077), a firm's pro-activeness can be judged by its ability to predict changes in the environment and consequently to forestall others in acting on the identified future needs.

#### Competitive aggressiveness

While proactiveness is a response to opportunities, the corollary is that competitive aggressiveness is a response to threats (Lumpkin & Dess, 1997:49).

### **3.3.4 Differentiating corporate entrepreneurship from other corporate concepts**

Antoncic and Hisrich (2003:11) are of the opinion that corporate entrepreneurship can only be completely defined if it is contrasted with other corporate initiatives. The authors contrasted intrapreneurship with four other prevailing corporate concepts, namely: a diversification strategy, capability improvement, organisational learning and organisational innovation. It was found that intrapreneurship shares some key similarities with all the concepts which were examined, but that there were vital differences to justify corporate entrepreneurship as a separate concept. The result of their study is presented in Table 3.4.

**Table 3.4: Differentiation of corporate entrepreneurship from similar management concepts**

| <b>Concept</b>                   | <b>Key concern</b>   | <b>Key similarity</b>  | <b>Key difference</b>  |
|----------------------------------|--|--|--|
| <b>Diversification strategy</b>  | Product/Market relatedness of organisational business  | Changes in diversification focus, especially in terms of entering new unfamiliar business    | Product / Market relatedness and synergy across organisational businesses not a primary focus of intrapreneurship; Intrapreneurship also includes non-product / market related activities and orientations |
| <b>Capability improvement</b>    | Coherent combinations of resources and activities across value chains of organisational businesses       | Intrapreneurship as a manifestation of organisational innovative capabilities                | Search of organisational inter-business coherence and synergy not a key concern of intrapreneurship  |
| <b>Organisational learning</b>   | Knowledge acquisition and retention and organisational routines' improvement                             | Intrapreneurship may create disruptions which are part of the learning process               | Building knowledge base, organisational memory and routines not a main concern of intrapreneurship   |
| <b>Organisational innovation</b> | New combinations from the organisational perspective (product, technological, administrative innovation) | Creation of something new in terms of new combinations in production and support activities. | Predominant focus of intrapreneurship is also on creation of new ventures, while this is not the focus of organisational innovativeness.   |

Source: Antoncic and Hisrich (2003:11).

Hisrich *et al.* (2008:71) compare an intrapreneur to a corporate manager on the one hand and an independent entrepreneur on the other hand. It is held that while managers are motivated by traditional corporate rewards such as promotions and entrepreneurs seek independence and money, intrapreneurs value both independence and the prospect of corporate advancement as motivating factors. An entrepreneur accepts and manages failures and risks but a manager will actively try to avoid them altogether. However, an intrapreneur will tend to follow a unique approach, by carefully managing risk whilst hiding a project from view until it is ready to promote with confidence.

### **3.3.5 The value of corporate entrepreneurship**

Morris and Sexton (1996:8) found that a correlation between the level of intrapreneurial activity and performance outcomes of a company could be substantiated. This relationship between corporate entrepreneurship and corporate financial performance was found to strengthen over time (Zahra & Covin, 1995:55).

Cornwall and Perlman (1990:15) argue that entrepreneurship is essentially concerned with creating wealth and as such, the increase in shareholders' wealth would be a fitting measure to determine the effectiveness of corporate entrepreneurship. Zahra and Covin (1995:47) support this view and state that there are two reasons for anticipating a relationship between entrepreneurial activities in an organisation and ensuing organisational performance. The first reason would be that innovativeness creates a competitive advantage by increasing the organisation's market reputation, adaptability and financial returns. The second reason is that intrapreneurial organisations are by definition more proactive than traditional organisations and therefore their quick market response allows a competitive edge over other players.

Luschinger and Bagby (2001:11) cite two examples of corporate entrepreneurs whose actions improved the financial returns of their respective companies:

- Despite the warnings of David Packard of Hewlett-Packard, Chuck House persevered in developing new electronic instrumentation. This product line later proved a saving grace to the Hewlett-Packard company's existence

- Art Fry had to persist against bureaucracy inside 3M to push the accidental development of the iconic “Post-It” product to a saleable product.

### 3.3.6 Caveats of corporate entrepreneurship

While a plethora of literature extols the value of corporate entrepreneurship (see supra), a growing body of material warns against incautious implementation and management of intrapreneurship in a corporation. On a personal level, poor control and boundaries can shelter “corporate rogues” who overstep the boundaries of sane risk assessment and ethics (Kuratko, 2007:7), while the impact of poor support on organisational development could be to siphon all skilled employees from cash-flow generating core business to new upstart initiatives (Birkinshaw, 2003:48). Furthermore, ill-considered wide-spread pursuance of corporate entrepreneurship in a company can lead to strategic misalignment and erosion of a company’s competitive position (Bouchard, 2001:7). Finally, if the dynamics of the intrapreneurial process as well as the nature of an intrapreneur is not understood and managed, it can lead to the intrapreneurial process fading into the wallpaper of corporate fads, while destroying the morale of corporate entrepreneurs (Bouchard, 2001:7).

The impact of injudicious implementation and championing of intrapreneurship on the demise of the Enron Corporation was examined by Birkinshaw (2003:5). Prior to its downfall, Enron was hailed as a flagship of intrapreneurial management. Four components of an essential intrapreneurial framework were identified and the improper application thereof by Enron was scrutinised:

- **Strategic direction:** While setting too strict and defined strategic direction could constrain employees, Enron eventually set its direction too broad by rapidly evolving away from being a provider of gas services in the early 1990’s. By the late 1990’s they aimed to be ‘the world’s best energy company’ and arrived at simply calling themselves ‘the world’s best company’ in 2001 as they dealt in a dazzling array of products ranging from energy and communications to banking services. While the chief executive officer of Enron might have understood the underlying thread connecting the different strategies, executives under them did



not. This resulted in any and all business opportunities being pursued with unbridled fervour (Birkinshaw, 2003:5).

- **Space to employees for entrepreneurial activities:** Too little space afforded to employees to spend on discretionary intrapreneurial work will kill corporate entrepreneurship, but too wide a berth given to employees will limit the effectiveness of the company. Enron actively encouraged and rewarded its employees for spending all available time on developing new business ideas and while this initially seemed to be an ideal situation, the unintended side effects soon arose. It was found that the best employees invariably tended to flock towards the newest high-growth opportunities and that profitable core business suffered gravely as a result of talent drain. In addition, a culture was created whereby few rewards were given to people who actually stuck with ideas right to the point where they became sustainable generators of cash flow (Birkinshaw, 2003:7).
- **Boundaries set to employees:** Unbreakable boundaries in all areas of operations negate any innovativeness that an employee could demonstrate, but failure to enforce 'mission-critical' ethical, legal and operational standards will lead to the failure of a company. Enron's poor control over the actions of its executives led to an ethos that anything would be tolerated, as long as profits could be demonstrated. This notion resulted in wildly unethical behaviour such as the creation of spin-off companies to hide losses, dubious accounting entries which did not reflect reality and intolerance to any person inside the company raising moral qualms (Birkinshaw, 2003:9).
- **Support given to employees:** An excessive amount of support and guidance given to employees will increase bureaucracy and complexity, but too little support and guidance will reinforce the maverick behaviour instilled by the previously-mentioned factors. Enron recruited the best graduates from business schools and deliberately led them to the understanding that career advancement was entirely up to each individual and little support was given to augment the actions of the corporate climber. This caused only the smartest, but also brashest

and most aggressive individuals being promoted to leadership above equally smart but less assertive colleagues (Birkinshaw, 2003:9-10).

Kuratko (2007:7) echoes the lessons learned by the failure of Enron and warns of the “rogue manager” overstepping ethical standards in the name of intrapreneurship. Innovative managers will always consider all avenues available to attain goals and an organisation must ensure that a proper entrepreneurial environment and ethical guidance is provided to curb the influence of persons wishing to exploit an entrepreneurial environment to gain an unfair corporate advantage.

While it has been shown that an intrapreneurial climate may lead to individual abuse or misguidance, the intended effects of a successful corporate entrepreneurship program may also affect the strategic alignment and competitive position of a firm (Bouchard, 2001:8). The very nature of corporate entrepreneurs tends to drive them to venture outside the domain of activities and competencies of the corporation and to (temporarily) consider synergies and relatedness as unimportant concepts. However, this causes the firm to direct resources towards non-core business and if poorly managed, will lead to loss of direction, poor exploitation of unique resources, waste, high failure risks and loss of managerial control.

Finally, Bouchard (2008:11) recognises that corporate entrepreneurship exposes the corporation to the liabilities of individualization, i.e. the negative consequences of relying increasingly on individuals instead of group procedures and decisions. Individuals have egos and the entrepreneurial ego may be inflated by the intrapreneurial process and lead to behaviour which does not benefit the corporation in the long run (Kuratko, 2007:5). In addition, it is understood that all intrapreneurial efforts carry some risk and failure of the individual or the corporation to effectively digest intrapreneurial setbacks might have a severe psychological impact on the intrapreneur (Kuratko, 2007:4). However, whether an intrapreneurship program in an organisation is highly successful or fades into inconsequentiality, the risk exists that both scenarios can lead to skilful intrapreneurs, who underpin the company’s competitive position, leaving the company because they have either attained extra marketable skills or could not stomach the repercussions of a failed venture (Bouchard, 2001:7).

### **3.4 Summary**

Researchers aiming to pen a definition of an entrepreneur tend to follow different approaches. Some authors prefer to focus on the steps required from an entrepreneur to bring a new venture to fruition, while others focus on the essential personal characteristics that an individual has to display to be regarded as one. A third group of researchers defines an entrepreneur by the role he or she is perceived to play in an economy. Finally, some choose to classify entrepreneurs by the factors that motivate them and the scale on which they operate.

Summarising the various definitions found in literature, it could be stated that an entrepreneur is an agent who recognises and exploits an opportunity by creating a viable venture. The entrepreneur has to possess certain key attributes and plays a pivotal role in the economic process.

When examining literature on entrepreneurship, it is found that most definitions of the concept takes a broad approach by describing it as a 'way' or life orientation, with certain concepts and values underpinning the term. In summation, entrepreneurship has been presented as a concept of dualistic nature: it is a way of leading and viewing life by its agents, but also an innovative and rewarding but risky process through which essential new economic activity is created to the benefit of both its agent and the economy as a whole.

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

When reviewing definitions of corporate entrepreneurship, it is found that most researchers agree on the terms intrinsic to the concept, viz. that both entrepreneurship and established organisations are involved. However, a considerable degree of difference of opinion exists regarding whether it is an employee-level trend or rather a company-wide or even exclusively strategic phenomenon. Some writers view its outcomes as the successful pursuance of opportunities at any level, while others are only prepared to recognise it when it leads to the creation of discernibly distinct new

ventures. Various dimensions underpinning corporate entrepreneurship are recognised, although dissidence exists regarding the actual number of salient elements playing a role. Finally, some experts in the field dedicated research to demarcate corporate entrepreneurship from other corporate initiatives such as organisational learning. Agreement is found in that corporate entrepreneurship is related to an entrepreneurial focus inside an established firm. It is often held that small or medium sized firms must be excluded from the domain of the term, although compelling arguments were made to include established undertakings of all sizes. The foreseen outcomes of corporate entrepreneurship include any combination from a spectrum which ranges from individual innovation or concerted identification and exploitation of opportunities, to strategic renewal of the firm and the establishment of new ventures.

It was found to be accepted - irrespective of the different views held on corporate entrepreneurship and its desired outcomes - that the intrapreneur is at heart still essentially an entrepreneur, albeit in a different setting. It therefore follows that efforts to profile an intrapreneur tend to compare intrapreneurs and entrepreneurs rather than detailing the attributes of an intrapreneur in isolation. An intrapreneur is viewed to be essentially an entrepreneur, although the different backdrop in which the person operates requires somewhat different qualities and techniques in order to obtain entrepreneurial accomplishment.

Researchers of corporate entrepreneurship map dimensions of the concept in order to clarify the full breadth of the term. Some variation exists in the understanding of the term 'dimensions', while different experts assign different dimensions to intrapreneurship. By comparing the views of various authors, a complete inventory of all facets of the concepts can be established. It was shown that following the content-based approach to defining corporate entrepreneurship dimensions, eight significant dimensions were distilled from literature.

Purely by looking at the definition and dimensions of corporate entrepreneurship, the observer might not be able to distinguish it with confidence from other corporate initiatives such as product diversification, organisational learning or even simply effective management. Therefore, some writers 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 key principles in order to stand alone as an independent and important concept.

General agreement is found among researchers regarding the importance of corporate entrepreneurship. While different reasons for its importance are proposed, most agree that it aids in making the firm more competitive whilst at the same time increasing employee satisfaction. Therefore, corporate entrepreneurship is vital to aid a company to thrive in changing market conditions, by harvesting the entrepreneurial skills of its employees to gain market leadership.

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 outweigh the benefits of intrapreneurship.

# CHAPTER 4

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## LITERATURE REVIEW ON A CLIMATE OF CORPORATE ENTREPRENEURSHIP

### 4.1 Introduction

The culture of an organisation can have either a positive or a negative influence on its personnel and can thus act as a conducive force to change or a powerful force of resistance (Coetsee, 2002:200).

The quality of entrepreneurship in an organisation is highly dependent on the quality of the prevalent business culture and therefore an apt enterprise culture is essential to foster change towards intrapreneurial behaviour (Casson, 2003:79). Oosthuizen (2006:147) asserts that the climate of an existing organisation is critical to how well the organisation will deal with growth and will have a significant impact on corporate entrepreneurship and subsequent growth of the organisation.

### 4.2 Definition of an entrepreneurial climate

Coetsee (2002:200) includes the climate of an organisation inside its culture and states that it is based on the shared values, beliefs and traditions that have been established over time in an organisation. The foundation of a corporation's culture is often implicit and taken for granted (Kreitner & Kinicki, 2007:76) and determines how it perceives and reacts to an environment. It 'helps members make sense out of everyday life in the organisation' (Cummins & Worley, 2005:483) and dictates what is acceptable or unacceptable in an organisation. It also prescribes the values and norms that people live by inside an organisation (Coetsee, 2002:200).

The culture of an organisation can influence its performance. It was found (Cummins & Worley, 2005:485) that a strong culture can positively influence a company's performance during times of environmental stability, but might detract from its flexibility and subsequent adaptability during times of uncertainty.

An organisation's culture manifests in multiple layers (Kreitner & Kinicki, 2007:77) and can be discerned according to outward visibility as well as resistance to change. The following layers are generally observed:

- **Observable artefacts:** This includes published values, internal jargon, dress codes and ways of conducting itself on the surface.
- **Values:** Values are divided into espoused values (norms and values that the business owner or management wants the workforce to aspire to) and enacted values (the actual values which the workforce perceive in action, which might in some cases be in direct opposition to the values that their management pays lip service to).
- **Basic assumptions:** These are values which have become so deeply entrenched and accepted over time that they guide organisational behaviour and as a result they are highly resistant to change.

Ireland, Kuratko and Morris (2003:1) confirm that an intrapreneurial climate conforms to the above model of universal corporate culture, in that it is not located on only one level or place within the organisation, but is ingrained within all levels, with its roots forming part of the core culture (or basic assumptions).

Timmons and Spinelli (2007:540) concur with the view that cultural values manifest as both espoused and enacted, by holding that climate is created by both the expectations that people bring to the organisation, as well as the actual practices and attitudes of key managers. The authors prefer to describe corporate climate according to six basic dimensions:

- **Organisational clarity:** The degree to which organisation is well organised, concise and efficient in the way that tasks, procedures and assignments are made and accomplished.
- **Management expectations:** The degree to which management puts pressure on employees for high standards and excellent performance.

- **Commitment:** The extent to which employees feel dedicated to the goals and objectives of the organisation.
- **Accountability:** The extent to which members of the organisation feel responsible for accomplishing their goals without being constantly monitored and second-guessed.
- **Recognition:** The extent to which employees feel they are recognised and rewarded for a job well done, instead of only being punished for mistakes or errors.
- **Unity:** The extent to which employees feel a sense of cohesion and team spirit and of working well together.

An ingrained entrepreneurial perspective and frame of mind in the processes and culture of an organisation is essential to the successful fostering of corporate entrepreneurship (Dess & Lumpkin, 2005:147). While different types of enterprises favour different types of entrepreneurial skills and hence cultures, a common value based on mutual trust can be found among the cultures of all successful industrial players (Casson, 2003:79).

According to Antoncic and Hisrich (2001:496), the behavioural traits of an entrenched entrepreneurial climate would be that the organisation engages in corporate venturing. The entrepreneurial firm would be innovative and pro-active and would continually renew itself. Bhardwaj, Agrawal and Momaya (2007a:48) focus on the innovation aspect of an entrepreneurial climate by maintaining that actions pertaining to the discovery, evaluation and exploitation of entrepreneurial opportunities would be present.

Cornwall and Perlman (1990:18) prefer to demonstrate the outward attributes of a culture that leans towards an entrepreneurial focus by contrasting it with a culture which can be regarded as decidedly non-entrepreneurial. Table 4.1 lists their findings.



**Table 4.1: Contrast between firms with entrepreneurial and non-entrepreneurial focus**

| <b>Attribute</b>                   | <b>Entrepreneurial focus in culture</b>   | <b>Non-entrepreneurial focus in culture</b>  |
|------------------------------------|---|--|
| <b>Strategy</b>                    | Seeks out new opportunities for growth while protecting and adapting current niches | Mainly concerned with protecting current market and grows through mergers and acquisitions |
| <b>Risk</b>                        | Managed intelligently to exploit for growth and survival                            | Avoided  |
| <b>Culture</b>                     | Culture is tool to facilitate innovation and growth                                 | Culture is tool to protect current way of operation  |
| <b>Structure and communication</b> | Looser structures, majority of information transferred laterally                    | Formal structures, majority of communication top-down                                      |
| <b>Decision making</b>             | Vision and mission set at top, after input from below is sought                     | Vision, mission and way of operating is unilaterally set at top level of management        |
| <b>People</b>                      | Essential resources to be protected and utilised                                    | Interchangeable resources which can be bought and sold                                     |
| <b>Creativity</b>                  | Actively fostered, developed and exploited  | Tolerated in some areas of operation   |

**Source:** Cornwall and Perlman (1990:18).

### 4.3 Constructs of an entrepreneurial climate

Bhardwaj *et al.* (2007b:131) proposed a model based on three key dimensions to describe corporate entrepreneurship and couple cultural and structural factors to each of the model components:

- **Competitive assets:** Management support, as well as tolerance of risk and concomitant failures.
- **Competitive processes:** Business intelligence generation, time for discretionary work, appropriate rewards and flexible organisational boundaries.
- **Competitive performance:** Pursuit of innovative solutions to opportunities and threats in the business environment.

While the inventory of cultural components coupled to the three key dimensions of Bhardwaj *et al.* (2007b:131) did not prove exhaustive, it did provide a useful framework to lend perspective to additional components unearthed by the comprehensive literature review by the author.

In total, 14 constructs were found by the author. Of these, 13 constructs are based on the work of various authors and are in accordance with those found by Oosthuizen (2006:130-132) and a 14<sup>th</sup> construct ('Ethical and value-based climate') is based on the work of Kuratko (2007), Birkinshaw (2003), Coetsee (2002) and Long-Fung Chau (2000).

The 14 constructs will be described in more detail below, in line with the structure proposed in Figure 4.1. The author of this study chose to group the constructs in three main groups, which comprise strategy-related factors, management and support – related factors and organisational factors.

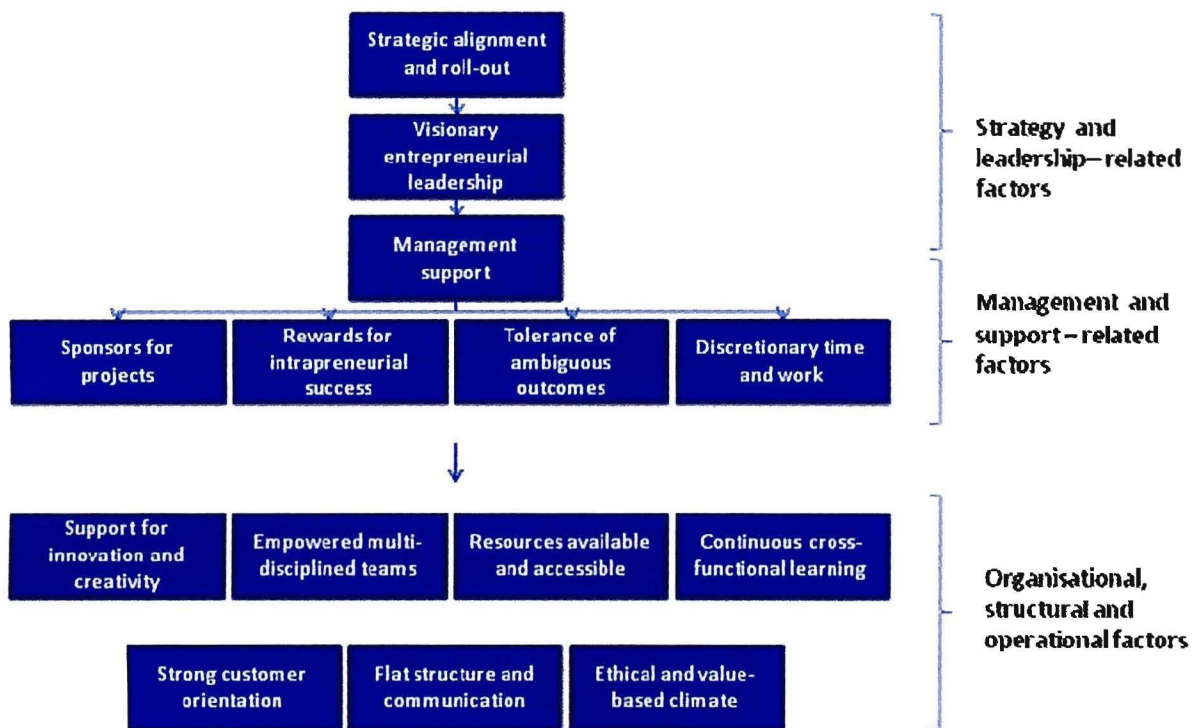
Strategy related factors are seen to encompass the way in which an entrepreneurial direction is foreseen for the company and the way in which the leadership of the firm imparts the direction to all levels of the organisation.

Management and support related factors relate to the way a manager (at all levels)

deals with his or her underlings directly, i.e. whether he appoints sponsors to support promising projects, whether he rewards successes and tolerates failures of his deputies and the amount of discretionary time afforded to people in his area. L

Organisational factors are established (or changed) over a longer period and pertain to the way in which the organisation operates and the values which guide its members.

**Figure 4.1: Model for constructs of an entrepreneurial firm**



Source: Author's own view.

### 4.3.1 Strategic alignment and roll-out

Garcia-Morales, Llorens-Montes and Verdu-Jover (2006:25) state that innovation cannot be instilled inside a company by mere management intent, but that it has to receive buy-in at all levels of the organisation. The most effective way to foster innovation and intrapreneurship is to formulate a vision of what the organisation wants to achieve and subsequently to align intrapreneurship with the strategic thrust needed to achieve the aforementioned vision (Pinchot & Pellman, 1999:25).

An intrapreneurship strategy needs to be developed which supports the overall strategy and the first step of implementing this approach would be to share the vision of innovation with all employees in order to gain access to the creative abilities of its workforce (Kuratko & Welsch, 2001:349). The importance of effective communication of the entrepreneurial strategy is viewed as essential by Gupta, MacMillan and Surie (2004:244) if entrepreneurial behaviour is to be encouraged. The conveyance of the strategy should be so effective that employees not only know why the need for innovation exists, but also how they should direct their efforts (Pinchot & Pellman, 1999:107) and what role each person can play to realise the company's vision through innovation (Pinchot & Pellman, 1999:117).

Going beyond the articulation and impartion of an intrapreneurial strategy, the onus rests on management to strive to align the firm's culture to the innovation process (Gaw & Liu, 2004:69). This obligation would further translate into ensuring a suitable organisational structure, human resource practice and support programs to encourage intrapreneurship (Ireland *et al.*, 2006:14).

The result of a clearly conveyed strategy which incorporates a reliance on innovativeness to reach the vision of the organisation would be the unleashing of creative talents of all people in the organisation (Kuratko, Hornsby, Naffziger & Montagno, 1993:32).

#### **4.3.2 Visionary entrepreneurial leadership**

Courage, vision and willingness to take charge will release entrepreneurial force in an organisation and this energy needs to be guided (Pinchot & Pellman, 1999:3). Nicholson-Herbert, Mkhize and Schroder (2004:43) concur with the importance of guiding the newly generated entrepreneurial energy. Effort directed at deliberately creating the kind of climate that sparks innovativeness must be matched by subsequent levels of vigour focussed on invoking sufficient formality in processes in order to channel the energy towards measurable results (Nicholson-Herbert *et al.*, 2004:43).

A visionary leader has two qualities: He is able to dream big and is subsequently able to convey that dream so effectively to his team that they are able to accept it as their own

(Hisrich *et al.*, 2008:50). Cohen (2004:16) elaborates by stating that an entrepreneurially minded leader has the ability of setting an organisation's vision and then to create the space, systems, procedures and culture that free others – at all organisational levels – to take responsible initiatives that can achieve the vision and mobilise other strong people who can share responsibility.

The outward attributes of visionary entrepreneurial leadership are discussed by Morris and Kuratko (2002:173). Their foremost finding is that visionary leadership should be translated into tangible and specific objectives and programs. This should be augmented by entrepreneurial role models in the organisation and top-level executives should demonstrate their own commitment towards entrepreneurship by their behaviour. Rue and Byars (2005:346) agree that the vision should be rendered into a clear roadmap visualised by all employees, detailing which results and benefits are sought and which changes need to be effected in order to achieve them.

The result of effective visionary leadership would be to inspire employees at any level to vigorously endeavour to discover and pursue opportunities for growth (Cohen, 2004:16).

### **4.3.3 Management support**

Management support for intrapreneurship is viewed as a commitment which is pledged over a long period of time, to work on the strengths and weaknesses of the organisation in order to arrive at the desired end state of an entrepreneurial corporation (Jacobs, 1999:33). It starts with a whole-hearted support and embracement of intrapreneurship by a corporation's top management, both by pledging their physical support and by ensuring that the required resources are availed (Hisrich & Peters, 2002:51). Middle management then helps carry the torch by helping to build coalitions among peers, championing ideas and following through on the implementation of necessary changes (Guth & Ginsberg, 1990:8).

The support needs to be manifested in different ways, including backing of ideas, providing knowledge and resources and protecting the firm's entrepreneurial drive when considering systems and processes (Hornsby, Kuratko & Zahra, 2002:259). Bhardwaj *et al.* (2007b:133) agree that support needs to extend beyond direct actions, into the way

that management shapes policies and implicitly direct staff towards entrepreneurial activities.

Kuratko and Hodgetts (2004:65) add that management support also manifests in two important and related ways:

- Recognition and nurturing of intrapreneurial talent and effort among employees.
- Identification of small experimental projects which have the potential to grow into significant ventures (Kuratko & Hodgetts, 2004:65).

By providing constructive management support in an intrapreneurial environment, the organisation will exhibit quick adoption of employee ideas, recognise people who cultivate ideas, provide support for small projects and provide funds to bring projects to critical impetus (Kuratko & Hodgetts, 2004:65).

#### **4.3.4 Sponsors for projects**

A sponsor is an agent who coaches, protects and organises resources for an entrepreneurial team (Pinchot & Pellman, 1999:3). The sponsor is tasked with protecting intrapreneurs from experiencing undue attacks and hurdles before their projects are marketable. He facilitates a process whereby strategic allies can be forged instead of enemies be made and generally ensuring that intrapreneurs can focus on the project at hand rather than company bureaucracy and politics (Pinchot & Pellman, 1999:3). In addition to smoothing the way and providing technical advice, an important role of a sponsor is to instil and maintain passion for a project (Thornberry, 2003:342).

Sponsorship is generally seen to be a component of management support (Bhardwaj *et al.*, 2007a:51) and as such has to start at the highest levels of the company (Turner, 2002:49). However, it is often viewed to be at its most effective when middle managers use the relationships that they have developed to build coalitions among colleagues to ensure commitment towards a common aim (Guth & Ginsberg, 1990:8). Irrespective of the ideal management level of sponsors, it is held that a sponsor should at least be placed in a position to effectively sell an idea to top leadership. According to Hisrich and Peters (2002:51), various sponsors should be dispersed through the company in order

to address multiple disciplines and functions.

Morris and Kuratko (2002:93) hold the view that sponsors should have sufficient political clout to successfully protect projects or even help hide them before they are publicly marketable in the corporate environment, while Pinchot and Pellman (1999:150) add that sponsors should also be in a secure enough position to readily stand back when necessary. Turner (2002:49) echoes the danger of a sponsor who refuses to relinquish control or acts in such an overbearing way that the team feels obliged to follow his instructions or suggestions.

Finally, the sponsor might have such a high standing that the team would tend to paint a 'rosy picture' to impress him, while some significant pitfalls are hidden or ignored (Pinchot & Pellman, 1999:7). The solution would be to clarify roles and objectives right at the onset of a project (Palmer, 2002:102). That would often lead to the sponsor taking on a role of lesser authority compared to his normal function in the company, in order to provide manoeuvring space for junior members of the intrapreneurial team (Pinchot & Pellman, 1999:7).

#### **4.3.5 Rewards and incentives for intrapreneurial behaviour**

Morris and Kuratko (2002:244) view rewards as a very significant instrument for positively guiding employee behaviour, especially if management has direct control over the allocation of rewards.

When establishing goals in order to determine rewards to employees, Kreitner and Kinicki (2007:272) prescribed the following approach regarding the nature of set objectives:

- **Specific:** Goals should be precise, instead of being vague and 'aspirational'.
- **Measurable:** Targets should be quantifiable instead of leaving them open to interpretation.
- **Attainable:** Objectives should be realistic, because people by nature do not like to fail.

- **Results orientated:** Goals should be aligned with the strategic intents of the company.
- **Time bound:** Target dates for completion should be set.

However, McBeth and Rimac (2004:21) argue that the traditional reward criteria - such as described above - tend to force management to set safe and predictable goals and therefore encourage only safe and predictable behaviour. If only immediate and measurable results which were determined prior to the inception of an initiative are rewarded and the uncertain nature of entrepreneurship is ignored, then a traditional reward system will act to suppress intrapreneurial behaviour (McBeth & Rimac, 2004:21).

An intrapreneur should be rewarded for his energy, effort and risk. However, while the rewards should be in relation to the energy expended, it should be kept in mind that projects might take a long time to realise tangible results and goals should be carefully defined (Hisrich *et al.*, 2005:49). When possible, intrapreneurs should be offered an equity stake in a new venture in order to motivate and retain them (Jones & George, 2003:665).

Whether rewards are monetary or otherwise, it should be ensured that the following elements are present in order to effectively manage a compensation system that promotes an entrepreneurial climate:

- **Goals:** While goals need not be detailed the strategic aim of the company should be explicitly stated.
- **Feedback:** A system of feedback and positive reinforcement should exist.
- **Accountability:** An emphasis on individual responsibility and the difference that every corporate entrepreneur can make.
- **Focus on outcomes:** Rewards should be based on results (Kuratko *et al.*, 1993:32).



Turner (2002:186) takes the view that the essence of the recognition that intrapreneurs seek, echoes those sought by entrepreneurs and revolves around ownership. McBeth and Rimac (2004:21) agree and state that intrapreneurs' rewards must be presented as options and the individual must be given the opportunity to choose a reward which is in accordance with his goals and values as an entrepreneur.

If an appropriate reward system is implemented in a company, it will lead to the cultivation of intrapreneurial behaviour, as well as the attraction and retention of intrapreneurial talent (Kuratko *et al.*, 1993:28).

#### **4.3.6 Tolerance of ambiguity in outcomes**

Tolerance of risk, ambiguity and uncertainty is a core attribute of an entrepreneur (Timmons & Spinelli, 2007:9). From this, it leads to the conclusion that experimentation and failures are part of the entrepreneurial process. However, employees in an organisation are conditioned to fear failure and this leads to managers favouring established procedures over innovation (Ackoff, 2006:225).

Turner (2002:52) states that the intrinsic quality of success entails that it commands trial and error. This is especially true of success based on innovation (Kuratko & Welsch, 2004:42) and it is therefore imperative to establish an environment where failure is tolerated. While failure is neither sought nor desired, it needs to be accepted by both management and employees that occasional failures are inevitable stones on the path to success and that mishaps will be forgiven (Kuratko & Welsch, 2001:351). Cohen (2004:18) proposes that the criteria for regarding a failure as 'acceptable' would be that an employee did his homework, applied sound business reasoning and tried to work towards attaining benefit for the organisation.

Hisrich and Peters (2002:50) agree that a culture of blaming people for mistakes destroys the potential for innovation and goes on to state that another benefit of controlled failures is that it affords the organisation the opportunity to learn and thus benefit from mistakes. Dawes (2007:21) concurs with the ability of mistakes to create new organisational knowledge. He proposes that an approach to harvest the positive effects from mistakes would centre around attempting to determine shared elements in

the types of mistakes being made, testing whether the mistake could have been avoided if the full set of available information had been assessed and by prescribing appropriate actions to address similar situations in the future (Dawes, 2007:21). Nicholson-Herbert *et al.* (2004:44) build on this view, by affirming the need for formal structures in which individuals are allowed to take risks and experiment in order to develop new knowledge and opportunities.

Lastly, Dawes (2007:21) warns that mistakes can sometimes be costlier than the company can afford (e.g. in the case of a public relations disaster resulting from an unsafe product) and therefore finds favour with the proposed structures in which individuals can experiment in a semi-controlled environment which could facilitate the effective management of cost and risks associated with trials.

#### **4.3.7 Discretionary time and work**

If no time is available to employees for exercising innovation through pursuing uncertain but potentially profitable opportunities which lie outside the strict scope of work of the employee, then it is quite clear that no intrapreneurship can take place irrespective of the availability of other resources (Kuratko & Hornsby, 2001:14). The corollary is that management will demonstrate its commitment to intrapreneurship by not only promising rewards for successes, but by trusting employees to allow them the authority to decide on how to spend some part of their available time (Kuratko *et al.*, 2005:703)

Bhardwaj *et al.* (2007b:136-137) discern both work discretion and availability of free time as critical constructs for intrapreneurial success in an organisation. Work discretion is measured by the amount of freedom given to develop own ideas, the ability to be one's own manager to some extent and independence in terms of methods and decision-making. The same authors judge the availability of free time by whether the employee's workload allows free time and whether he is allowed to consider problems which lie outside of the worker's formal area.

#### **4.3.8 Support for innovation, creativity and new ideas**

An innovative spirit lies at the heart of the entrepreneurial process (Timmons & Spinelli, 2007:55) and channelled through small entrepreneurial firms it has accounted for 95%

of all disruptive technological change in the United States since the Second World War. Going beyond being the driver of small upstart entrepreneurial firms, continuous innovation has become an essential skill to ensure sustained corporate performance in the 21<sup>st</sup> century's global economy (Kuratko & Welsch, 2001:347).

A key element to instilling intrapreneurship in a firm is the active encouragement of innovation (Kuratko & Welsch, 2001:350). A successful corporate entrepreneur has to be pushed to exercise his ability to apply creativity to garner resources and bolster support in order to overcome many obstacles to bring a project to fruition (Morris & Kuratko, 2002:104). However, many firms experience difficulties in managing innovation, because they are more familiar with managing familiar elements where outcomes are predictable. When the field of innovation requires opening up the unknown, conventional management is left impotent because it is neither able to direct the process for the best outcomes nor can it learn rapidly and respond quickly to the outcomes of the innovation process (Pinchot & Pellman, 1999:13).

Creativity is seen as using a person's mental capability and enquiring mind in order to unearth new things and can extend to the ability to link previously unrelated concepts to develop new ideas, concepts and processes (Morris & Kuratko, 2002:104). Schumpeter, one of the pioneers in entrepreneurship research of the previous century, placed significant emphasis on the importance of "carrying out of new combinations" in the form of products, services or markets (Stevenson & Jarillo, 1990:17). However, this ability of creating new products or combinations extends beyond the creation of new ventures into the ambit of new product development, implementation of new technologies and discovering of innovative processes (Bhardwaj & Momaya, 2006:37).

On an organisational level, innovation can be seen as a willingness to emphasise research and development, new products, improved processes and an overall technological improvement (Slevin & Covin, 1990:45).

Lowe and Marriot (2006:70) view innovation as any creative process that adds value. They distinguish four categories in the intrapreneurial context:

- **Product innovation:** Changing of current products and services.
- **Process innovation:** A different way of delivering products.
- **Position innovation:** A change to the context in which a product is introduced to the market.
- **Paradigm innovation:** An alteration to the underlying assumptions and models on which the organisation bases its business (Lowe & Marriot, 2006:70).

#### **4.3.9 Empowered multi-disciplined teams**

A feature of entrepreneurial firms is that they create cross-functional teams that aid in innovation by debating and incorporating different perspectives and have the power to make decisions (Pinchot & Pellman, 1999:109). Chowdhury (2005:731) elaborates on the decision-making ability of teams by affirming the common believe that teams generally make better decisions than individuals due to the incorporation of broader perspectives and the presentation of more alternatives to be considered. McBeth and Rimac (2004:19) argue that in the modern business environment, intrapreneurship can only come to full fruition if the collective competencies and knowledge of a team can be applied to develop an intrapreneurial project.

Sadler (2000:31) emphasises the importance of diversity in various specialisation fields to promote innovation. According to Gaw and Liu (2004:68), this is especially true in an entrepreneurial firm, where an important intrapreneurial ability is represented by the capability to tap into the functional experience of cross-functional teams, because a process or product often comprises functional elements which lie outside the scope of knowledge of one individual. Each member of a team both adds a strength to the team and reinforces interdepartmental dependency and cooperation (Turner, 2002:55) and a well set-up team will ensure that all the background information and resources are available for a good decision whilst at the same time being protected from herd-thinking phenomena (Jones & George, 2003:482).

Cohen (2004:18) points out that small but multi-skilled teams can react quicker, are more flexible and have a wider breadth of knowledge to draw on, when compared to large teams compiled from a single functioning unit. West and Meyer (1998:417) echo the importance of diversity in a team and point out that disagreement on secondary objectives of a firm or even a project can often lead to increased performance due to idea diversity.

Rue and Byars (2005:75) assert that well-functioning groups yield better results when compared to individuals working in isolation, but they also raise some cautionary points regarding the detrimental outcomes of poorly managed groups. Their comparison is presented in Table 4.2.

**Table 4.2: Advantages and disadvantages of working in a group**

| <b>Positive aspects</b>   | <b>Negative aspects</b>  |
|---|--|
| <b>Greater total knowledge inside groups</b>  | Possibility of domination by one person or interest group  |
| <b>Wider set of alternatives to consider when making a decision</b>                                     | Herd-thinking tends to force groups to accept first apparent solution without considering alternatives in detail |
| <b>Greater acceptance of decision due to all individuals participating in decision – making process</b> | Social pressure can build up in group forcing individuals to conform   |
| <b>Decisions and implications are better understood by all team members</b>                             | Competition in group can escalate to the extent that it undermines the importance of the goals of the group      |

**Source:** Rue and Byars (2005:75).

Morris, Davis and Allen (1994:73) contrast teamwork (or collectivism) with individualism to determine the relative benefit of each in an intrapreneurial environment. In their view, individualism leads to a culture in which independence, control and individual ambition

is valued and individuals do not place a high value on group achievements. Collectivism encourages working together, consultation and valuing of team results above individual results. On the whole, the authors argue that neither collectivism nor individualism must be unduly promoted and that a balance must be struck to harvest individual innovation and ambition while gaining the benefits of cooperation and group pride of collectivism (Morris *et al.*, 1994:73).

The result of the establishment of cross-functional teamwork is that 'collective entrepreneurship' emerges in which the benefit of synergy enables intrapreneurial teams to generate new ventures (Kuratko, Ireland & Hornsby, 2001:61).

#### **4.3.10 Resource availability and accessibility**

One of the most significant ways in which a company can demonstrate support for the intrapreneurial process is to avail resources to corporate entrepreneurs (Antoncic & Hisrich, 2004:526). Implicit into this support is also the tacit understanding that risks will be taken with these resources and that outcomes of the usage of the resources may be uncertain (Hornsby *et al.*, 2002:253).

Timmons and Spinelli (2007:341) posit that in an entrepreneurial environment resources comprise people, financial resources, tangible assets and a business plan. In an intrapreneurial environment, it is recognised (Bigelow, 2006:16) that resources stretch beyond mere financial means and that the value vested in the knowledge of people is one of the most important assets to be made available. Hisrich *et al.* (2005:426) build on this by stating that an important resource is the ability to collect resources and apply them in unique and valuable new combinations.

While it is held that resources of the company need to be available and easily accessible (Hisrich & Peters, 2002:50), it is accepted (Thompson, Strickland & Gamble, 2007:48) that practical considerations can lead to a corporate entrepreneur not receiving all requested resources. However, this is viewed to often yield positive results, (Thompson *et al.*, 2007:48; Timmons & Spinelli, 2007:91) because it fosters innovation by forcing the intrapreneur to "do more with less".

The availability of resources will drive intrapreneurial activities in established firms (Antoncic & Hisrich, 2004:526) in itself, but will also yield secondary benefits by leading managers to perceive availability as an encouragement to experimentation and risk-taking (Hornsby *et al.*, 2002:251). Furthermore, it has been shown (Santora, 2007:83) that availability of resources reinforces loyalty in employees who are keen on experimentation, because they expect tangible organisational support for their efforts.

#### **4.3.11 Continuous cross-functional learning**

Intrapreneurship drives knowledge creation, the development of new competencies and the modification of existing ones (Robinson, 2001:96). However, knowledge is also a precedent for intrapreneurship, because intrapreneurship starts off from current knowledge which is continuously being increased in a learning organisation and it takes a quantum leap from there into the unknown to create new knowledge and ventures (Antoncic & Hisrich, 2003:13).

A learning organisation proactively creates, acquires and transfers knowledge and changes its behaviour on the basis of new knowledge and insight (Kreitner & Kinicki, 2007:549). In addition, it is held (Jones & George, 2003:662) that the employees of a learning organisation are encouraged to identify opportunities and solve problems, thus enabling the organisation to continuously experiment, improve and increase its ability to serve customers.

Dess, Ireland, Zahra, Floyd, Janney & Lane (2003:355) point out that the two major avenues of learning are through organisational memory and experimentation. Newly acquired knowledge can be manifested as technical knowledge, but also more importantly as integrative knowledge (new combinations of resources and opportunities) and exploitive knowledge (new ways to take advantage of firm resources and opportunities to create new products and ventures).

New possibilities are recognised by people who move across functions, geographies, products and lines of business; they are thus exposed to many different perspectives and experiences (Cohen, 2004:18). McBeth and Rimal (2004:18) argue that organisational learning should not be pursued at all costs, but rather that a careful

balance of detailed knowledge of one subject versus wide cross-functional exposure should be achieved.

Organisational learning in an intrapreneurial environment will result in finding new ways of commercializing the firm's goods or services that evolved from effective applications of its technical and integrative knowledge (Dess *et al.*, 2003:357).

#### **4.3.12 Strong customer orientation**

It is essential that an entrepreneurial company invest heavily in developing a continuous understanding of the need of their customers, because it is essential to its future success (Turner, 2002:188). A strong focus on customer requirements sharpens a company's focus on innovation and suppresses wasteful actions such as the pursuit of internal political gains in a company (Pinchot & Pellman, 1999:113).

Cohen (2004:19) states that a company's foremost *raison d'être* is to serve its customers and argues that a strong customer orientation – manifested by exposure of workers at all levels to customers and their requirements – serves as a stimulus to change and the development of new products and services. Hisrich and Peters (2002:54) concur that ways need to be found to operate closer to the customer at all levels. Farrel (1993:117) identified four areas in which a company must ensure that it operates close to its customer: Having excellent product knowledge, rapidness of response, being courteous and ensuring long-term relations with customers.

Deshpandé, Farley and Webster (2000:354) state that a customer orientation is rooted in a set of beliefs based on the assertion that customer requirements and satisfaction are the top priorities of the company. Liu, Luo and Schi (2002:367) point out that it creates dynamic interactions among the organisation, customers and competitors in the market. Andotra and Pooja (2006:181) indicate that knowledge garnered of a customer (as well as of competitors) can translate into a company gaining significant market advantage, while Appiah-Adu and Singh (1998:390) established that a significantly positive correlation was found between customer focus and product success.



#### **4.3.13 Flat organisational structure and effective communication**

A firm with an intrapreneurial climate requires a flat organisational structure complete with networking, teamwork, sponsors and mentors (Hisrich & Peters, 2002:47).

Organisational structure is the underlying construction that determines the ability to change that an organisation possesses and the rapidness thereof (McBeth & Rimac (2004:20). It has been observed that fresh ideas rarely fit into rigid organisational structures and that innovators often have to cross boundaries to get help and support (Pinchot & Pellman, 1999:112). McBeth and Rimac (2004:20) conclude that the ideal structure to sustain a continuous flow of innovations is flat and decentralised. It exhibits flexibility and focus on people and teams, whilst being characterised by the formation of informal networks and a strong support for employees' desire for independence (McBeth & Rimac, 2004:20).

In addition to a reduction in hierarchical levels in terms of decision-making, the organisation should be characterised by the absence of barriers to communication (Rue & Byars, 2000:13). Morris and Kuratko (2002:173) prescribed further requirements of an organisational structure to facilitate intrapreneurship:

- Reduction of hierarchical levels to a minimum
- Broad area of control for managers to aid in decision making
- Responsibility enabled by relevant level of authority
- Lower level input into management systems
- Open communication channels
- Accountability demanded from employees.

The increased autonomy and control over resources afforded by a flat organisational structure to managers will lead to greater innovation, while more direct involvement in the decision making process inherent to a concise chain of command leads to higher commitment (Russell, 2001:72). Cohen (2004:18) agrees that a reduction in hierarchy and segmentation increases employee initiative and encourages entrepreneurial behaviour by bestowing more authority and reducing barriers among roles.

#### **4.3.14 Ethical and value-based climate**

Various dimensions underpinning corporate entrepreneurship were found to have a possible influence on the extent to which employees make ethical decisions in a company (Chau & Siu, 2000:372). Pierce and Henry (1996:427) point out that in the absence of a formal and well rolled out value system and code of ethics, a perception of “everybody does it” can force up to 40% of employees to be coerced into making unethical decisions. For these reasons, a well-entrenched holistic value system is held as an antecedent for a culture of corporate entrepreneurship (Kuratko & Goldsby, 2004:25). This is especially true at middle-management level (Kuratko & Goldsby, 2004:14).

According to Heinonen and Toivonen (2007:168), middle management is the most critical group of employees to exhibit intrapreneurship, if a culture of corporate entrepreneurship is to be fostered in a company. While senior management is often isolated from day to day activities, middle managers play a crucial role by taking strategic direction from senior management and implementing it on floor level (Kuratko & Goldsby, 2004:15). However, Kuratko and Goldsby (2004:14) warn that middle managers can be influenced by an inadequate organisational culture to act unethically in the pursuit of intrapreneurship and by virtue of their unique position in the company it might be difficult to detect and correct such behaviour.

When examining the requirement of flat organisational structures and employee freedom, Sadler (2000:30) rightly points out that bureaucratic structures and strict work procedures do serve a purpose and that when altogether discarding these safeguards, uncontrolled individual behaviour could lead to the downfall of the organisation. Birkinshaw (2003:9) augments this argument by examining the role that boundaries (or the lack thereof) played in the demise of Enron. It was found that the company strongly championed intrapreneurial behaviour, but in the process failed to enforce critical ethical standards. A philosophy of “anything goes” as long as profits can be demonstrated manifested amongst its executives and this example inspired lower-level employees to pursue highly unethical business activities which generated large (but short lived) profits for Enron (Birkinshaw, 2003:9).

Derber (1996:6) found that while some forms of harmful behaviour in a corporation are actively discouraged (such as outright lying), others (such as using any means possible to obtain results for the company) are tacitly or actively cultivated by leading corporations and financial institutions. Giacalone and Knouse (1997:49) propose that such a situation should be remedied by integrating ethical procedures into the very fabric of the organization. Somers (2001:189) showed that a corporate code of ethics contributes significantly to reducing ethical transgressions in an organisation. However, it should be noted that the same author found that a professional code of ethics appeared to have little or no influence on ethical behaviour and that a company can thus not rely on the principles prescribed by the professional organisation to which its accountants, engineers and managers are affiliated (Somers, 2001:190). When an effective corporate code of ethics is developed, it is essential that it should also be communicated well (Pierce & Henry, 1996:435).

#### **4.4 Organisational performance as a precedent of corporate entrepreneurship**

Various researchers (Murphy, Trailer and Hill, 1996:15; Brancato, 1995:121) argue that the organisational performance of an entrepreneurial company should be measured according to multiple dimensions, including but not being limited to financial performance. Atkinson *et al.* (1997:27) agree with this standpoint, by defining internal (employees and suppliers) and external (shareholders, customers and the general community) stakeholders and positing that a model for measuring the performance of a firm should verify whether expectations of internal and external stakeholders are met. For instance, some aspects of the expectations of shareholders and the community alike would be met by financial performance and long-term sustainability of the firm (Atkinson *et al.*, 1997:27).

Van der Post (1997:75) argues that financial performance is a solid foundation from which to draw inferences regarding the success and effectiveness of an organisation, because all efforts and systems are eventually aimed at ensuring sustainable financial returns. Over time, entrepreneurial firms will generate better returns than their non-

entrepreneurial competitors due to the immediate rewards of successful ventures, as well as the inherent proactiveness and flexibility of entrepreneurial firms (Zahra and Covin, 1995:47). Empirical proof has been established to show a positive relationship between intrapreneurship and financial results in firms (Morris & Sexton, 1996:8) and this relationship appears to continuously strengthen over time (Zahra, 1995:242). It has been proposed that financial performance should be measured in terms of market share escalation (Murphy *et al.*, 1996:15) or alternatively in terms of growth in turnover and profits (Goosen, de Coning & Smit, 2002:23).

An important success factor of a company is vested in the way that it is able to effectively focus on its customers (Appiah-Adu & Singh, 1998:390). Manifested indicators of a customer focus include the ability to retain customers by instilling loyalty to a company's offerings in the marketplace (Kotler & Armstrong, 2008:19), as well as the ability to focus development direction and the actions of personnel on ways to satisfy customers' needs (Strydom, Jooste & Cant, 2000:223).

Dess *et al.* (2003:370) build on the stakeholder approach of Atkinson *et al.* (1997:27), by stating that a measure of corporate success is related to the effectiveness and efficiency that a company's employees (as internal stakeholders) are able to employ in producing the company's outputs. Effectiveness is seen as "doing things right" in order to create value for the company, while efficiency relates to "doing the right things" in order to ensure the maximum output whilst expending the minimum input (Jacobs, Chase & Aquilino, 2009:6). However, another key area in which a successful organisation serves its employees as stakeholders is in creating a people-centred organisation in which human capital is viewed as the most important asset (Kreitner & Kinicki, 2007:4). Bulut and Alpkın (2006:67) found that the intrinsic and extrinsic rewards flowing from a culture of corporate entrepreneurship, strongly drives both organisational commitment and job satisfaction among participants.

Coetsee (2002:24) links the factors relating to employee-stakeholder success together, in stating that a company which is accomplished in creating a motivating climate will manifest the following attributes:

- **Aligned-commitment:** People are focussed on shared goals and values and are committed towards realising these.
- **Effectiveness and efficiency:** Aligned-committed teams are able and motivated, effectively and efficiently achieve company goals.
- **Job satisfaction:** Employees experience their job as meaningful, their efforts as being aptly rewarded and themselves as growing (Coetsee, 2002:24).

All ventures exhibit growth curves which taper off after they have reached maturity (Timmons & Spinelli, 2007:535) and research and development (R&D) forms an important asset of intellectual stock from which new business ventures can be distilled (Ahuja & Lampert, 2001:529). Collis and Montgomery (2005:33) state that a consistent flow of expenditure needs to be directed to R&D in order to ensure acceptable long-term levels of strategic intellectual stock that can ensure a sustainable competitive advantage to a successful firm.

Finally, March and Sutton (1997:698) examined the degree of accuracy attainable when attempting to use organisational performance as a dependent variable. It was found that various factors were always present to detract from a perfect measurement of organisational performance and that researchers must at all times be explicitly conscious of the ambivalence inherent in the determination thereof. Implicitly, testing internal perceptions regarding organisational performance is accepted as one of many (imperfect) techniques to determine this construct as a dependent variable (March & Sutton, 1997:704).

#### **4.5 Establishing a climate of corporate entrepreneurship**

It is essential to foster an enabling environment to encourage the development of entrepreneurship as well as to build up entrepreneurial capacity (Vosloo, 1994:155). However, De Villiers (2007:108) points out that there are no simple, once-off steps to be

followed to establish intrapreneurship in a company. The organisation has to be viewed as a whole and entrepreneurship needs to be incorporated into every aspect in order to become part of the day-to-day actions of staff and management.

#### **4.5.1 Barriers to fostering a climate of corporate entrepreneurship**

During the second part of the previous century, research by Westfall (1969:240) indicated three main barriers which prevent firms from acting entrepreneurially:

- **Unbalanced information:** Companies tend to discard ideas for venturing which do not follow the traditional core business (and thus area of expertise) of the firm. This was found to be more prevalent in larger firms, with smaller firms being more prepared to consider ventures away from their core business.
- **Scarce management resources:** Senior management has too little time to devote to investigating and evaluating breakout opportunities and therefore tends to focus on extrapolating the current strategy and business model. This phenomenon was found to be more common in smaller businesses, where management's efforts tend to be more concentrated on day-to-day decisions.
- **Perceived cost of innovation:** Almost all innovative business ventures were found to require an initial outlay which was not guaranteed to be recovered and therefore risk aversion and an intolerance of the possibility of failures scuttled many innovative projects (Westfall, 1969:240).

The size of a firm can have a secondary influence on its entrepreneurial bias: A small firm might have a predilection to wander away from its core business in search of new opportunities, but often does not have the management resources to dedicate to entrepreneurial ventures. Conversely, larger firms might have sufficient management resources but little taste for wandering off its beaten path and therefore it is suggested that an optimum size of organisation exists which would lend itself to entrepreneurship (Westfall, 1969:242).

Ahuja and Lampert (2001:521) echo the dangers of intuitively wanting to stay close to core business in all developments and investigations. Three traps are identified which,

being entrenched in the culture of most successful organisations, prevent the creation of breakthrough innovations:

- **Familiarity trap:** Experience with a specific technology or method of operation leads to more proficiency in the use thereof. Proficiency brings effectiveness to the firm, but repeated positive feedback between experience and competence blinds the corporation to new technologies or techniques.
- **Maturity trap:** Every successful firm has particular technologies and techniques which it favours. Finding proven and reliable business tools raises efficiency to a very high level. However, emerging technologies which do not currently match the capabilities of the current business tools but would eventually surpass it, are often being ignored at the peril of the organisation.
- **Propinquity trap:** When addressing problems, a solution which builds on technological antecedents is less risky than one that attempts a brand new solution to a current problem. Adopting “nearness” to current technologies or techniques as a standard ensures stability in an organisation, but it undermines any potential for discontinuous innovation (Ahuja & Lampert, 2001:530).

The effect of ownership and governance as a barrier to (or proponent of) corporate entrepreneurship was investigated by Zahra (1996:1730). It was found that the following factors could inhibit an entrepreneurial focus in companies:

- **Executives and outside directors with short-term goals:** Managers at all levels tend to act according to the stakes that they have in the enterprise. If they are strongly encouraged to achieve short-term goals while having no long-term interest in the success of the company, corporate entrepreneurship will not be considered due to it generally having a longer realisation horizon.
- **Lack of large, long-term investors:** It was found that institutional investors who took the long-term view of its investment in a company did not only allow entrepreneurial activities, but often actively demanded it. On the other hand, smaller short-term investors tended only to focus on short-term results brought

on by improved efficiency (Zahra, 1996:1730).

#### **4.5.2 Actions to implement a culture of corporate entrepreneurship**

The very first step in implementing corporate entrepreneurship is to merge it into the short and long term strategy of the firm (Pinchot & Pellman, 1999:25). Shareholders should accept and be aligned with a strategy of entrepreneurship and this should translate into setting directors' objectives which advocate an entrepreneurial focus (Zahra, 1996:1730). Furthermore, once entrepreneurship is embraced, the top level executive should explicitly articulate the fact that it is impossible to manage intrapreneurial actions only in the upper echelons of the company (Westfall, 1969:245). A conscious realisation is required from management that new venture planning would have to be decentralised to the point where lower-level employees are empowered by means of informational and financial resources (Westfall, 1969:245).

Van der Merwe and Oosthuizen (2009:1) list the following factors as critical managerial action steps to develop a climate of corporate entrepreneurship:

- **Develop an entrepreneurial vision:** Senior management needs to articulate a vision of an inspiring future which is used to guide decisions, inspire commitment and motivate action. This vision is based on organisational transformation which transcends the current view of what is possible in the organisation.
- **Recognise the critical importance of failure:** Tolerating failure in creative ventures supports the emergence of untried, new ideas in the entrepreneurial company. Learning from failure, as opposed to expecting punishment for it, should therefore be promoted in the organisation.
- **Instil the desire to be innovative:** Management should first establish the nature of innovation sought and the sources inside the company whence it is expected to be obtained. Consequently, the entire system should be streamlined to promote the exploration of innovation from within: All kinds of innovation and value continuous improvement, process breakthroughs, new products and services, new ways of working together, new internal services and new organisational patterns.



- **Share risks and rewards with employees:** Entrepreneurship is about risk and reward and thus it is required that employees are exposed to some of the risk and should meaningfully participate in the rewards. Bonuses, freedom, research support or other resources for both individuals and teams should be influenced by the degree to which projects succeed brilliantly or fail outright.
- **Sanction entrepreneurial activities and commit resources:** An organisational support system should be developed to provide resources, autonomy and emotional support to intrapreneurs should be developed. That would give individuals with attractive strategic proposals the latitude and resources to try them out.
- **Instil customer focus:** Customer focus should first be raised to the level that it becomes part of the corporate consciousness. The processes should be established to stimulate dialogue on ways to improve customer satisfaction and build direct lines to customers. It is proposed to engage in in-depth conversations with random employees and use the information to improve customer experience.
- **Create an intrapreneurial architecture:** While the essence of an innovative organisation is flexibility, adaptability is not achieved by continuously tinkering with the formal organisational structure. The aim should be to develop policies and arrangements that foster an effective self-organising system which enables the optimum development of networks and cross-boundary cooperation (Van der Merwe & Oosthuizen, 2009:1).

When considering the practical dissemination of intrapreneurship to middle management and subsequently the entire workforce, it should be borne in mind that entrepreneurship is not an inborn and static feature. A large amount of formal or informal training, know-how, experience and a significant amount of self-development goes into establishing a person as an entrepreneur (Timmons & Spinelli, 2007:19).

Thornberry (2002:329) investigated whether intrapreneurs could be cultivated in a similar way in which entrepreneurs are developed. After examining the effects of the formal corporate entrepreneurship training programs of four major companies, the following observations were made:

- Even if a culture is not entrepreneurial, islands can exist in a company where intrapreneurship can thrive for some time.
- With education, training and support a significant fraction of employees can develop into intrapreneurs.
- The two most important educational tools for the development of intrapreneurship were catalytic coaching and a business planning process.
- When the required training and support is present, it is difficult to rule out any person from developing into a corporate entrepreneur and therefore intrapreneurs can spring forth from any number of unexpected sources within a company.
- While it is generally recommended that idea initiation and implementation be separated organisationally, it was found that all organisations had intrapreneurial individuals who could identify, develop and implement new business ventures from conception to complete fruition.
- The critical mass needed in terms of active intrapreneurs is surprisingly small in relation to the large benefits reaped for the company and it is therefore not necessary to try and convert each and every manager into a corporate entrepreneur before results are yielded (Thornberry, 2002:329).

Ireland *et al.* (2006:29) propose that a formal training program should be rolled-out to equip all parties with knowledge of intrapreneurship and the skills to develop themselves in terms of intrapreneurship. The following elements are proposed to form part of such a training program:

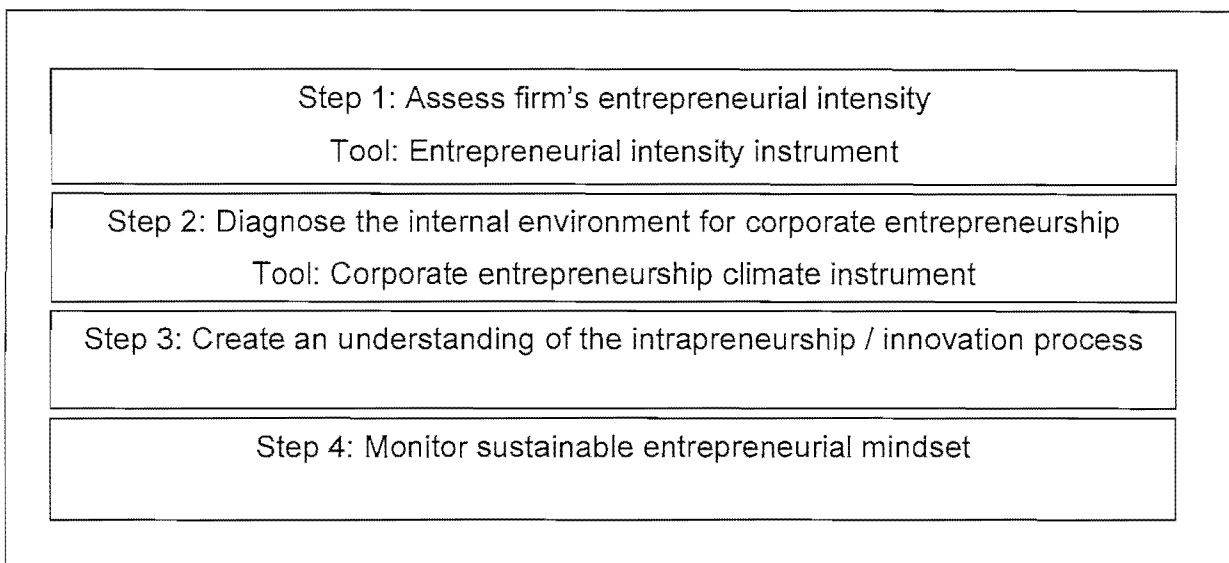
- Introduction to entrepreneurship
- Entrepreneurial breakthrough processes
- Creative thinking

- Idea development process
- Examining of barriers, facilitators and triggers to entrepreneurial thinking
- Venture planning (Ireland *et al.*, 2006:29)

Hisrich *et al.* (2005:51) propose that at least one day per month be earmarked to intrapreneurship training and that an important aspect of the program should be an opportunity for employees to share experiences.

Ireland *et al.* (2006:21) are of the view that the starting point of a program to implement an intrapreneurial culture would be to judge the current level of intrapreneurship and to compare future 'snapshots' of the culture to the base measurement done prior to commencement of the program. It is proposed that an entrepreneurial health audit be used to diagnose the level to which intrapreneurship has already been implemented successfully and also the extent to which the climate is capable of sustaining ongoing entrepreneurial behaviour (Ireland *et al.*, 2006:21). The steps of the audit process are outlined in Figure 4.2.

**Figure 4.2: The entrepreneurial health audit**



**Source:** Ireland *et al.* (2006:22).

The following tools are mentioned in the entrepreneurial health audit (Figure 4.2) and were developed by Ireland *et al.* (2006:21):

- **Entrepreneurial intensity instrument:** The current degree of entrepreneurship (or entrepreneurial intensity) actually exhibited by the firm is measured (Ireland *et al.*, 2006:22).
- **Corporate entrepreneurship climate instrument:** Establishes the factors that support the results obtained from the intensity instrument, by measuring the prevalence of factors which are considered as essential antecedents to a climate which encourages intrapreneurship (Ireland *et al.*, 2006:24).

In conclusion, Hisrich *et al.* (2005:51) present an action to establish a climate of corporate entrepreneurship which combines the recommendations in this section:

- **Management commitment:** Top, upper and middle management's commitment must be secured and sustained for at least three years prior to broad roll-out of corporate entrepreneurship in an organisation.
- **General introduction:** The concept of intrapreneurship is introduced to the entire organisation, preferably by seminars. Aspects of intrapreneurship are introduced, strategies are refined, guidelines are set and intrapreneurial leaders are trained.
- **Expectation clarification and resource allocation:** The general direction in which management expects intrapreneurial focus as well as a risk budget needs to be clarified. Subsequently, detailed planning and the allocation of sponsors and champions should be completed.
- **Technological leveraging:** The organisation needs to investigate ways in which technology can be applied to make it more flexible in order to compete beyond levels that its current size and core business dictate.
- **Training:** Dedicated managers should spearhead employee training programs. Understanding the concept of intrapreneurship, developing a business plan and effective customer interaction should be mastered by all employees completing the training.

- **Customer propinquity:** The organisation should find ways to get closer to its customers using databases, headhunting from competitors and interaction with its retailers.
- **Productivity increase:** A focus on “doing more with less” must be followed by empowerment of employees so that management levels could be reduced.
- **Support structures:** Corporate entrepreneurship activities do not – as a rule – affect the bottom line over a short term. Strong support structures need to be established to ensure that intrapreneurial impetus is not lost over time.
- **Clarify rewards:** Recognition entails an essential part of entrepreneurship, but linking monetary rewards or even equity stakes to the outcomes of intrapreneurial activities could prove to be difficult if not clarified beforehand.
- **Evaluation system:** Successful intrapreneurial units must expand, while unsuccessful ones should be eliminated. Furthermore, even successful ventures must be contained within the broad mission statement of the organisation. Therefore an evaluation system must be established which can be used to cull off poor performers whilst boosting promising ventures (Hisrich *et al.*, 2005:51).

## 4.6 Summary

Various researchers assent on the essential elements and influence of corporate culture and agree that entrepreneurship needs to be ingrained in the corporate climate in order to foster intrapreneurship. It was seen that a corporation’s culture manifests in various levels and an appropriate culture is essential to success. This statement is especially true regarding the importance of an entrepreneurial focus in culture if intrapreneurship inside a firm is to be promoted.

The desired end-state of the company needs to be formulated into a strategic intent and the deliberate efforts needed to reach that state should incorporate an intrapreneurial strategy. This strategy should be communicated to and accepted by all employees in order to realise the vision of the company.

Visionary leadership pertains to the way in which the organisation's top leadership distil and accept a vision and subsequently transfer that vision so that employees become aligned and committed to it.

Management support builds on the vision imparted by a company's leadership and relates to the way in which business administrators at all levels continuously provide support and buy-in into ensuing intrapreneurial efforts. Sponsorship can be viewed as part of management support, with specific focus on facilitating a smooth process to develop ideas into ventures. Sponsorship in an organisation will smooth the path of the entrepreneurial process, protect projects from premature threats and will build stronger intrapreneurial teams.

A part of management support of corporate entrepreneurship consists of the creation of a reward system which is tailored to reward successful outcomes of the entrepreneurial process. Furthermore, support needs to be extended to include the acceptance and management of intrapreneurial failures. Controlled failures are viewed as essential precursors to organisational learning and success and therefore it has to be tolerated and managed.

While management support should provide incentives for success, tolerance of failures and sponsors for facilitation, a fourth element in the form of available time needs to be added to empower individuals to pursue intrapreneurial initiatives.

A value which underpins an entrepreneurial climate includes an appreciation for innovation and creativity and the realisation that new ideas are vital to the long-term success of the organisation. Multi-disciplined teams allows intrapreneurs to garner the creative ability of people with different competencies, while individuals become more effective corporate entrepreneurs by undertaking continuous learning across the boundaries of corporate functions.

Availing resources to employees empowers them to act entrepreneurially, but also acts as an encouragement by way of demonstrating the confidence that a company has in the abilities of its workforce to apply resources wisely in order to distil new opportunities.

A company's reason for existence is vested in its ability to serve its customers and therefore a strong focus on customers is required to underpin an intrapreneurial climate. A flat organisational structure with free communication increases the flexibility of an organisation and aids in bringing ideas - which could serve current or future customers - to fruition quicker.

Propagating corporate entrepreneurship places great trust in a company's employees to use the resources, time and trust availed to them wisely. However, in the absence of an ethical climate with a strong value orientation, corporate entrepreneurship can evolve into a free-for-all pursuit of unethical activities which will do more harm than good to the organisation and could even lead to its downfall.

Practical steps towards creating a culture of corporate entrepreneurship can only be undertaken once management accepts a vision of intrapreneurship. Various barriers towards the effective implementation of corporate entrepreneurship have been identified and paradoxically, most of these barriers lie embedded in the approach required to effectively manage a successful organisation. Awareness programs, effective training and continuous monitoring and auditing are tools which aid in the deliberate cultivation of a culture of corporate entrepreneurship.

# CHAPTER 5

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## RESULTS OF EMPIRICAL RESEARCH

### 5.1 Introduction

Based on an investigation into the attributes of ArcelorMittal as a company (discussed in chapter two), the characteristics of corporate entrepreneurship (reviewed in chapter three) and the salient features of a climate of corporate entrepreneurship (examined in chapter four), a tool was developed to test both the perceived presence of constructs supporting a climate of corporate entrepreneurship as well as the perceived success of the organisation.

A sampling tool in the form of a questionnaire was developed by previous researchers and adapted for the purposes of this study. The questionnaire was sent to 325 persons and 180 usable responses were obtained. Underlying constructs of the questionnaire were tested for reliability by calculating a Cronbach Alpha coefficient and subsequently unreliable constructs were disregarded. Demographical data was analysed in isolation, before tests for both statistical and practical significance were applied to highlight measured perceptions which appear to be significantly influenced by demographical factors. Finally, overall ratings of perceptions pertaining to constructs of an entrepreneurial climate and success of the company were compiled in order to gain a quantitative insight into views held by respondents.

### 5.2 Data collection and processing

#### 5.2.1 Study population

It was decided to target functional positions typically populated by skilled specialist as well as lower to middle management. This decision was based on the target population's managerial exposure and the discretionary elements of its work description. From an analysis of the company's human resource database, it was found that roles denominated as G up to B encompassed all management levels as well as



most skilled technical positions in the Finishing units of ArcelorMittal Vanderbijlpark. In total, 325 questionnaires were administered to persons functioning in the Finishing units of the Vanderbijlpark plant of ArcelorMittal South Africa and as such the entire target population received a questionnaire.

### 5.2.2 Measuring instrument

The measuring instrument was presented in the format of a survey which was administered to respondents in hardcopy format, on which a respondent indicates his/her agreement with a given statement on a Likert scale. The survey tests for the perceived presence of constructs of a culture of corporate entrepreneurship and is based on the questionnaire developed by Oosthuizen (2006) and adapted by Jordaan (2008). The questionnaire was subsequently expanded for the purposes of this study. Additions to the measuring instrument tested perceptions regarding the success of the company on certain key measures, collected essential demographical data and tested for the presence of a proposed additional climatical construct which was not recognised by Oosthuizen (2006) or Jordaan (2008).

The questionnaire consisted of three sections:

- **Section A:** Consisted of 65 statements to which the respondent indicated agreement on a scale from one to five. This section tested for the perceived prevalence of the 13 constructs discussed in section 4.3 (Constructs of an entrepreneurial climate).
- **Section B:** Consisted of 23 statements to which the respondent indicated agreement on a scale from one to five, to test perceptions regarding the performance of the company. Furthermore, additional constructs (ethical and value based climate) was incorporated into this section. It was elected not to incorporate the additional constructs into section A, in order to maintain comparability with the results of previous studies which were partly based on section A's construction.
- **Section C:** Recorded demographical data on gender, age, race, qualification level, job grading, management level and functional department of respondents.

### 5.2.3 Distribution of questionnaires

Discussions were held with the general manager of human resources on the site and it was agreed that the most effective method would be to channel hard-copy questionnaires to respondents via human resource consultants. To preserve total anonymity, no respondent was requested to enter his/her name on a questionnaire and there was no way for the author of this study to relate a specific response back to an individual. Therefore, it was not possible to resubmit questionnaires to respondents if it was found that some information was missing.

In total, 208 questionnaires were received back via human resource consultants, of which 28 had to be disqualified due to significant areas of incomplete responses which rendered the documents unusable. The remaining 180 responses were handed to the Statistical Consultation Services of the North-West University for processing and data stemming from these forms the foundation of the analysis presented in this chapter. This information is summarised in Table 5.1.

**Table 5.1: Analysis of responses**

|   | <b>Number of questionnaires</b> | <b>% of questionnaires</b> |
|---|---------------------------------|----------------------------|
| <b>Questionnaires sent out</b>              | 325                             | 100                        |
| <b>Questionnaires returned</b>              | 208                             | 64.0                       |
| <b>Questionnaires discarded: Incomplete</b> | 28                              | 8.6                        |
| <b>Questionnaires used</b>                  | 180                             | 55.4                       |

## 5.2.4 Reliability and effect size testing methods

### Reliability testing

Reliability of both sections A and B of the questionnaire was tested separately, using Cronbach's alpha coefficient to verify internal consistency of each individual construct's test.

Cronbach's alpha coefficient is used to estimate the reliability of item-specific variance in a one-dimensional test. If a construct yields a large alpha coefficient, then it can be concluded that a large portion of the variance in the test results for the construct is attributable to general and group factors (Cortina, 1993:103). Generally, alpha values above 0.70 indicate acceptability although lower values can also be ratified (Schmitt, 1996:353) whilst values higher than 0.90 raise cautionary notes regarding the possibility of excessive redundancy being built into a test (Peterson, 1994:390). Field (2008:668) holds that when attitudes (rather than abilities) are tested, a score of lower than 0.70 could still be held as acceptable. For the purpose of this study, the thresholds indicated in Table 5.2 will be applied.

**Table 5.2: Thresholds held in application of Cronbach's alpha.**

| <b>Cronbach alpha coefficient value</b> | <b>Interpretation</b>               |
|---|-------------------------------------|
| > 0.70                                  | Acceptable                          |
| 0.60-0.70                               | Reportable and suspected acceptable |
| <0.60                                   | Suspected unacceptable              |

### Statistical and practical significance

An analysis is made to determine the effect of demographical variables on perceptions measured by the questionnaire. However, quantitative tests need to be performed in order to verify whether any observed influence of demographical variables is significant enough to be reportable.

A test of statistical significance is firstly performed. The probability that the obtained difference in means (between the perceptions of two different demographical groups) could be obtained whilst the hypothesis that there is in fact no difference between the means still holds true, is calculated using a paired t-test. Consequently, a small p-value indicates a low probability of equal means and is therefore regarded to indicate significance. For the purpose of this study, a p-value lower than 0.05 is held to indicate **statistical significance**.

It has been shown (Ellis & Steyn, 2003:51) that the paired t-test to determine statistical significance is influenced by sample size, automatically yielding a smaller value as sample size increases. Therefore, a test of practical significance is also applied to determine a d-value, denoting an effect which is unaffected by sample size. The effect sizes (d-values) which will be held to signify **practical significance** are presented in Table 5.3.

**Table 5.3: Thresholds held in application of effect size tests.**

| <b>d-value</b>   | <b>Interpretation</b>                 |
|------------------|---------------------------------------|
| <b>&gt; 0.80</b> | Large effect: Practically significant |
| <b>0.50-0.80</b> | Medium effect                         |
| <b>0.20-0.80</b> | Small effect                          |

### **5.3 Demographical information**

Demographical information was captured in section C of the questionnaire and is presented in this section. The demographical profile of the overall target population was analysed from ArcelorMittal's human resource database and presented in Annexure B. Where available, the target population's demographical profile was compared to demographical data of respondents in the following section.

### 5.3.1 Gender of participants

Participants indicated their gender by selecting a block termed “Male” or “Female” in section C of the questionnaire. The results are presented in Table 5.4.

**Table 5.4: Gender distribution of respondents**

| <b>Gender</b> | <b>Number of responses</b> | <b>% of responses</b> |
|---------------|----------------------------|-----------------------|
| Male          | 170                        | 94.44                 |
| Female        | 10                         | 5.56                  |
| Total         | 180                        | 100                   |

From Table 5.4, it can be seen that the majority (94.44%) of respondents were male, which compares to demographical profile of the target group presented in Annexure B (96.92% male).

### 5.3.2 Age of participants

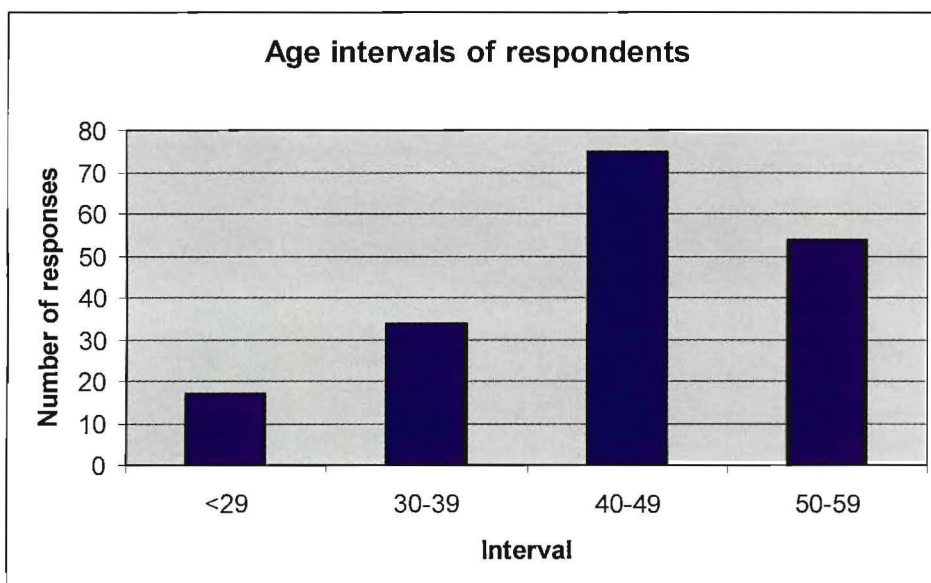
Participants selected an appropriate age interval from section C of the questionnaire. The results are presented in Table 5.5.

**Table 5.5: Age distribution of respondents**

| <b>Age [years]</b> | <b>Number of responses</b> | <b>% of responses</b> |
|--------------------|----------------------------|-----------------------|
| 29 or younger      | 17                         | 9.44                  |
| 30-39              | 34                         | 18.89                 |
| 40-49              | 75                         | 41.67                 |
| 50-59              | 54                         | 30.00                 |
| Total              | 180                        | 100                   |

From Table 5.5, it can be seen that 41.67% of respondents were in the age group 40-49 years, which represents the largest age group of the sample. The second largest age group is 50-59 years which is populated by 30% of the sample, indicating that a total of 71.67% of those sampled were of an age of 40 years or older. A response was allowed for an employee being 60 years or older, but it was not utilised by any respondent. Figure 5.1 provides a graphical representation of the age distribution of respondents, thus demonstrating that the distribution appears to be left-skewed.

**Figure 5.1: Age interval distribution of respondents**



### 5.3.3 Race of participants

Four options which are in accordance with the standard South African racial classification terms were presented in section C. The results are presented in Table 5.6.

**Table 5.6: Race distribution of respondents**

| <b>Race</b>                 | <b>Number of responses</b> | <b>% of responses</b> |
|-----------------------------|----------------------------|-----------------------|
| <b>Black</b>                | 20                         | 11.11                 |
| <b>White</b>                | 157                        | 87.22                 |
| <b>Indian</b>               | 1                          | 0.56                  |
| <b>Coloured</b>             | 0                          | 0                     |
| <b><i>Not indicated</i></b> | 2                          | 1.11                  |
| <b>Total</b>                | 180                        | 100                   |

From Table 5.6, it can be seen that 87.22% of respondents were White, which compares to 84.9% of persons in the target group being White. Black respondents comprised 11.11% of responses whilst making up 12.6% of the target group. A total of 1.11% of respondents declined to indicate their race.

#### **5.3.4 Highest academic qualification of participants**

Participants were presented with six options to choose from in terms of qualification level in section C. The results are presented in Table 5.7.

**Table 5.7: Highest academic qualification of respondents**

| <b>Qualification level</b> | <b>Number of responses</b> | <b>% of responses</b> |
|----------------------------|----------------------------|-----------------------|
| Lower than Grade 12        | 2                          | 1.11                  |
| Grade 12                   | 34                         | 18.89                 |
| Certificate                | 23                         | 12.78                 |
| Diploma                    | 90                         | 50.00                 |
| Degree                     | 16                         | 8.89                  |
| Post graduate              | 10                         | 5.56                  |
| <i>Not indicated</i>       | 5                          | 2.78                  |
| <b>Total</b>               | <b>180</b>                 | <b>100</b>            |

Table 5.7 indicates that the largest group of respondents (50%) is represented by persons holding a tertiary diploma. If diplomas, degrees and postgraduate studies are grouped together, then 64.45% of respondents have attained a tertiary qualification. A total of 2.78% of respondents did not indicate their highest academic qualification.

### **5.3.5 Job grading of participants**

Job grading was expressed as applied in ArcelorMittal. In this context, an earlier alphabet-denomination generally indicates a grading which is higher in remuneration and responsibilities (viz. a B-grading is higher than a G-grading). The pertinent bands spanned by the target population were presented as options and the results are presented in Table 5.8.



**Table 5.8: Job grading distribution of respondents**

| <b>Job grading</b>          | <b>Number of responses</b> | <b>% of responses</b> |
|-----------------------------|----------------------------|-----------------------|
| <b>G</b>                    | 116                        | 64.44                 |
| <b>F</b>                    | 33                         | 18.33                 |
| <b>E</b>                    | 21                         | 11.67                 |
| <b>D</b>                    | 0                          | 0                     |
| <b><i>Not indicated</i></b> | 10                         | 5.56                  |
| <b>Total</b>                | 180                        | 100                   |

From Table 5.8, it can be seen that 64.44% of respondents were functioning in a G-role position, which compares to 67.38% of persons in the target group being in G-role positions. Increasing job grading (i.e. earlier alphabet denominators) correlated to a decrease in number of responses, with no responses received from employees functioning in D roles or upwards. A total of 5.56% of respondents did not indicate their grading.

### **5.3.6 Job category of participants**

Categories were determined by the main job responsibilities found in the target group. On the questionnaire the selection “Support” was defined as being comprised of human resources, safety and health, administrative and stock control. “Specialist” was defined to encompass all engineering and technical staff. The results are presented in Table 5.9.

**Table 5.9: Job category of respondents**

| <b>Job category</b>  | <b>Number of responses</b> | <b>% of responses</b> |
|----------------------|----------------------------|-----------------------|
| Manager              | 17                         | 9.44                  |
| Superintendent       | 56                         | 31.11                 |
| Specialist           | 98                         | 54.44                 |
| Support              | 2                          | 1.11                  |
| Other                | 3                          | 1.67                  |
| <i>Not indicated</i> | 4                          | 2.22                  |
| <b>Total</b>         | <b>180</b>                 | <b>100</b>            |

Table 5.9 shows that the largest group of respondents (54.44%) functions in a specialist (engineering or technical) capacity. The second largest group (31.11%) comprises first-line supervisors. Managers make up 9.44% of respondents with other functions as well as missing responses each accounting for fewer than 3% of respondents.

### **5.3.7 Functional department of participants**

The Rolling and Engineering departments were subdivided along hierarchical and managerial lines and respondents indicated the area in which they function. The results are presented in Table 5.10.

**Table 5.10: Functional department of respondents**

| <b>Functional area</b>          | <b>Number of responses</b> | <b>% of responses</b> |
|---------------------------------|----------------------------|-----------------------|
| Cold North: Production          | 6                          | 3.33                  |
| Cold South: Production          | 11                         | 6.11                  |
| Cold North & South: Maintenance | 52                         | 28.89                 |
| Rolling: Business processes     | 2                          | 1.11                  |
| Engineering: Projects           | 25                         | 13.89                 |
| Hot Rolling: Production         | 18                         | 10.00                 |
| Hot Rolling: Maintenance        | 10                         | 5.56                  |
| Plate Mill: Production          | 8                          | 4.44                  |
| Plate Mill: Maintenance         | 0                          | 0                     |
| Engineering: Infrastructure     | 48                         | 26.67                 |
| <b>Total</b>                    | <b>180</b>                 | <b>100</b>            |

Table 5.10 shows that the majority of responses came from the maintenance area of Cold Rolling (28.89%), with the Engineering department's infrastructure division generating the second largest number of responses (26.67%).

## 5.4 Measuring the climate of corporate entrepreneurship

In section 4.3, 13 constructs measuring an entrepreneurial climate were described. In the questionnaire, each of the identified constructs was tested by means of five evenly dispersed statements attesting to the presence of the construct. Respondents indicated agreement on a Likert scale ranging from “1” (strongly disagree) to “5” (strongly agree).

In total, 65 questions were posed in section A to test for the presence of the 13 identified constructs.

### 5.4.1 Reliability of the measurement instrument using the Cronbach Alpha coefficient

A Cronbach alpha coefficient was calculated for every construct in section A measuring perceptions regarding a climate of corporate entrepreneurship. The results are presented in Table 5.11, in order of highest to lowest alpha coefficient yielded.

**Table 5.11: Cronbach alpha coefficient for Section A constructs**

| <b>Construct</b>            | <b>Mean</b> | <b>S</b> | <b>Cronbach alpha</b> |
|-----------------------------|-------------|----------|-----------------------|
| Strong customer orientation | 3.539       | 0.680    | 0.830                 |
| Appropriate rewards         | 2.643       | 0.788    | 0.790                 |
| Support for innovation      | 3.138       | 0.734    | 0.785                 |
| Sponsors for project        | 3.077       | 0.687    | 0.772                 |
| Strategic alignment         | 3.459       | 0.715    | 0.772                 |
| Cross-functional learning   | 3.232       | 0.747    | 0.772                 |
| Empowered teams             | 3.286       | 0.655    | 0.767                 |
| Resources available         | 2.714       | 0.714    | 0.758                 |
| Entrepreneurial leadership  | 3.362       | 0.694    | 0.741                 |

|                                    |       |       |       |
|------------------------------------|-------|-------|-------|
| <b>Management support</b>          | 3.118 | 0.616 | 0.706 |
| <b>Flat structure</b>              | 3.180 | 0.664 | 0.673 |
| <b>Tolerance of ambiguity</b>      | 3.043 | 0.608 | 0.658 |
| <b>Discretionary time and work</b> | 3.316 | 0.666 | 0.652 |

From Table 5.11, it can be seen that a total of 10 constructs yielded Cronbach alpha coefficient values higher than 0.70, which leads to an unqualified declaration that the measurement of these constructs is reliable (see discussion in section 5.2.4). Three constructs yielded alpha values of lower than 0.70, recording values of 0.673 (Flat organisational structure and effective communication), 0.658 (Tolerance of ambiguity in outcomes) and 0.652 (Discretionary time and work) respectively. However, in line with the argument presented under “Reliability and effect size testing methods” (above), the measurement of these constructs are deemed to be acceptably reliable.

#### **5.4.2 Results of a climate of corporate entrepreneurship**

Perceptions regarding the presence of constructs of an entrepreneurial climate were tested in section A of the questionnaire. The results thereof are presented in Table 5.12, in descending order of means attained.

**Table 5.12: Results of constructs measuring a climate of corporate entrepreneurship**

| <b>Construct</b>            | <b>N</b>   | <b>Mean</b>  | <b>S</b>     |
|-----------------------------|------------|--------------|--------------|
| Strong customer orientation | 180        | 3.539        | 0.680        |
| Strategic alignment         | 180        | 3.459        | 0.715        |
| Entrepreneurial leadership  | 180        | 3.362        | 0.694        |
| Discretionary time and work | 180        | 3.316        | 0.666        |
| Empowered teams             | 180        | 3.286        | 0.655        |
| Cross-functional learning   | 180        | 3.232        | 0.747        |
| Flat structure              | 180        | 3.180        | 0.664        |
| Support for innovation      | 180        | 3.138        | 0.734        |
| Management support          | 180        | 3.118        | 0.616        |
| Sponsors for project        | 180        | 3.077        | 0.687        |
| Tolerance of ambiguity      | 180        | 3.043        | 0.608        |
| Resources available         | 180        | 2.714        | 0.714        |
| Appropriate rewards         | 180        | 2.643        | 0.788        |
| <b>TOTAL</b>                | <b>180</b> | <b>3.162</b> | <b>0.550</b> |

Table 5.12 indicates that an average score of 3.162 was recorded when considering all 13 constructs, with an average standard deviation of 0.550 being observed.

The constructs which scored the highest (strongest agreement to the presence thereof in ArcelorMittal) are **Strong customer orientation** ( $\bar{x} = 3.539$ ), **Strategic alignment and roll-out** ( $\bar{x} = 3.459$ ) and **Visionary entrepreneurial leadership** ( $\bar{x} = 3.362$ ).

Lowest agreement was found with statements indicating the presence of **Rewards and incentives for intrapreneurial behaviour** ( $\bar{x} = 2.643$ ), **Resource availability and accessibility** ( $\bar{x} = 2.714$ ) and **Tolerance of ambiguity in outcomes** ( $\bar{x} = 3.043$ ).

### 5.4.3 Relationship between demographical variables and entrepreneurial climate constructs

Demographical variable: Age group

Respondents were divided into two age groups. One group consisted of respondents younger than 40 years of age with the balance resorting to the alternative group.

**Table 5.13: Relationship between age group and constructs of a climate of corporate entrepreneurship**

| <b>Construct</b>                   | <b>Age group</b> | <b>n</b> | <b><math>\bar{x}</math></b> | <b>S</b> | <b>p</b> | <b>d</b> |
|------------------------------------|------------------|----------|-----------------------------|----------|----------|----------|
| <b>Entrepreneurial leadership</b>  | Under 40         | 51       | 3.39                        | 0.79     | 0.703    | 0.06     |
|                                    | Over 40          | 129      | 3.35                        | 0.65     |          |          |
| <b>Management support</b>          | Under 40         | 51       | 3.16                        | 0.64     | 0.545    | 0.10     |
|                                    | Over 40          | 129      | 3.10                        | 0.61     |          |          |
| <b>Sponsors for projects</b>       | Under 40         | 51       | 3.12                        | 0.77     | 0.616    | 0.07     |
|                                    | Over 40          | 129      | 3.06                        | 0.65     |          |          |
| <b>Tolerance of ambiguity</b>      | Under 40         | 51       | 3.10                        | 0.64     | 0.449    | 0.12     |
|                                    | Over 40          | 129      | 3.02                        | 0.60     |          |          |
| <b>Support for innovation</b>      | Under 40         | 51       | 3.17                        | 0.88     | 0.722    | 0.05     |
|                                    | Over 40          | 129      | 3.13                        | 0.67     |          |          |
| <b>Appropriate rewards</b>         | Under 40         | 51       | 2.75                        | 0.89     | 0.276    | 0.16     |
|                                    | Over 40          | 129      | 2.60                        | 0.74     |          |          |
| <b>Strategic alignment</b>         | Under 40         | 51       | 3.41                        | 0.84     | 0.544    | 0.09     |
|                                    | Over 40          | 129      | 3.48                        | 0.66     |          |          |
| <b>Discretionary time and work</b> | Under 40         | 51       | 3.31                        | 0.67     | 0.920    | 0.02     |
|                                    | Over 40          | 129      | 3.32                        | 0.66     |          |          |
| <b>Empowered teams</b>             | Under 40         | 51       | 3.22                        | 0.72     | 0.397    | 0.13     |
|                                    | Over 40          | 129      | 3.31                        | 0.63     |          |          |
| <b>Resources available</b>         | Under 40         | 51       | 2.77                        | 0.79     | 0.487    | 0.10     |
|                                    | Over 40          | 129      | 2.69                        | 0.68     |          |          |
| <b>Cross-functional learning</b>   | Under 40         | 51       | 3.35                        | 0.83     | 0.203    | 0.19     |
|                                    | Over 40          | 129      | 3.19                        | 0.71     |          |          |
| <b>Strong customer orientation</b> | Under 40         | 51       | 3.47                        | 0.80     | 0.426    | 0.11     |
|                                    | Over 40          | 129      | 3.56                        | 0.63     |          |          |
| <b>Flat structure</b>              | Under 40         | 51       | 3.13                        | 0.71     | 0.522    | 0.10     |
|                                    | Over 40          | 129      | 3.20                        | 0.65     |          |          |



Table 5.13 indicates the statistical and practical significance of the influence of age group of the study group on perceptions regarding entrepreneurial constructs. The following was found:

- **Statistical significance:** No p-values smaller than 0.05 were exhibited and thus no statistically significant correlation between the age group of respondents and any construct could be shown.
- **Practical significance:** Similarly, no d-values were found to exceed 0.20 (the lower threshold for noteworthiness) and therefore it could be stated that age group has a negligible effect on the rating of any construct tested in section A.

Demographical variable: Race

The influence of race on the perceptions of a climate of corporate entrepreneurship was examined. Due to the low prevalence of Indian and Coloured respondents, all non-white respondents were grouped as "Black".

**Table 5.14: Relationship between race and constructs of a climate of corporate entrepreneurship**

| <b>Construct</b>                   | <b>Race</b> | <b>n</b> | <b><math>\bar{x}</math></b> | <b>S</b> | <b>p</b> | <b>d</b> |
|------------------------------------|-------------|----------|-----------------------------|----------|----------|----------|
| <b>Entrepreneurial leadership</b>  | White       | 157      | 3.31                        | 0.69     | 0.004    | 0.68     |
|                                    | Black       | 21       | 3.77                        | 0.66     |          |          |
| <b>Management support</b>          | White       | 157      | 3.10                        | 0.62     | 0.296    | 0.24     |
|                                    | Black       | 21       | 3.25                        | 0.57     |          |          |
| <b>Sponsors for projects</b>       | White       | 157      | 3.02                        | 0.68     | 0.005    | 0.65     |
|                                    | Black       | 21       | 3.47                        | 0.63     |          |          |
| <b>Tolerance of ambiguity</b>      | White       | 157      | 2.99                        | 0.61     | 0.001    | 0.74     |
|                                    | Black       | 21       | 3.45                        | 0.39     |          |          |
| <b>Support for innovation</b>      | White       | 157      | 3.09                        | 0.71     | 0.020    | 0.45     |
|                                    | Black       | 21       | 3.49                        | 0.88     |          |          |
| <b>Appropriate rewards</b>         | White       | 157      | 2.57                        | 0.76     | 0.001    | 0.68     |
|                                    | Black       | 21       | 3.16                        | 0.87     |          |          |
| <b>Strategic alignment</b>         | White       | 157      | 3.41                        | 0.72     | 0.007    | 0.63     |
|                                    | Black       | 21       | 3.86                        | 0.61     |          |          |
| <b>Discretionary time and work</b> | White       | 157      | 3.29                        | 0.67     | 0.157    | 0.33     |
|                                    | Black       | 21       | 3.51                        | 0.68     |          |          |
| <b>Empowered teams</b>             | White       | 157      | 3.27                        | 0.67     | 0.331    | 0.22     |
|                                    | Black       | 21       | 3.42                        | 0.54     |          |          |
| <b>Resources available</b>         | White       | 157      | 2.65                        | 0.70     | 0.002    | 0.73     |
|                                    | Black       | 21       | 3.16                        | 0.67     |          |          |
| <b>Cross-functional learning</b>   | White       | 157      | 3.19                        | 0.74     | 0.031    | 0.48     |
|                                    | Black       | 21       | 3.56                        | 0.78     |          |          |
| <b>Strong customer orientation</b> | White       | 157      | 3.49                        | 0.67     | 0.005    | 0.64     |
|                                    | Black       | 21       | 3.93                        | 0.70     |          |          |
| <b>Flat structure</b>              | White       | 157      | 3.15                        | 0.67     | 0.062    | 0.43     |

Table 5.14 presents the statistical and practical significance of the influence of race of the study group on perceptions of a climate of corporate entrepreneurship. The following was found:

- **Statistical significance:** Perceptions on eight constructs of an entrepreneurial climate exhibited p-values of lower than 0.05 and were thus significantly influenced by the race of respondents. The constructs which were most notably influenced were **Tolerance of ambiguity** ( $p = 0.001$ ), **Appropriate rewards** ( $p =$

0.001), **Availability of resources** ( $p = 0.002$ ) and **Entrepreneurial leadership** ( $p = 0.004$ ).

- **Practical significance:** None of the constructs'  $d$ -values exceeded 0.80, therefore indicating that no large and practically significant effect was demonstrated. However, a medium or visible relationship between race and **Tolerance of ambiguity** ( $d = 0.74$ ), **Resource availability** ( $d = 0.73$ ), **Appropriate rewards** ( $d = 0.68$ ) and **Entrepreneurial leadership** ( $d = 0.68$ ) was observed.

Black respondents showed a statistically and visibly **higher rate** of agreement with statements indicating the presence of tolerance of ambiguity, appropriate rewards, availability of resources and strong entrepreneurial leadership in the company, when compared to White respondents.

#### Demographical variable: Job category

Job category was grouped into functions with managerial aspects (manager and superintendent) and non-managerial functions (specialists, support and other staff). The results are presented in Table 5.15.

**Table 5.15: Relationship between job category and constructs of a climate of corporate entrepreneurship**

| <b>Construct</b>                   | <b>Job category</b> | <b>n</b> | <b><math>\bar{x}</math></b> | <b>S</b> | <b>p</b> | <b>d</b> |
|------------------------------------|---------------------|----------|-----------------------------|----------|----------|----------|
| <b>Entrepreneurial leadership</b>  | Management          | 73       | 3.46                        | 0.58     | 0.107    | 0.22     |
|                                    | Specialist          | 103      | 3.29                        | 0.77     |          |          |
| <b>Management support</b>          | Management          | 73       | 3.12                        | 0.56     | 0.903    | 0.02     |
|                                    | Specialist          | 103      | 3.11                        | 0.67     |          |          |
| <b>Sponsors for projects</b>       | Management          | 73       | 3.14                        | 0.65     | 0.235    | 0.18     |
|                                    | Specialist          | 103      | 3.02                        | 0.71     |          |          |
| <b>Tolerance of ambiguity</b>      | Management          | 73       | 3.12                        | 0.51     | 0.158    | 0.20     |
|                                    | Specialist          | 103      | 2.99                        | 0.66     |          |          |
| <b>Support for innovation</b>      | Management          | 73       | 3.20                        | 0.68     | 0.290    | 0.15     |
|                                    | Specialist          | 103      | 3.08                        | 0.77     |          |          |
| <b>Appropriate rewards</b>         | Management          | 73       | 2.63                        | 0.77     | 0.863    | 0.03     |
|                                    | Specialist          | 103      | 2.65                        | 0.81     |          |          |
| <b>Strategic alignment</b>         | Management          | 73       | 3.59                        | 0.71     | 0.032    | 0.33     |
|                                    | Specialist          | 103      | 3.36                        | 0.72     |          |          |
| <b>Discretionary time and work</b> | Management          | 73       | 3.29                        | 0.64     | 0.863    | 0.03     |
|                                    | Specialist          | 103      | 3.31                        | 0.68     |          |          |
| <b>Empowered teams</b>             | Management          | 73       | 3.30                        | 0.59     | 0.713    | 0.05     |
|                                    | Specialist          | 103      | 3.26                        | 0.71     |          |          |
| <b>Resources available</b>         | Management          | 73       | 2.75                        | 0.68     | 0.526    | 0.09     |
|                                    | Specialist          | 103      | 2.68                        | 0.74     |          |          |
| <b>Cross-functional learning</b>   | Management          | 73       | 3.25                        | 0.69     | 0.676    | 0.06     |
|                                    | Specialist          | 103      | 3.20                        | 0.79     |          |          |
| <b>Strong customer orientation</b> | Management          | 73       | 3.65                        | 0.64     | 0.055    | 0.28     |
|                                    | Specialist          | 103      | 3.45                        | 0.70     |          |          |
| <b>Flat structure</b>              | Management          | 73       | 3.25                        | 0.61     | 0.229    | 0.18     |
|                                    | Specialist          | 103      | 3.12                        | 0.70     |          |          |

Table 5.15 presents the statistical and practical significance of the influence of job category on perceptions pertaining to entrepreneurial constructs. The following was found:

- **Statistical significance:** Perceptions regarding **Strategic alignment** ( $p = 0.032$ ) were shown to be influenced by job category in a statistically significant way.

- **Practical significance:** Perceptions regarding **Strategic alignment** ( $d = 0.33$ ) and **Customer orientation** ( $d = 0.28$ ) exhibited a small ( $d > 0.20$ ) relationship to the job category of respondents.

Respondents functioning in a managerial or supervisory capacity showed a statistically **higher rate** of agreement with the presence of strategic alignment. Job category exhibited a small effect on agreement with the presence of a strategic alignment and strong customer orientation.

Demographical variable: Highest academic qualification

Qualification level was grouped into persons having attained a degree, diploma or post-graduate qualification being regarded as "Tertiary", with others falling into the group "Non-tertiary".

**Table 5.16: Relationship between highest academic qualification and constructs of a climate of corporate entrepreneurship**

| <b>Construct</b>                   | <b>Qualification level</b> | <b>n</b> | <b><math>\bar{x}</math></b> | <b>S</b> | <b>p</b> | <b>d</b> |
|------------------------------------|----------------------------|----------|-----------------------------|----------|----------|----------|
| <b>Entrepreneurial leadership</b>  | Non tertiary               | 59       | 3.49                        | 0.59     | 0.085    | 0.26     |
|                                    | Tertiary                   | 116      | 3.30                        | 0.74     |          |          |
| <b>Management support</b>          | Non tertiary               | 59       | 3.16                        | 0.52     | 0.602    | 0.08     |
|                                    | Tertiary                   | 116      | 3.11                        | 0.66     |          |          |
| <b>Sponsors for projects</b>       | Non tertiary               | 59       | 3.19                        | 0.61     | 0.111    | 0.24     |
|                                    | Tertiary                   | 116      | 3.01                        | 0.73     |          |          |
| <b>Tolerance of ambiguity</b>      | Non tertiary               | 59       | 3.19                        | 0.48     | 0.025    | 0.33     |
|                                    | Tertiary                   | 116      | 2.97                        | 0.66     |          |          |
| <b>Support for innovation</b>      | Non tertiary               | 59       | 3.27                        | 0.70     | 0.103    | 0.26     |
|                                    | Tertiary                   | 116      | 3.07                        | 0.75     |          |          |
| <b>Appropriate rewards</b>         | Non tertiary               | 59       | 2.60                        | 0.70     | 0.553    | 0.09     |
|                                    | Tertiary                   | 116      | 2.67                        | 0.83     |          |          |
| <b>Strategic alignment</b>         | Non tertiary               | 59       | 3.67                        | 0.65     | 0.006    | 0.43     |
|                                    | Tertiary                   | 116      | 3.36                        | 0.72     |          |          |
| <b>Discretionary time and work</b> | Non tertiary               | 59       | 3.35                        | 0.64     | 0.653    | 0.07     |
|                                    | Tertiary                   | 116      | 3.30                        | 0.67     |          |          |
| <b>Empowered teams</b>             | Non tertiary               | 59       | 3.21                        | 0.54     | 0.190    | 0.20     |
|                                    | Tertiary                   | 116      | 3.34                        | 0.68     |          |          |
| <b>Resources available</b>         | Non tertiary               | 59       | 2.80                        | 0.62     | 0.273    | 0.17     |
|                                    | Tertiary                   | 116      | 2.67                        | 0.75     |          |          |
| <b>Cross-functional learning</b>   | Non tertiary               | 59       | 3.26                        | 0.64     | 0.685    | 0.06     |
|                                    | Tertiary                   | 116      | 3.22                        | 0.80     |          |          |
| <b>Strong customer orientation</b> | Non tertiary               | 59       | 3.73                        | 0.63     | 0.010    | 0.41     |
|                                    | Tertiary                   | 116      | 3.44                        | 0.69     |          |          |
| <b>Flat structure</b>              | Non tertiary               | 59       | 3.29                        | 0.61     | 0.094    | 0.26     |
|                                    | Tertiary                   | 116      | 3.11                        | 0.69     |          |          |

Table 5.16 presents the statistical and practical significance of the influence of academic qualification on perceptions concerning entrepreneurial constructs. The following was found:

- **Statistical significance:** Perceptions regarding **Strategic alignment** ( $p = 0.006$ ), **Customer orientation** ( $p = 0.010$ ) and **Tolerance of ambiguity** ( $p =$

0.025) were shown to be influenced to a statistically significant extent by qualification level.

- **Practical significance:** Qualification level exerted a small ( $d > 0.20$ ) effect on perceptions regarding eight constructs of an entrepreneurial climate. Of these, most notable are **Strategic alignment** ( $d = 0.43$ ), **Customer orientation** ( $d = 0.41$ ) and **Tolerance of ambiguity** ( $d = 0.33$ ).

Respondents without a tertiary qualification showed a statistically **higher rate** of agreement with the presence of strategic alignment, strong customer orientation and tolerance of ambiguity in the company.

## **5.5 Perceived success of the organisation**

In section 4.4, five constructs of organisational success were described. In section B of the questionnaire, perceptions regarding the identified constructs were tested by means of 17 evenly dispersed statements attesting to the presence of the construct. Respondents indicated agreement on a Likert scale ranging from “1” (strongly disagree) to “5” (strongly agree). Furthermore, constructs pertaining to an ethical and value-based culture were added (see discussion in section 4.3.14) and 5 questions in section B tested perceptions regarding the presence thereof.

In total, 23 questions were posed in section B to test for the presence of the seven identified constructs.

### **5.5.1 Reliability of the measurement instrument using the Cronbach Alpha coefficient**

A Cronbach alpha coefficient was calculated for each construct in section B of the questionnaire. The results are presented in Table 5.17 in order of descending Cronbach alpha coefficients.

**Table 5.17: Cronbach alpha coefficient for Section B constructs**

| <b>Construct</b>                   | <b>Mean</b> | <b>S</b> | <b>Cronbach alpha</b> |
|------------------------------------|-------------|----------|-----------------------|
| <b>Customer and market success</b> | 3.634       | 0.546    | 0.738                 |
| <b>People development</b>          | 2.842       | 0.935    | 0.762                 |
| <b>Processes optimised</b>         | 3.451       | 0.617    | 0.420                 |
| <b>Sustainable success</b>         | 2.833       | 0.759    | 0.242                 |
| <b>Ethical culture</b>             | 3.209       | 0.576    | -0.197                |
| <b>Financial measures</b>          | 3.281       | 0.533    | -0.245                |
| <b>Value-based culture</b>         | 3.764       | 0.694    | -0.245                |
| <b>Total</b>                       | 3.297       | 0.479    |                       |

From Table 5.17, it can be seen that a total of 2 constructs had alpha values higher than 0.70, which leads to an unqualified declaration that the measurement of these constructs are reliable.

Five constructs had alpha values of lower than 0.70 and as a result four were discarded outright due to low ( $\alpha < 0.300$ ) Cronbach alpha coefficients. Process measures ( $\alpha = 0.420$ ) was considered in line with the argument presented under “Reliability and effect size testing methods” (above), but nonetheless rejected due to an unacceptable low internal consistency.



### 5.5.2 Results of perceived success of the organisation

Perceptions regarding the presence of constructs of organisational success were tested in section B. Constructs with low Cronbach alpha coefficients were purged from results and the remaining accepted constructs were used in subsequent calculations. The results are presented in Table 5.18.

**Table 5.18: Results of success constructs measured in Section B**

| <b>Construct</b>                   | <b>N</b>   | <b>Mean</b>  | <b>S</b>     |
|------------------------------------|------------|--------------|--------------|
| <b>Customer and market success</b> | 180        | 3.634        | 0.546        |
| <b>People development</b>          | 180        | 2.842        | 0.935        |
| <b>TOTAL</b>                       | <b>180</b> | <b>3.238</b> | <b>0.741</b> |

Table 5.18 indicates that an average score of 3.238 was applied by respondents when considering the two accepted measures of organisational performance, with an average standard deviation of 0.741 being observed.

The construct which scored the highest (strongest agreement to the presence thereof in ArcelorMittal) is **Customer and market success** ( $\bar{x} = 3.634$ ), with **People development** ( $\bar{x} = 2.842$ ) being regarded by respondents to be the worst-represented success factor.

### 5.5.3 Relationship between demographical variables and organisational performance constructs

#### Demographical variable: Age group

Respondents were divided into two age groups. One group consisted of respondents younger than 40 years of age with the balance resorting to the alternative group.

**Table 5.19: Relationship between age group and organisational performance constructs**

| <b>Construct</b>                   | <b>Age group</b> | <b>n</b> | <b><math>\bar{x}</math></b> | <b>S</b> | <b>p</b> | <b>d</b> |
|------------------------------------|------------------|----------|-----------------------------|----------|----------|----------|
| <b>Customer and market success</b> | Under 40         | 51       | 3.60                        | 0.58     | 0.550    | 0.09     |
|                                    | Over 40          | 129      | 3.65                        | 0.53     |          |          |
| <b>People development</b>          | Under 40         | 51       | 2.84                        | 1.10     | 0.989    | 0.00     |
|                                    | Over 40          | 129      | 2.84                        | 0.87     |          |          |

Table 5.19 indicates the statistical and practical significance of the influence of age group on perceptions of organisational performance. The following was found:

- **Statistical significance:** No p-values smaller than 0.05 were obtained and thus age group has no statistically significant influence on perceptions regarding organisational performance.
- **Practical significance:** All effect sizes of age group on perceptions regarding organisational performance were smaller than 0.20 and therefore age group has no effect on perceptions regarding organisational performance.

Demographical variable: Race group

The influence of race on perceptions of a climate of corporate entrepreneurship was examined. Due to the low prevalence of Indian and Coloured respondents, all non-white respondents were grouped as “Black”.

**Table 5.20: Relationship between race group and organisational performance constructs**

| <b>Construct</b>                   | <b>Race group</b> | <b>n</b> | <b><math>\bar{x}</math></b> | <b>S</b> | <b>p</b> | <b>d</b> |
|------------------------------------|-------------------|----------|-----------------------------|----------|----------|----------|
| <b>Customer and market success</b> | White             | 157      | 3.59                        | 0.55     | 0.012    | 0.58     |
|                                    | Black             | 21       | 3.91                        | 0.43     |          |          |
| <b>People development</b>          | White             | 157      | 2.77                        | 0.93     | 0.003    | 0.69     |
|                                    | Black             | 21       | 3.41                        | 0.80     |          |          |

Table 5.20 indicates the statistical and practical significance of the influence of race on perceptions pertaining to organisational performance. The following was found:

- **Statistical significance:** Perceptions pertaining to both **Customer and market success** ( $p = 0.012$ ) and **People development** ( $p = 0.003$ ) were shown to be statistically influenced to a significant degree by the race of respondents.
- **Practical significance:** The race of respondents showed a medium or visible effect on perceptions regarding the success of **People development** ( $d = 0.69$ ) and **Customer and market success** ( $d = 0.58$ ) in ArcelorMittal.

Black respondents showed a statistically and visibly **higher rate** of agreement with statements indicating the success of people development and customer orientation in the company.

Demographical variable: Job category

Job category was grouped into either functions with managerial aspects (manager and superintendent) or non-managerial functions (specialists, support and other staff).

**Table 5.21: Relationship between job category and organisational performance constructs**

| Construct                 | Job category | n   | $\bar{x}$ | S    | p     | d    |
|---------------------------|--------------|-----|-----------|------|-------|------|
| Customer & market success | Management   | 73  | 3.74      | 0.57 | 0.023 | 0.34 |
|                           | Specialist   | 103 | 3.55      | 0.52 |       |      |
| People development        | Management   | 73  | 2.98      | 0.88 | 0.086 | 0.25 |
|                           | Specialist   | 103 | 2.73      | 0.97 |       |      |

Table 5.21 indicates the statistical and practical significance of the influence of job category on perceptions of organisational performance. The following was found:

- **Statistical significance:** Perceptions regarding **Customer and market success** ( $p = 0.023$ ) are shown to be influenced to a statistically significant extent by the job category of respondents.

- **Practical significance:** Job category had a weak effect on perceptions regarding **Customer and market success** ( $d = 0.34$ ) and **People development** ( $d = 0.25$ ).

Respondents functioning in a managerial or supervisory capacity showed a statistically and practically **higher rate** of agreement with the presence of customer and market success, whilst exhibiting a practically higher rate of agreement with the presence of people development.

Demographical variable: Highest academic qualification

Qualification level was grouped into persons having attained a degree, diploma or post-graduate qualification being regarded as "Tertiary", with others falling into the group "Non-tertiary".

**Table 5.22: Relationship between highest academic qualification and organisational performance constructs**

| Construct                 | Qualification level | n   | $\bar{x}$ | S    | p     | d    |
|---------------------------|---------------------|-----|-----------|------|-------|------|
| Customer & market success | Non tertiary        | 59  | 3.75      | 0.45 | 0.030 | 0.33 |
|                           | Tertiary            | 116 | 3.56      | 0.58 |       |      |
| People development        | Non tertiary        | 59  | 3.03      | 0.86 | 0.039 | 0.32 |
|                           | Tertiary            | 116 | 2.72      | 0.97 |       |      |

Table 5.22 indicates the statistical and practical significance of the influence of qualification level of participants on perceptions held regarding organisational performance. The following was found:

- **Statistical significance:** Perceptions of both constructs, namely **Customer and market success** ( $p = 0.030$ ) and **People development** ( $p = 0.039$ ) are shown to be significantly influenced by the qualification level of respondents.
- **Practical significance:** A weak influence of qualification level is shown to interact with both constructs, with d-values between 0.32 and 0.33 being recorded.

Respondents without a tertiary qualification demonstrated a statistically and practically **higher rate** of agreement with the presence of a successful customer orientation and people development.

## 5.6 Summary

The presence of constructs of an entrepreneurial climate as well as perceived success of ArcelorMittal was tested by means of a questionnaire. A population of 325 people inside the Finishing units of ArcelorMittal was identified and hardcopy questionnaires were administered to all persons in the identified population. After processing of completed surveys, a total of 180 responses were presented for interpretation.

Demographical information indicates that the majority of respondents were white (87.22%), male (94.44%) and over 40 years of age (71.67%). Most respondents (57.22%) performed non-managerial specialist work and held a tertiary qualification (64.45%).

Reliability testing was done by calculating a Cronbach alpha coefficient for every construct. When deemed reliable, the mean and standard deviation for responses on every construct were calculated. Subsequently, tests of statistical and practical significance were employed to quantify the significance of observed influences by demographical variables on results.

All 13 constructs testing for the presence of an entrepreneurial climate were found to be acceptable based on their Cronbach alpha coefficients. It was found that constructs of Strong customer orientation ( $\bar{x} = 3.539$ ), Strategic alignment and roll-out ( $\bar{x} = 3.459$ ) and Visionary entrepreneurial leadership ( $\bar{x} = 3.362$ ) were rated highest by respondents. Rewards and incentives for intrapreneurial behaviour ( $\bar{x} = 2.643$ ), Resource availability and accessibility ( $\bar{x} = 2.714$ ) and Tolerance of ambiguity in outcomes ( $\bar{x} = 3.043$ ) were rated lowest. Various moderate to small effects of demographical variables on perceptions regarding constructs were found, with the most notable being Black respondents who indicated higher agreement with the presence of Tolerance of ambiguity in outcomes, Rewards and incentives for intrapreneurial behaviour, Resource availability and accessibility and Visionary entrepreneurial leadership.

Of an initial seven, five constructs testing for perceptions regarding corporate success were disregarded due to low alpha scores. Of the remaining two constructs, respondents rated Customer and market success the highest while People development was regarded worst. Demographical variables exhibited moderate to insignificant influences on perceptions of corporate success.

# CHAPTER 6

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## CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Introduction

The importance of corporate entrepreneurship has been demonstrated (Chapter 3) and the constructs which support climates of entrepreneurship have been explored (Chapter 4). Data pertaining to the perceived presence of constructs of an entrepreneurial climate as well as selected success factors of the company was analysed and presented in Chapter 5.

The purpose of this section is to interpret and draw conclusions from the data of the empirical study. Firstly, demographical data of the respondents is analysed and subsequently the measured perceptions regarding the constructs of an entrepreneurial climate are discussed. This is followed by an analysis of the effect of demographical variables on perceptions of an entrepreneurial climate. Subsequently, perceptions regarding corporate success and the influence of demographical variables thereupon are examined.

Based on the comprehensive literature review and the results of the empirical study, recommendations are forwarded on actions to improve the culture of corporate entrepreneurship in the Vanderbijlpark site of ArcelorMittal South Africa.

Lastly, adherence to the objectives of the study is determined and areas subject to further research are proposed.

### **6.2 Conclusions on perceptions regarding a climate of corporate entrepreneurship and success of the company**

Conclusions will be presented in accordance with the basic structure of the questionnaire. Only data, for which an acceptable Cronbach alpha coefficient was determined, will be considered (see 5.2.4 for discussion).

### **6.2.1 Demographical data**

The age distribution of respondents is left-skewed, with 71.67% being older than 40 years. Whilst this holds no direct implication for corporate entrepreneurship, it does raise cautionary tones because of the high age of the Finishing units' technical and managerial staff. The company does appear to be in the process to redress the situation, with the influx of young technical trainees and bursary holders causing only 66.0% of all employees on the entire site functioning in B to G roles to be older than 40 years. Thus, while the broad site has managed to allow younger trainees to meaningfully impinge on skilled technical jobs, this has not happened to the same extent in the Finishing units.

Most of the respondents were male (94.44%), compared to 96.92% of workers in the Finishing units being male and 92.53% of all workers on the Vanderbijlpark site. Whilst the uneven gender distribution is to be lamented, it is held to be unsurprising in light of the labour-intensive robust environment of a steel producing company.

Whites represented 87.22% of all respondents, which compares to 84.9% of persons in the Finishing units and 76.32% of all persons on site functioning in B to G role positions. Indian and Coloured employees are generally underrepresented on the site (a total of 4.0% when considered together) and thus the remainder of positions are largely made up of Black employees. The same argument can be followed as under the discussion of age, in that the entire site has made some inroads in promoting non-whites to function in B to G role positions but that the Finishing units are lagging behind.

A total of 64.44% of respondents functioned in the lowest grading which was included in the study population (G-role), with representation decreasing as job roles escalated. Specialists (which included engineering staff) comprised 54.44% of responses, followed by supervisors (31.11%). Most respondents (64.45%) completed tertiary education in the form of a diploma, degree or post-graduate qualification. Only 1.11% of respondents did not complete Grade 12.



Thus, the majority of respondents were skilled technical or managerial personnel applying long experience in addition to knowledge obtained through tertiary education. The sample group appears to be ageing and predominantly white males, with data from the broader site indicating that younger non-white personnel are infiltrating the B to G role positions which were being studied.

### **6.2.2 Climate of corporate entrepreneurship**

While it would be enticing to use the definitions assigned to each value on the Likert scale to make an assessment of whether the construct is acceptable or not (i.e. based on whether most respondents stated "I agree" or "I don't agree") the only basis from which an inference could be made would be to contrast comparative ratings achieved.

The respective top characteristics rated as 'strong' (i.e. respondents agreed with statements indicating the presence thereof) as well as 'weak' will be discussed.

#### Highest rated: Customer orientation

With an average rating of  $\bar{x} = 3.539$ , respondents are of the opinion that resources and innovations are aimed at customer satisfaction, that customer feedback is regularly obtained and that customers are in general regarded as important stakeholders. This is considered to bode well for the entrepreneurial climate of the company because customers are the reason for the company's existence and customer satisfaction is the only path to financial sustainability of an organization (Cummings & Worley, 2005:281).

It must be kept in mind that the other 12 constructs measure internal aspects with which respondents come in to contact on an almost daily basis. However, customer orientation might be seen as a no-feedback effort in which respondents might perceive their efforts to improve the service level experienced by customers, without receiving feedback whether it really does. Therefore, the results of this construct might indicate either a very strong customer focus or alternatively (blissful) ignorance regarding real perceptions of customers.

### Second-highest rated: Strategic alignment

Strategic alignment of efforts by employees is rated at  $\bar{x} = 3.459$ . This indicates that respondents feel that they are well informed and kept in the loop regarding strategy, that the vision of the company has been translated to departmental goals and that employees are guided by the company's strategy in their tasks.

A strong strategic alignment indicates receptiveness to a culture of intrapreneurship, because a well-formulated, communicated and accepted strategy is seen as the first step of implementation of corporate entrepreneurship (Pinchot & Pellman, 1999:25). The measurement instrument tested whether the company's current strategy was well communicated and accepted and not whether an intrapreneurial strategy was already entrenched. However, should the company choose to explore the corporate entrepreneurship route it is clear that its leadership will be adept at imparting the new strategy effectively.

### Third-highest rated: Entrepreneurial leadership

An average rating of  $\bar{x} = 3.459$  was reported, translating to respondents perceiving their leaders to take a long-term and opportunity-obsessed view of the organisation, whilst inspiring employees to act in the same way. An intrapreneurial climate would be invigorated through this style of leadership, because it leads to rousing employees at any level to vigorously endeavour to discover and pursue opportunities for growth (Cohen, 2004:16).

It is clear that entrepreneurial leadership is already perceived to be prevalent in the organisation, with employees being inspired by their leaders to explore any and every opportunity.

The questionnaire did not specify whether the opportunities which are continuously exploited, refer to growth prospects or rather to areas for improving the cost-effectiveness of an operation. In view of the aggressive and sustained cost-cutting exercises that the company underwent during the past two decades, it would be speculated that the latter premise holds true. However, it is held that this does not pose

any drawback: A work force of 'battle-hardened' cost cutters that is used to organisational change and never shy away from challenging the status quo, could be prime material for being led to redirect its focus onto recognising opportunities for innovation and growth of the company.

#### Other highly-rated constructs

The average score achieved for all the constructs was  $\bar{x} = 3.162$ . Constructs which were rated higher than average include availability of discretionary time and work ( $\bar{x} = 3.316$ ), working in empowered teams ( $\bar{x} = 3.286$ ), facilitation of cross-functional learning ( $\bar{x} = 3.232$ ) and presence of a flat structure with open communication ( $\bar{x} = 3.180$ ).

When comparing the results of the assessment of entrepreneurial climate constructs to the model of the constructs presented in Figure 4.1 ('Model for constructs of an entrepreneurial firm'), it can be seen that both "strategy and leadership-related factors" and "organisational, structural and operational factors" were generally rated favourably. However, factors related to direct management and support fared worse and were in poorly regarded in most instances (see discussion below).

#### Worst rated: Appropriate rewards.

With a rating of  $\bar{x} = 2.643$ , respondents indicated that criticism is emphasised rather than recognition, that job performance is not overtly indicative of rewards and that – broadly speaking – exceptional employees could not expect compensation for their efforts.

Caution should be exercised when interpreting the feedback on this construct. A study in the United States has shown that almost 40% of employees feel that there is no link at all between performance and pay (Cummings & Worley, 2005:382) and therefore a construct measuring satisfaction with rewards is unlikely to be highly rated in any but the most exceptional of organisations. At the same time, it should be kept in mind that rewards encompass both extrinsic (e.g. money or share options) and intrinsic (positive reinforcement and increase of self-worth) alike (Kreitner & Kinicki, 2007:282) and that the questionnaire was specifically broad in order to cover both types of rewards.

Coetsee (2002:35) recognises a psychological (in addition to an explicit) contract between employee and company, in which an employee expects to receive certain benefits and recognition for his efforts, even if these are not recognised in his written contract of employment. If this is not managed effectively (often by his direct supervisor), an employee will feel demotivated no matter how many figures the company presents to demonstrate that the employee is actually remunerated to an above-average level.

The fact that most respondents rated appropriate rewards as the lowest construct is in accordance with the research findings quoted above by Cummings and Worley (2005:382). It might therefore be dismissed as a naturally human sentiment to always feel underappreciated (especially in terms of monetary rewards). However, it could also be viewed that most employees appear to feel that ArcelorMittal is not a company that values excellence and therefore than an outstanding employee should either strive to achieve the bare minimum, or seek employment at a company that does merit distinction. In either case, a culture of corporate entrepreneurship might be entrenched with difficulty as long as the basic link between effort and reward does not appear to be internalised by employees.

#### Second-worst rated: Resource availability

By being awarded an average score of  $\bar{x} = 2.714$ , respondents expressed the view that getting money or other resources to boost an innovative project off the ground is both complicated and difficult.

Resources are essential to corporate entrepreneurs wishing to implement innovative projects (Antoncic & Hisrich, 2004:526). Nevertheless, a natural scarcity of resources also tests the innovative ability of entrepreneurs (Thompson *et al.*, 2007:48). On the whole, it is held that the current lack of access to resources experienced could easily be rectified once a strategy of corporate entrepreneurship is implemented provided that it is recognised as one of the pillars of such a culture. More serious would be the eventuality that the shortage of resources is not as much caused by frugality but rather by a lack of trust in the ability of employees of the company to manage resources wisely.

### Third-worst rated: Tolerance of ambiguity

An average rating of  $\bar{x} = 3.043$  was assigned to this construct, indicating that the concept of taking calculated risks is not really recognised or valued, with the corollary being that persons making mistakes are not easily forgiven. Success based on innovation is invariably preceded by trial and (notably) error (Kuratko & Welsch, 2004:42) and therefore a culture of blaming people for mistakes destroys the potential for innovation (Hisrich & Peters, 2002:50).

The outcome of this construct is in line with the findings of an internal survey of the corporate culture (see discussion under 2.5.1 above). It is worrying that employees perceive that they always have to toe the line set by management, or face punishment.

### Other poorly-rated constructs

Besides the abovementioned three constructs, the list of constructs which were rated lower than the average of  $\bar{x} = 3.162$  includes sponsorship received for projects ( $\bar{x} = 3.072$ ), general support received from management ( $\bar{x} = 3.118$ ) and support for innovation ( $\bar{x} = 3.138$ ).

### Summary of constructs of an entrepreneurial climate

Factors pertaining to the strategy and upper leadership of the company were rated well, as well as most constructs which relate to the structural way in which the enterprise is run on a day-to-day base. Therefore, should an entrepreneurial climate be established it could be stated with confidence that both the leadership and the organisational foundations of the company would be in fine fettle to support the new direction.

The way in which people are directly managed exhibits some shortcomings which need to be addressed before intrapreneurship can be fostered. People perceive their managers to be bountiful in punishment, but decidedly frugal on praise, rewards, forgiveness, support and resource allocation. Some researchers (Heinonen & Toivonen, 2007:168) believe that middle management is actually the most important group in the company to drive corporate entrepreneurship, indicating that ArcelorMittal would have to

achieve a revolution in the way its middle management interacts with subordinates before corporate entrepreneurship can get a foothold in the company.

### **6.2.3 Perceived success of the organisation**

Initially, five factors indicative of organisational success were tested in order to serve as dependent variables being influenced by a climate of corporate entrepreneurship. Of these, three factors had to be discarded due to low Cronbach alpha coefficients (see discussion under 5.5.1). Furthermore, tests for additional constructs (viz. ethical and value-based climate) which were added after not being recognised by the originators of the questionnaire (Jordaan, 2008; Oosthuizen, 2006) also failed to yield acceptable coefficients of Cronbach's alpha and were dispensed with. The results of the remaining two constructs will be discussed in this section.

#### Highest rated: Customer and market success

An average score of  $\bar{x} = 3.634$  was awarded to this construct, indicating that respondents feel that the company has a high customer retention rate and that customers are well-served. This is congruent with the result of the entrepreneurial climate section, with respondents perceiving that a strong (internal) customer focus translates into external success comprising satisfied customers and secure markets.

#### Lowest rating: People development

The least agreement was found with this construct ( $\bar{x} = 2.842$ ), translating to respondents not experiencing the feeling of being treated as the most valuable asset of the company, whilst indicating a low level of commitment and a decline in morale during recent times.

A lowering in morale could in part be attributed to the unavoidable influence of prevailing business conditions during the "worst economic crisis of the past 70 years" (BBC, 2009). However, distinct parallels could be drawn between low levels of commitment exhibited amongst employees (viewed in this construct as a dependent variable) and the demonstrated shortcomings in the way middle management of the company interacts with subordinates (viewed supra as independent variables).

### Summary of perceived success of the organisation

Customer and market success as a construct was highly regarded while people development was rated poorly. Whilst it is not within the ambit of this study to develop a quantitative relationship between the independent variables of intrapreneurial climate constructs and the dependent variables of organisational success, a qualitative relationship was demonstrated to exist to some extent between the dependent and independent variables. A strong internal customer focus was recognised in the climate survey, which corresponds with perceptions of high levels of actual customer satisfaction. Similarly, several inadequacies pertaining to the way in which middle management interacts with underlings can be correlated with perceptions of low morale and commitment being exhibited among employees.

#### **6.2.4 Relationship between demographical variables and various constructs**

The age of respondents had no demonstrable effect on either perceptions regarding the presence of any constructs of an entrepreneurial climate or perceptions regarding organisational success.

Race exerted a moderate to large influence on a significant number of constructs of an entrepreneurial climate, as well as on some constructs of organisational success. African, Indian and Coloured respondents (grouped for comparison purposes as "Black") generally tended to rate constructs of an entrepreneurial climate higher. Specifically, significantly higher agreement was found with constructs relating to the presence of tolerance of ambiguity, appropriate rewards, availability of resources and strong entrepreneurial leadership in the company. Similarly, the presence of people development as a manifested construct of organisational success was recognised more readily by Black than White respondents. These observations might in part be attributed to the success of ArcelorMittal's Employment Equity (EE) initiative, which might result in Black respondents experiencing more mentorship and guidance, whilst being rewarded for good work and being allowed some leeway to experiment and make mistakes in order to develop. It is important to draw parallels between the aims of an effective EE program and those of corporate entrepreneurship, in order to demonstrate that both

initiatives can to some extent be championed in the same manner and to the same ends.

Comparisons outlining the effect of job category grouped positions with managerial or supervisory aspects together and compared those with specialist positions' responses. Respondents in managerial positions showed substantially higher levels of agreement with the presence of entrepreneurial constructs pertaining to strategic alignment and strong customer orientation, whilst agreeing to a larger degree with the presence of optimised processes. Persons in managerial positions are the primary drivers of these constructs and it might therefore be regarded as unsurprising that they rate these higher than persons in specialist positions do. The implication is that managerial or supervisory employees might readily internalise and drive a climate of corporate entrepreneurship as soon as the strategic need thereto is communicated.

Respondents without a tertiary qualification expressed higher agreement with the presence of strategic alignment, strong customer orientation and tolerance of ambiguity in the company. All three constructs of a successful company (optimised processes, a successful customer orientation and people development) were also rated higher by respondents without tertiary education.

Various factors could cause this observation, including the possibility that persons with a tertiary education might tend to be more critical and possibly somewhat more cynical regarding the presence of constructs which support an intrapreneurial climate or indicate corporate success. The implication for improving an entrepreneurial climate would be that persons with a tertiary education might prove to be more difficult to be convinced of the benefits of corporate entrepreneurship and might also be more skilled in highlighting the possible flaws in a new initiative.



## 6.3 Recommendations on establishing a climate of corporate entrepreneurship

### 6.3.1 Introduction

A project to establish a climate of corporate entrepreneurship would have a twofold foundation:

- **Correction of current shortcomings:** In broad, a decidedly authoritarian culture (see discussion in section 2.5) and inadequate presence of several constructs which supports a culture of corporate entrepreneurship (see discussion in section 6.2) pose the greatest shortcomings in the Vanderbijlpark plant of ArcelorMittal South Africa.
- **Implementing corporate entrepreneurship:** A deliberate strategic thrust must be made to establish leadership, support structures, rewards and systems to support corporate entrepreneurship.

Both abovementioned aspects will be addressed in the discussion.

Whilst the ambit of this study comprised the Finishing units of the Vanderbijlpark site of ArcelorMittal South Africa, recommendations will aim to provide guidelines for rolling out corporate entrepreneurship to the entire site or to all sites in the country.

### 6.3.2 Establishing a climate of corporate entrepreneurship

The guidelines set by Hisrich *et al.* (2005:51) which were discussed in section 4.5.2 will form the foundation of the proposed plan of action.

#### Ensure management commitment

Commitment will only be attained from top management if unquestionable advantages of corporate entrepreneurship can be shown. These advantages must be demonstrated by performing an unflinching analysis of the state of company, taking into account shortcomings in terms of international best practices and the fact that its current lack of

commitment by paving the way for corporate entrepreneurship through affiliating trade unions into the drive.

### General introduction to organisation

Seminars should be held where employees from the lowest grading (L roles) up the top management of the site (B and C roles) participate. At these seminars, agreement should be sought from all employees on aspects regarding the intrapreneurial strategy, guidelines on how the process is to function and appointments of champions to the process.

Emphasis should be placed on communicating a clear purpose and why change is needed to reach the proposed end-state. An analysis of current shortcomings and barriers to corporate entrepreneurship (such as explored in this study) must be presented and involvement must be sought from all stakeholders on ways to overcome the stated deficits. Where barriers to corporate entrepreneurship cannot (for various reasons) be totally overcome, agreement must be sought on ways to manage these dilemmas. Facilitators must focus on driving discussion towards achieving results and as many as possible employees must become committed to the outcomes of the discussion.

Based on measurements in this study indicating declining morale and a perceived lack of people focus in the company, apathy and resistance to change is foreseen to be present to a substantial degree. Seminar facilitators must realise that many employees will require compelling reasons to believe that management is committed to corporate entrepreneurship, that it would be to the benefit of both employees as well as the company and that it is not just another management fad (the ArcelorMittal shop floor term is "flavour of the day").

In securing an effective communication process, it is important to commit to the magnitude of the undertaking. It is held that the maximum size of an effective seminar where two-way communication can take place would be 50 attendees. With a work force of 4600 employees at the Vanderbijlpark site, it would translate to close to 100 seminars being held. Having follow-up seminars with focus groups such as middle

management would raise the number of seminars to 150. If a rate of two seminars per day can be sustained, the process can be completed in 75 working days (approximately 4 months). During this period, a dedicated conference venue and seminar facilitators must be secured.

The success of the communication process will be judged according to both the awareness and level of acceptance by employees of the concept and must be verified by means of surveys. If unacceptable results are obtained, the communication process must be revisited prior to advancing the next step.

#### Expectation clarification and resource allocation

Agreement reached during preceding seminars with employees, must be distilled into accepted procedures pertaining to the way in which corporate entrepreneurship will be managed. Specific focus areas identified by top management where entrepreneurial effort must be directed should be combined with procedures in order to arrive at a point where pivotal leaders of the process can be appointed.

The allocation of funds, human resources and other means must be clarified up to departmental level, taking the focus area into account.

#### Technological leveraging

Using technology (especially information technology) to improve efficiency and flexibility is not new in most companies and is certainly accepted practice in ArcelorMittal. However, efforts should be concentrated to specifically aid corporate entrepreneurship by providing at least the following aids:

- **Streamlined approval processes:** Digital capturing of venture information and automatic electronic routing of priority-decisions towards steering committee member should aid in reducing bureaucracy to a minimum.
- **Information repository:** Intrapreneurs should have easy access to electronic information shared by universities, government agencies, trade organisations, customers and suppliers.

- **Specialist repository:** A live index of all financial, marketing, technical and managerial specialists in the global ArcelorMittal group should be available, so that corporate entrepreneurs can easily transcend the borders of their own knowledge by contacting a specialist for assistance.

A measure of effective assistance rendered by information technology systems would be that corporate entrepreneurs use less than an agreed-upon percentage (e.g. 5%) of their discretionary time on preparatory paperwork or trying to source information.

### Training

While seminars were held to communicate the purpose of corporate entrepreneurship to all employees, selected employees need to undergo dedicated training in entrepreneurship with a corporate focus.

Ireland *et al.* (2006:29) propose that a formal training program should equip all parties with knowledge of intrapreneurship and all the skills that the process requires. The following elements are proposed to form part of such a training program:

- Introduction to entrepreneurship
- Entrepreneurial breakthrough processes
- Creative thinking
- Idea development process
- Examining of barriers, facilitators and triggers to entrepreneurial thinking
- Venture planning

In addition, effective usage of all information systems (see discussion above) should be demonstrated to trainees.

It is proposed that the entrepreneurship training program be presented as a certificate program which is affiliated with a South African university. The only measure of the effectiveness of the training program would be whether applicants passed an examination.

When examining perceptions regarding constructs of a climate of corporate entrepreneurship, it transpired that certain shortcomings pertaining to the manner in which middle management interact with subordinates appeared to have surfaced. Whilst it is not a recognised generic element of entrepreneurial training in a corporate environment, it is nonetheless essential that training be given to all middle managers in ways to interact with subordinates which would result in aligned-commitment. It is held that middle management is the most important group to drive corporate entrepreneurship (Heinonen & Toivonen, 2007:168) and if ArcelorMittal's middle management is not equipped with skills on how to best manage people the pivotal agents of the entrepreneurial process are hamstrung. Furthermore, empowerment of employees can only be achieved (see discussion below) once middle managers have been trained to attain the ability to relinquish control whilst still ensuring results.

#### Customer propinquity

Intelligence gathered on customers must be communicated to all employee levels. Even the lowest level of employees must know who their customers are, what their needs are and what material from ArcelorMittal they reject. In addition, all incumbents in middle management must know exactly which portions of a customer's raw material is not supplied by ArcelorMittal, what the strategic mission and aim of every customer is and what the nature of every customer's relationship with the eventual end-user is.

Customer proximity could be increased by the following:

- **Customer visits:** Frequent visits by all employees to customers help create an understanding of the current and future operational needs of customers.
- **Intelligence systems:** Instead of only relying on casual knowledge held by marketers and other personnel who interact with customers, a dedicated effort should be launched to compile an intelligence report on every customer. When not only the current needs of a customer but also its future requirements, opportunities, threats and vision of its leadership are understood, then ArcelorMittal can truly start identifying innovative opportunities to serve its customers in new ways.

- **Customer communication:** Information and product scheduling systems must be refined to the extent that every operator handling a product must not only be aware that it is product X, but also that it is processed for customer Y having a number of detailed requirements.

A measurement of organisation-wide customer focus would be that any employee polled could indicate ArcelorMittal's main customers and their requirements.

### Productivity increase

While ArcelorMittal can be regarded as a past-master of productivity increases (mainly by cutting overhead costs), productivity increases by means of empowering lower-level employees have not previously been an explicit target. However, empowering lower-level employees serves to both widen the scope sources from where possible intrapreneurs might emerge and to free up discretionary time for middle management.

Employees are empowered by trust placed in them to autonomously decide on the best way to perform their work (Coetsee, 2002:33). It is postulated that the only effective action to empower employees would be to train supervisors and middle managers in techniques on how to partially relinquish control while at the same time still ensuring excellent results.

### Support structures

Robust structures need to be in place to ensure that innovative ventures are not relegated to the back burner in favour of more pressing operational initiatives.

It is proposed that support be given in the form of mentors located in middle to upper management levels of the organisation. These mentors should help intrapreneurs by acting in the following roles:

- **Advisor:** Mentors should first and foremost act as soundboards and 'gurus' to corporate entrepreneurs facing difficult challenges.
- **Defender:** A mentor should have a significant enough standing in the organisation to effectively sell an idea to top management. In addition, he/she

should be able to ward off undue attacks on a young and risky project or even help hide the project until its merit can be demonstrated.

The success of mentorship should be monitored by means of monthly report submitted to top management in which support rendered to intrapreneurial projects were outlined.

### Clarify rewards

Recognition based on individual monetary rewards or equity stakes will always have a controversial element and it is of utmost importance that strict and clear rules be laid down before launching corporate entrepreneurship.

However, whilst monetary gains are seen to be the motivating force of most entrepreneurs, it should be kept in mind that various other options are available to reward successful corporate entrepreneurs:

- **Recognition:** A system could be devised whereby successful leaders of innovative projects are awarded gradings based the accumulated benefits realised by all the person's intrapreneurial projects. While conventional status denominations would entail bronze, silver and gold, creative denominations could be explored (e.g. a master intrapreneur could attain "black belt" status). It is important that rewards be handed over with the amount of ceremony befitting the benefits afforded to the company by the intrapreneur's projects, with the ideal being that directors hand over the highest awards attainable.
- **Discretionary time:** It should be recognised that a large number of employees gain self-actualisation through performing sterling work. Therefore, a reduction in menial tasks and more discretionary time available to focus on work that is viewed as important by an employee could be highly valued.
- **Variety in work:** The ability to transcend work boundaries in order to learn more about other departments could be of value to various employees.

Finally, it is important to recognise that not only financial successes should be rewarded but rather successful displays of corporate entrepreneurship. Therefore, a failed project

on which an intrapreneur did thorough preparation and from which valuable knowledge was gained could still benefit the company and should thus be recognised.

It is not within the ambit of this proposal to explicitly clarify the exact nature of rewards which should be offered. However, it is important that clear and strict rules regarding rewards be developed, after considering all options.

### Evaluation system

Successful intrapreneurial ventures must expand, while unsuccessful ones should be eliminated. Furthermore, even successful undertakings must be contained within the broad mission statement of the organisation. Therefore an evaluation system must be established which can be used to cull off poor performers whilst boosting promising ventures.

An evaluation system must comprise at least the following elements:

- **Base case measurement:** The default level of intrapreneurial activity must be determined in each department, prior to launching corporate entrepreneurship.
- **Continuous measurement:** After implementation of corporate entrepreneurship, intrapreneurial activity must be regularly monitored to determine the success of the initiative.
- **Project evaluation:** Criteria must be laid down according to which decisions are made on whether entrepreneurial projects may proceed.
- **Knowledge repository:** Both successful and failed projects must be thoroughly documented in the evaluation system, in order to increase organisational knowledge.

For a detailed discussion on measurement of intrapreneurial activity, section 4.5.2 should be consulted.



### 6.3.3 Summary on recommendations

It has been shown that the establishment of corporate entrepreneurship is a complicated and long process. Current organisational deficiencies need to be addressed first, followed by the implementation of action steps to aid in fostering corporate entrepreneurship.

## 6.4 Critical evaluation of the study

The success of the study is evaluated by referring to the primary and secondary objectives listed in section 1.3.

### 6.4.1 Primary objective

The primary objective of the study is to assess the level of intrapreneurship within upper to middle employee levels of the Finishing units of ArcelorMittal Vanderbijlpark and to make recommendations regarding the encouragement of an entrepreneurial climate within these business units.

The primary objective was achieved by realising the secondary objectives and by presenting recommendations introduced in section 6.3.

### 6.4.2 Secondary objectives

The secondary objectives, which support the primary objectives, are listed below together with an evaluation of whether they were met.

1. Defining entrepreneurship and its importance in an economy by means of a literature review.

**Evaluation:** Achieved in section 3.2 (Definition and impact of entrepreneurship).

2. Defining corporate entrepreneurship and the vital role it plays in ensuring corporate sustainability by means of a literature review.

**Evaluation:** Achieved in section 3.3 (Definition and impact of corporate entrepreneurship).

3. Defining a culture of corporate entrepreneurship inside an organisation and describing the constructs that underpin such a culture, by means of a literature review.  
**Evaluation:** Achieved in section 4 (Literature review on a climate of corporate entrepreneurship).
4. Describing ArcelorMittal South Africa and its relationship with its main stakeholders, by means of a review of both published and unpublished literature.  
**Evaluation:** Achieved in section 2 (Overview of ArcelorMittal Vanderbijlpark) and specifically section 2.4 (Assessment of company performance and its relationship with stakeholders).
5. Using the body of knowledge garnered from a literature review to adapt a questionnaire in order to measure the level of entrepreneurship in the B to G role levels of the Finishing units of ArcelorMittal Vanderbijlpark.  
**Evaluation:** Achieved in section 5.2 (Data collection and processing).
6. Validating the reliability of the questionnaire by means of statistical analysis.  
**Evaluation:** Achieved in sections 5.4.1 (Reliability of the measurement instrument using the Cronbach Alpha coefficient) and 5.5.1 (Reliability of the measurement instrument using the Cronbach Alpha coefficient) respectively.
7. Using collected data in order to present prevalent perceptions regarding both the climate of corporate entrepreneurship and success of the company.  
**Evaluation:** The results of the empirical research on this aspect were presented in sections 5.4 (Measuring the climate of corporate entrepreneurship) and 5.5 (Perceived success of the organisation) respectively. A discussion on the results was held in section 6.2 (Conclusions on perceptions regarding a climate of corporate entrepreneurship and success of the company)
8. Examining the influence of select demographical variables on the observed levels of corporate entrepreneurship and perceptions of the success of the company.  
**Evaluation:** The quantitative influence was presented in sections 5.4.3

(Relationship between demographical variables and entrepreneurial climate constructs) and 5.5.3 (Relationship between demographical variables and organisational performance constructs). A discussion on the influences was held in section 6.2.4 (Relationship between demographical variables and various constructs).

9. Determining the shortcomings in the corporate entrepreneurship culture of the assessed business unit and to make recommendations to improve thereon.

**Evaluation:** This was achieved in sections 6.2 (Conclusions on perceptions regarding a climate of corporate entrepreneurship and success of the company) and 6.3 (Recommendations on establishing a climate of corporate entrepreneurship).

## 6.5 Suggestions for further research

The following areas of further research are proposed:

- **Industry comparison:** In view of the fact that at least part of the questionnaire has been used in other studies being conducted in a variety of South African companies, a comparison can be made of results obtained from different industries and sectors.
- **Questionnaire refinement:** In this study, various instances have been found where questions were too broad to make an accurate inference (i.e. was customer satisfaction highly rated because of a strong focus on customers, or merely because no feedback from customers is channelled to respondents and therefore they assume “all is well”?). The questionnaire should be refined in order to be able to draw more accurate conclusions.
- **Organisational performance comparison:** Current perceptions regarding organisational performance on South African firms were only determined prior to implementation of corporate entrepreneurship. The effect of the implementation on perceived (or actual) performance of the company should be examined.

- **Implementation of corporate entrepreneurship:** Studies to date tended to focus on the benefits which could be realised by implementing corporate entrepreneurship and the characteristics of a corporate climate which would support it. A study needs to be performed on an actual (successful or not) implementation of corporate entrepreneurship in a South African firm, in order to study the pitfalls, obstacles, solutions and consequences experienced.

## 6.6 Summary

The results of the empirical study were interpreted in this section and conclusions were drawn regarding perceptions on both the state of the entrepreneurial climate and the success of the company.

Demographical data of respondents indicates that the majority of respondents were skilled technical or managerial personnel applying long experience in addition to knowledge obtained through tertiary education. Whilst the broad Vanderbijlpark site of ArcelorMittal demonstrates some progress in promoting younger non-white employees to higher managerial or technical positions, the ageing and predominantly white profile of the sample group indicates that the Finishing units are lagging behind in this aspect.

Constructs of an entrepreneurial climate which were rated well by respondents include a strong customer orientation, strategic alignment and entrepreneurial leadership. Poorly-rated constructs include appropriate rewards, resource availability and tolerance of ambiguity. It is held that factors relating to leadership and strategic implementation as well as structural factors of the organisation were regarded to support a climate of corporate entrepreneurship, but that the ability of middle management to interact with their subordinates shows up as a distinct shortcoming.

The organisation was perceived to be successful in catering to the needs of customers but development of its employees was seen to be an inadequacy which hampers the success of the organisation.

Various demographical variables were found to influence perceptions regarding the presence of constructs of a climate of corporate entrepreneurship as well as the

success of the organisation. From these observations, inferences are made as to the ideal target group for an initial implementation of corporate entrepreneurship.

Recommendations for the establishment of a climate of corporate entrepreneurship focus on addressing identified organisational deficiencies before commissioning an initiative to actively cultivate corporate entrepreneurship.

Finally, the objectives of the study were critically revisited in order to verify compliance and areas for further research were suggested.

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## **ANNEXURE A: QUESTIONNAIRE**

The questionnaire which was administered to 325 persons is presented in the format in which it was distributed.

# CORPORATE ENTREPRENEURIAL CLIMATE QUESTIONNAIRE

Dear Respondent

It would truly be appreciated if you could complete this questionnaire. It is totally anonymous and confidential, and its aim is to judge whether ArcelorMittal Vanderbijlpark's culture lends itself to innovation. The results of this survey will be incorporated into a study done on ArcelorMittal by a Master's degree student, and the results will be made available to all participants in the study.

Innovation (or corporate entrepreneurship) is the degree to which persons inside an organisation are free and empowered to exercise their creativity and knowledge beyond what is strictly expected of them. Various barriers to suppress this creativity can exist while management can also do a lot of things to encourage innovation, and the purpose of this survey is the learn more about the barriers or assistance which you experience every day.

It is estimated that the questionnaire will take 15 minutes to complete. It consists of three sections, and must kindly be filled in by hand.

Please be assured that your input would be very valuable to help understand which obstacles and support you experience every day in your work.

Kindly return your completed survey to your Human Resources representative

Thank you very much.

**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)

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 with the statement listed.

|            |  | Strongly Disagree | Slightly Disagree | Neither agree nor disagree | Slightly agree | Strongly Agree |
|------------|--|-------------------|-------------------|----------------------------|----------------|----------------|
| <b>A03</b> | My manager helps me to get my work done by removing obstacles in my way. | 1                 | 2                 | 3                          | 4<br>X         | 5              |

## SECTION A: 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<br>DISAGREE | Slightly<br>Disagree | Neither agree<br>nor disagree | Slightly<br>Agree | Strongly<br>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<br>DISAGREE | Slightly<br>Disagree | Neither agree<br>nor disagree | Slightly<br>Agree | Strongly<br>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<br>DISAGREE | Slightly<br>Disagree | Neither agree<br>nor disagree | Slightly<br>Agree | Strongly<br>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: PERFORMANCE OF THE ORGANISATION

This section consists of 23 statements. Please indicate to what extent you agree or disagree with each statement. Please mark the applicable block with a cross (X).

|            |  | Strongly<br>DISAGREE | Slightly<br>Disagree | Neither agree<br>nor disagree | Slightly<br>Agree | Strongly<br>AGREE |
|------------|--|----------------------|----------------------|-------------------------------|-------------------|-------------------|
| <b>B01</b> | Our organisation develops product/services with customers' needs in mind.  | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B02</b> | The competitive position of our organisation has improved over the past few years.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B03</b> | My company made an effort to make me aware of the ArcelorMittal values and way of conduct  | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B04</b> | Our organisation has experienced growth in market share over the past few years.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B05</b> | Our employees are highly committed to our organisation.  | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B06</b> | If I find a way to secretly cheat our customers a small bit to save money, our top management will be pleased with me.                               | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B07</b> | During difficult economic periods, investments in research and development/ innovative projects continue and no significant financial cuts are made. | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B08</b> | Our organisation has a high customer retention rate.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B09</b> | Our top leadership act according to the ArcelorMittal values and code of conduct when making their decisions.  | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B10</b> | Our customers are loyal to our organisation.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B11</b> | In our organisation, employees are viewed as the most valuable asset of the organisation.  | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B12</b> | Taking care of customers is our organisation's top priority.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B13</b> | My organisation will never try to make profit from something that could be seen as illegal or immoral.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B14</b> | The morale (job satisfaction) of our employees has improved over the past few years.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B15</b> | Our customers are satisfied with our organisation's product/service offerings.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B16</b> | The image (stature) of our organisation, relative to our competitors, has grown over the past few years.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B17</b> | Our organisation has experienced growth in turnover over the past few years.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B18</b> | If an idea could save money but requires us to lie to our customers, our management will try to implement it as long as we cannot be caught out.     | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B19</b> | The effectiveness (doing the right things) of our organisation has improved over the past few years.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B20</b> | Employees in our organisation understand the needs of our customers.   | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B21</b> | Our organisation has experienced growth in profits over the past few years.  | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B22</b> | When I need to decide whether I am ethically doing the right thing, I also consider the ArcelorMittal values to help me decide.                      | 1                    | 2                    | 3                             | 4                 | 5                 |
| <b>B23</b> | 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 and anonymously. Your assistance in providing this important information is appreciated.

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

|            |                                |      |         |         |         |     |
|------------|--------------------------------|------|---------|---------|---------|-----|
| <b>C01</b> | <b>Indicate your age group</b> | ≤ 29 | 30 - 39 | 40 - 49 | 50 - 59 | 60+ |
|------------|--------------------------------|------|---------|---------|---------|-----|

|            |                             |      |        |
|------------|-----------------------------|------|--------|
| <b>C02</b> | <b>Indicate your gender</b> | Male | Female |
|------------|-----------------------------|------|--------|

|            |                           |       |       |          |        |
|------------|---------------------------|-------|-------|----------|--------|
| <b>C03</b> | <b>Indicate your race</b> | Black | White | Coloured | Indian |
|------------|---------------------------|-------|-------|----------|--------|

|            |   |  |  |  |  |
|------------|---|--|--|--|--|
| <b>C04</b> | <b>Indicate your highest academic qualification</b> |  |  |  |  |
|            | Lower than Grade 12                                 |  |  |  |  |
|            | Grade 12  |  |  |  |  |
|            | National certificate                                |  |  |  |  |
|            | National diploma                                    |  |  |  |  |
|            | University degree                                   |  |  |  |  |
|            | Post graduate qualification                         |  |  |  |  |

|            |                              |   |   |   |   |
|------------|------------------------------|---|---|---|---|
| <b>C05</b> | <b>Indicate your grading</b> | G | F | E | D |
|------------|------------------------------|---|---|---|---|

|            |                                   |         |                |  |  |                           |
|------------|-----------------------------------|---------|----------------|--|--|---------------------------|
| <b>C06</b> | <b>Indicate your job category</b> | Manager | Superintendent | Specialist<br>(Engineer /Technician etc) | Support<br>(Human resources, SHERQ Admin, stock control etc) | Other<br>(Please specify) |
|------------|-----------------------------------|---------|----------------|--|--|---------------------------|

|            |   |   |  |   |  |
|------------|---|---|--|---|--|
| <b>C07</b> | <b>Indicate your functional department</b>                                      |   |  |   |  |
|            | Cold North:<br>Production   | Cold South:<br>Production                             | Cold North & South:<br>Engineering & Maintenance | Rolling: Business processes, SHE and Safety | Vanderbijlpark Engineering: Projects                                 |
|            | Hot Mills:<br>Furnaces, R/Mill & Coil + Mill Roll supply + Finishing & dispatch | Hot Mills:<br>Maintenance and Reliability Engineering | Plate Mills:<br>Production                       | Plate Mills:<br>Maintenance                 | Vanderbijlpark Engineering: Energy, Infrastructure, Reliability, etc |

**THANK YOU VERY MUCH FOR YOUR VALUED INPUT.**

## **ANNEXURE B: DEMOGRAPHICAL PROFILE OF THE VANDERBIJLPARK SITE**

An analysis of the human resources database of ArcelorMittal Vanderbijlpark was completed, in order to present the demographical profile of the Finishing units. Selected demographical data is presented in this section.

The racial composition (based on the standard South African racial classification) of G to B role employees on the Vanderbijlpark site is presented in Table 9.1.

**Table 9.1: Racial profile of G to B role employees in the Finishing units**

| <b>Racial classification</b> | <b>% of workforce</b> |
|------------------------------|-----------------------|
| <b>African</b>               | 12.6                  |
| <b>Coloured</b>              | 0.6                   |
| <b>Indian</b>                | 1.8                   |
| <b>White</b>                 | 84.9                  |
| <b>Total</b>                 | 100                   |

Table 9.2 presents the gender profile of all G to B role employees at the Vanderbijlpark site.

**Table 9.2: Gender profile of G to B role employees at the Finishing units**

| <b>Gender</b> | <b>% of workforce</b> |
|---------------|-----------------------|
| <b>Male</b>   | 96.92                 |
| <b>Female</b> | 3.08                  |
| <b>Total</b>  | 100                   |

The relative distribution of workers among the G to B role bands in the Finishing units at the Vanderbijlpark site is presented in Table 9.3.

**Table 9.3: Relative distribution of G to B role employees at the Finishing units**

| <b>Role</b>  | <b>% of workforce</b> |
|--------------|-----------------------|
| <b>E</b>     | 15.38                 |
| <b>F</b>     | 17.23                 |
| <b>G</b>     | 67.38                 |
| <b>Total</b> | 100                   |