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CHAPTER 1: BACKGROUND AND ORIENTATION TO THE PROBLEM

1.1 INTRODUCTION

Since the turn of the previous century, electricity has rapidly grown in importance. It has become one of the world's most commonly used commodities and has, at least in all first world countries, become like breathing - nobody really thinks about it until something goes wrong. There is an enormous industry involved in the management, generation, distribution, consumption and economics of the Electricity Supply Industry (ESI). This is comparable with the human body's nerve system and brain. Almost every activity of mankind is linked to electricity - industrial production, water supply, communications, computation, and basic living.

The industry started off as small developments all over the world. As the industry grew governments soon saw the need to take control of the commodity. The regulation of electrical utilities in the USA began about 85 years ago as, one-by-one, the states moved to grant each local area an exclusive franchise monopoly to serve its local electricity customers. This franchise came with an obligation to serve and an approved averaged fixed rate for retail customers. For most of that history the industry had neither the technology nor the competitive motivation to implement demand responsive pricing. (Smith, 2002).

The industry was soon recognised as a vital part of the economies of countries, states, provinces, cities, or towns and regulatory authorities were established.

In South Africa this led to the establishment of the national Electricity Supply Commission commonly known as Eskom. Many local authorities also saw the potential for growth and income and started their own internal electricity departments. In line with international trends a South African body called the National Electricity Forum (NELF) was established in the early nineties. The goal was to promote universal availability of electricity and the establishment of a regulator. The National Electricity Regulator (NER) was established by Government in 1995 in terms of the National Electricity Amendment Act (Act 60 of 1995). The electricity supply industry of South Africa was now fully regulated by Government.

Internationally however winds of change were blowing. By the 1990s, a growing chorus of voices within the USA electricity industry, Congress, and the federal government was pushing to bring competition to the industry. Congress opened the system to competition in 1992 with the National Energy Policy Act, which allowed power producers to compete for the sale of electricity to utilities. In 1996, the Federal Energy Regulatory Commission (FERC) issued what would become one of its most famous orders. Order 888 required utilities to open their transmission lines to competitors. Soon thereafter, New Hampshire launched a pilot program allowing competition, as did Arizona, California, Massachusetts, Pennsylvania, and Rhode Island. These actions at state level fuelled the fire for a national deregulation plan. (Electricity Utility Briefing Book. [Online])

The motivation for deregulation of the Electricity Supply Industry in the USA was to:

- Reduce prices
- Improve services
- Foster innovation through competition
- Increase efficiency
- Foster customer choice
- Promote transmission open access
- Ensure competitiveness in generation

Following the establishment of the National Electricity Regulator, the South African Government also started the process of restructuring the electricity industry. Cabinet decided in February 1998 to rationalise the Electricity Distribution Industry (EDI) and to establish a maximum number of Regional Electricity Distributors (REDs), responsible for the distribution and management of electricity sales to the retail user. A report, commonly known as the "EDI Blueprint Report" was tabled with Cabinet. Cabinet decided, amongst others, to establish a holding company that would oversee the establishment of six REDs and the deregulation of the EDI by August 2007. The EDI Blueprint Report states that two of these REDs might not be viable and will need special attention in order to survive. (Department of Mineral and Energy Affairs, 2001:2). This poses an exiting management challenge.

There is a general recognition that corporate entrepreneurship will enhance corporate performance and promote success. (Nieman & Pretorius; 2004:6; Timmons, 1999:5; Turner, 2002:228) This triggered the hypothesis: Electricity Utilities that foster corporate entrepreneurial behaviour will outperform utilities that do not endeavour to implement such initiatives. The opportunity to influence the South African restructuring of the electricity industry formed the incentive for this research.

1.2 THE MANAGEMENT DILEMMA

The management dilemma can therefore be summarized as being one of addressing the needs of an increasingly sensitive and demanding consumer in a fast changing technical environment that will be highly regulated, at least for the near future, whilst still attaining the performance levels set by the business owners. In short: EDI Management's dilemma is the uncertainty about what they should do to improve their organization's performance and chances of being successful both in the eyes of the consumer and the owner. (Department of Mineral and Energy Affairs, 2001:4).

1.3 MANAGEMENT QUESTIONS

In a longitudinal analysis of the contextual influences on the corporate entrepreneurship-performance relationship studied by Zarha & Covin between 1983 and 1990, it was found that a positive and strengthening linkage exists between corporate entrepreneurial behaviour and subsequent financial performance (Zarha & Covin, 1995:43). This finding suggests that the new RED organizations should promote entrepreneurial behaviour.

Hornsby, Kuratko, and Zahra (2000:253) assessed the measurement properties of a scale that measured the key internal organizational factors that influence middle management to initiate corporate entrepreneurial activities. It focused on five factors that the literature converge on and found that the five factors, namely management support, work discretion/autonomy, rewards/reinforcement, time availability, and organizational boundaries represent the critical number of internal organizational factors that influence middle management to foster entrepreneurial activity within established companies. It can therefore be deduced that these factors should be promoted within a RED striving for better performance.

The question however arises whether it is possible to actually successfully promote, deploy, and foster these five internal organizational factors in a highly regulated (government) environment.

Awty (2001) found that:

- Governments now recognize that to be accountable and competitive, they have to be more efficient and effective;
- There is more value in “steering” than “rowing”; and
- An acceptable balance between entrepreneurship and the social goals of the population have to be established.

Stemming from the general management questions and the research findings mentioned above, the following questions for the purpose of this thesis evolve:

i. Can electricity utilities be seen as corporate business?
ii. What are the performance criteria for the RED?
iii. Can corporate entrepreneurs enhance the performance of the RED?
iv. If so, how should management promote entrepreneurship?
v. What will the implications be on the success of the RED?

1.4 RESEARCH QUESTIONS

From the management questions a host of detailed research and investigative questions evolve. These were evaluated and prioritised in order to determine which ones should form part of the research instrument. The research questions are dealt with in detail in following sections. However, in summary, these questions are structured and grouped in such a manner as to obtain distinct results from the respondents on the five factors and the general management questions mentioned in paragraph 1.3 above.

1.5 RESEARCH OBJECTIVES

This research focuses on and investigates the success-entrepreneurial orientation correlation within South African electricity utilities. This is done by means of an instrument that measures the perception of senior utility officials on both

successes and entrepreneurial orientation within the utility. Entrepreneurship is conceptualised as a manageable process with underlying dimensions of, amongst others, creativity, innovativeness, risk taking and pro-activeness. (Carlock, 1994. Morris & Kuratko, 2002:30). Unique characteristics of the electricity utility environment are examined.

It is hypothesized that: Electricity Utilities that foster corporate entrepreneurial behaviour will outperform utilities that do not encourage such behaviour.

The aim of this research is to investigate the current correlation between corporate entrepreneurship (CE), organizational culture (OC), management strategies (MS), organizational success (OS), and organizational demographics (OD) of corporate electrical utilities within South Africa and to compare the results with the results obtained from a literature study on the subject within the First World Countries. This comparison should highlight the success factors both in the South African and First World utilities, and will enable the recommendation of actions to be taken regarding factors that are not present in the South African utilities.

This research is based on the work of Morris and Kuratko (2002) and the Entrepreneurial Performance Index (EPI) instrument to determine the degree and frequency of entrepreneurship as well as the underlying dimensions of innovativeness, risk-taking, and proactiveness.

1.6 IMPORTANCE/BENEFITS OF THE STUDY

The aim of this thesis is to contribute to the analytical knowledge about the influence of entrepreneurs on the success of electricity utilities. The research will focus on the perceived contribution made by entrepreneurs; the environmental conditions experienced by entrepreneurs; and how entrepreneurship was promoted. The outcome of the thesis should be a guideline for electricity utility managers on entrepreneurial factors that promote success within their industry. This should add to their chance of survival and even greater success.

This study is of enormous importance for South Africa right now as the EDI in South Africa is at present moving through major restructuring and towards deregulation. If the research results are heeded, the managers of the REDs may be able to

create a viable business whilst contributing to the solution of South Africa's social and economic problems and challenges.

No evidence could be found that a similar study of the South African Electricity Distribution Industry/Utility has already been done.

1.7 DESCRIPTION OF CONSTRUCTS

As an overview the major constructs used in the research, namely corporate entrepreneurship, organizational success, and organizational demographics are briefly discussed below and will be discussed in detail in the following chapters.

1.7.1 Corporate Entrepreneurship

Entrepreneurship is elusive, difficult to define. The word itself is derived from a French root meaning “to undertake.” Peter Kilby (1971) in his writings on entrepreneurship has compared it to the heffalump of Winnie the Pooh fame. The heffalump is a large, self-important creature that many claim to have seen though none can identify his characteristics with certainty (Kao, 1991, p14). Table 1.1 below, reflects some of the definitions in the literature on corporate entrepreneurship. From this it is clear that Kilby’s statement is very valid.

Table 1-1 Definitions of corporate entrepreneurship / entrepreneurship

Authors/s and Year	Published definition
Pinchot III (1985:ix)	Entrepreneurs are "dreamers who do", those individuals who take hands-on responsibility for creating innovation of any kind within an organisation. They may be the creators or inventors but are always the dreamers who figure out how to turn an idea into a profitable reality.

Authors/s and Year	Published definition
Jennings and Lumpkin (1989:489)	Corporate entrepreneurship is defined as the extent to which new products and/or new markets are developed. An organisation is entrepreneurial if it develops a higher than average number of new products and/or new markets
Guth and Ginsberg (1990 : 5)	Corporate entrepreneurship encompasses two types of phenomena and the processes surrounding them: (1) the birth of new businesses within existing organisations, i.e., internal innovations or venturing, and (2) the transformation of organisations through renewal of the key ideas on which they are built, i.e. strategic renewal
Burgelman, (1983: 154)	Corporate entrepreneurship involves extending the firm's domain of competence and corresponding opportunity set through internally generated new resource combinations
Zahra (1995:227)	Corporate entrepreneurship is seen as the sum of a company's innovation, renewal, and venturing efforts. *Innovation* involves creating and introducing products, production processes, and organisational systems. *Renewal* means revitalizing the company's operations by changing the scope of its business, its competitive approaches or both. It also means building or acquiring new capabilities and then creatively leveraging them to add value for shareholders. *Venturing* means that the firm will enter new businesses by expanding operations, existing or new markets
Chung and Gibbons (1997:14)	Corporate entrepreneurship is an organisational process for transforming individual ideas into collective actions through the management of uncertainties

Authors/s and Year	Published definition
Covin and Miles (1999)	There is a commonality among all firms that could be reasonably described as entrepreneurial. This commonality is the presence of innovation. Innovation refers to the introduction of new products, process, technology, system, technique, resource, or capability to the firm or its markets. In addition to this they claim that another element must be present in order to claim an entrepreneurial orientation. This element is the presence of the objective of sustained high performance or improving competitive standing through actions that radically energize organizations or "shake up" the status quo in their markets or industry.
Sharma and Chrisman (1999:)	Under this definition, strategic renewal (which is concerned with organizational revitalization involving major strategic and/or structural changes), innovation (which is concerned with introducing something new to the marketplace), and corporate venturing (corporate entrepreneurial efforts that lead to the creation of new business organizations within the corporate organization) are all important and legitimate parts of the concept of corporate entrepreneurship.
Kuratko (2001)	Entrepreneurship includes acts of creation, renewal, or innovation that occur within or outside an organization.

Authors/s and Year	Published definition
Machet (2001)	Found a hierarchy of three practices to ensure corporate entrepreneurship: Firstly, it is necessary to remove inhibitory practices that constrain people and prevent recruitment being handled entrepreneurial. The number of job offers made by the organization that is turned down should be measured. The second level is the use of stimulatory practices that reward innovative, risky and proactive behaviour. The performance management system should enable the management of human capital as the personal responsibility of each manager. Thirdly, he found the need to create systems to embed these activities in the organization. Organizations must be flexible, fleet of foot; there must be a high level of autonomy at the operating level, robust debate must be allowed and a learning orientation developed.
Morris and Kuratko (2002:85)	Corporate entrepreneurship is a term used to describe entrepreneurial behaviour inside established midsize and large organizations.
Nieman, Hough, and Niewenhuizen (2003:348)	Corporate entrepreneurship comes about through the entrepreneur as intra organizational revolutionary – challenging the status quo and fighting to change the system from within.

A careful examination of the above table reflects that different authors sometimes use the same term differently, and some authors use different terms to describe the same phenomenon. However, analysis of the above table indicates a common pattern with mutual elements among the various definitions. A common thread that

runs through the various conceptualisations of corporate entrepreneurship is that corporate entrepreneurship is characterized by the following:

- The transformation or rejuvenation of organizations through a renewal of key areas of the business;
- The birth of new businesses within existing businesses;
- Renewal or reorganization of structural and recognition systems as a radical departure from historical and dominant structural patterns and systems.
- The improvement of performance.

What follows below is a description of the major components of Corporate Entrepreneurship that will be used in this research, namely: innovativeness, risk-taking, proactiveness, and degree and frequency of entrepreneurship. These components are now discussed in brief and will be discussed in full in Chapters 2 and 3.

Innovativeness is the first dimension that characterizes an entrepreneurial organization (Kuratko & Welsch, 1994:359; Morris & Kuratko, 2002:39). The concern is with the relative emphasis on activities that represent a departure from that which is currently available. The fundamental question is to what extent is the organization doing things that are novel, unique or different? Mauzy and Harriman (2003: 232) posit that this is influenced by the level of creativity promotion as they see innovation as the result of purposeful creativity.

Risk-taking according to Morris and Kuratko (2002:41) does not refer to reckless decision-making but it rather involves a realistic awareness of the risks involved – including financial, technical, market and personal risks. Risk-taking can thus be viewed as both an individual-level trait as well as an organization-level concept. Turner (2002:240) states that entrepreneurship involves willingly risking from concept to implementation to maximize value, and Cornwall & Perlman (1990:241) supports this view in their statement that the foundation of entrepreneurship is risk and risk-taking.

Proactiveness is less easy to define. It is concerned with implementation, with taking responsibility and doing whatever is necessary to bring an entrepreneurial concept to fruition. (Morris and Kuratko, 2002:44) This supports the Kanter (1985:47) view that entrepreneurs – and entrepreneurial organizations – always operate at the edge of their competence, and they do not allow the past to serve as a restraint on the future. Drucker (1985) indicated that the entrepreneurial business must, as part of its strategy, make every manager of an existing business greedy for new things.

Degree and frequency of entrepreneurship refers to the combination of the three components mentioned above. Morris & Kuratko (2002:46) states that entrepreneurial success will happen when the appropriate degree of each component is present and that the degree of each is variable and is dependant on the situation

1.7.2 Organizational Success

To be successful, organizational entrepreneurship must be approached from a strategic management perspective. Organizational entrepreneurship must be part of the broad strategic plans of an organization and must be an integral part of the implementation of these plans (Cornwall & Perlman, 1990:19). Bird (1998:57) defines the performance of an entrepreneur as the product of ability and motivation. This is important as entrepreneurs will be driving organizational entrepreneurship. The study focuses on the level of revenue, profit, and employment as well as the growth in these variables. Finally it measures the perception of the respondent on its own organizations performance vis-à-vis the competitors.

1.7.3 Organizational Demographics

The role of demographical information gathered in this study is to enable analysis in order to try and generate alternative explanations.

1.8 RESEARCH DESIGN

1.8.1 Design

The research of the constructs mentioned in paragraph 1.7 is designed as an exploratory literature study to define the hypotheses for a formal causal statistical study with the objective of answering the research and management questions and

to discover/define future research opportunities. The relationships between the variables determining the entrepreneurial performance index of electricity utilities in South Africa and their performance/success variables are tested. Using factor analysis those factors significantly promoting success within the industry are identified and separated from those that do not make a significant difference.

1.8.2 Hypotheses

The following hypotheses are investigated:

H_0: Non-entrepreneurial Electricity Utilities do not perform significantly worse than Entrepreneurial Electricity Utilities.

H_{0a}: Entrepreneurial Electricity Utilities perform significantly better than Non-entrepreneurial Electricity Utilities.

A measuring instrument was developed, tested for reliability and validity with data from South African electricity utilities, and was then made available to managers in all the different electricity utilities in South Africa. These utilities have no distinction other than that they are electricity utilities associated with individual municipalities or the state. The instrument measures different variables like organizational culture, management strategies, organizational success, and organizational demographics. During the development of the instrument it became clear that other propositions should also be set to guide the thinking. These are:

P_1 South African electricity utility managers do not perceive their utility's strategies to be entrepreneurial.

P_2 South African electricity utility managers do not perceive their utility's top-level decision making to be entrepreneurial.

P_3 South African electricity utility managers do not perceive their utilities to be financially successful.

P_4 South African electricity utility managers do not perceive their utilities to be socially successful.

1.9 METHODOLOGY

This is a formal study to test the hypotheses.

An exploratory literature study, referred to in Chapters 2 and 3, was first done to

- Understand the management dilemma better.
- Look for ways others might have addressed the management question.
- Gather background information to help formulate investigative questions.
- Identify sources for and actual questions that might be used as measurement questions.

Once this phase was completed a first phase instrument was developed and possible subjects are identified and invited to participate in the research. Data is collected from these subjects using the Internet and a self-reporting instrument. This is a exploratory study in which it is envisaged to determine the influence of an entrepreneurial environment within a utility on the performance and success of that utility. (Cooper and Schindler, 2001:139). It will also represent a cross-sectional study, presenting a "snapshot" of the South African electricity industry with the focus on entrepreneurship and success. Longitudinal studies may be proposed as further study options.

1.9.1 Measurement

The measurement instrument developed for this research consists of four sub instruments. The first part of the instrument measures organization size and field of business. The second part is based on the Entrepreneurial Performance Index (EPI) instrument. (Morris & Kuratko, 2002:291). The third part of the measurement instrument measures the organization's performance based on performance factors used by Naman and Slevin (1993) in their research on success of organizations. The fourth part defines the demographical variables of the respondent.

The reliability and validity of the EPI instrument has already been established by Morris and Sexton (1996:9) but is confirmed for this thesis.

The EPI is designed to measure the following factors:

- Company orientation
- New product/service/process introduction
- Key business behavioral dimensions.

This is done with 18 five point Likert type questions.

Finally, based on the research on success of organizations by Naman and Slevin (1993), thirteen variables are used to measure the performance construct. Three of the items are profitability indicators (revenue, return on revenue and return on assets). The three other variables are growth indicators (growth in revenue, growth in profits and growth in employment). Respondents are asked to indicate how satisfied they are with the performance of their firm vis-à-vis competitors along each of the six performance measures. A five-point Likert scale ranging from very unsatisfied (1) to very satisfied (5) is used for that purpose.

Control Variables: Firm size and firm age is included as control variables to account for alternative explanations. The total number of employees in the firm will measure firm size. Firm size is included as a control variable because small ventures may be more amenable to the speed and flexibility required of entrepreneurship. However, smaller firms may lack the resources needed to sustain entrepreneurship. Firm age is measured by the number of years the respondent had been in the present position. Younger firms may exhibit more EI in their desire to achieve full capacity. It is also necessary to control for the age of the firm since the performance measures used in the study are chiefly growth and business volume.

The instrument was developed; tested for external - and internal validity; tested for reliability and then pilot tested to ensure practicality. The instrument was refined and then distributed to an estimated 680 role players in South African electricity utilities.

The methodology and data analysis is discussed in detail in Chapters 4 and 5.

1.10 THE STRUCTURE OF THE THESIS

Chapter 2 focuses on the classical theoretical assumptions underpinning CE as an organizational phenomenon. It examines the critical elements and dimensions that constitutes CE, and critically evaluates the relationship of CE to the key variables in this study, namely organizational culture, management strategies, organizational success, and organizational demographics.

Chapter 3 focuses on the most recent findings in the literature regarding CE in electricity utilities. It further examines and discusses the relationship between CE and critical elements and factors influencing electricity utility performance.

Chapter 4 focuses on the research methodology that under girds the study. It furnishes descriptive statistics of respondents who took part in this study and a detailed description of the instrument used. The various statistical techniques used in the study are described in detail.

Chapter 5 focuses on the analysis of the data. The results of the various statistical techniques used in the study are discussed in detail.

Chapter 6 presents the findings of this study. The findings are related to the five research propositions that underpin this study.

Chapter 7 furnishes a conclusion to the present study, implications for management and recommendations for future research.

CHAPTER 2: LITERATURE REVIEW - THE CLASSICAL THEORY

2.1 INTRODUCTION

In this chapter's literature review entrepreneurship in general and the concepts that are investigated in the study, namely corporate entrepreneurship and success specifically, as well as the relationships between these concepts, are explored.

It is indeed a formidable task to do a review of the literature on Entrepreneurship and the Entrepreneur because of the interdisciplinary nature of this literature. Economists like Cantillon, Say, Schumpeter, etc, Economic Historians like Gras, Cole, Redlich, Cochran, etc., and Behavioural Scientists like Max Weber and David C McClelland have focused on the different aspects of Entrepreneurship and Entrepreneurs. Entrepreneurship has been referred to as the "fourth factor" of production. Needless to say that one cannot, in a general review, address oneself to a detailed review of each discipline's contribution to the study of Entrepreneurship. However, this general review is of relevance to this study as its main topic, namely the correlation between entrepreneurial orientation and corporate success is basically derived from the literature study. The contributions of the two main disciplines are reviewed below.

2.1.1 The Economists

2.1.1.1 Richard Cantillon (1680-1734)

This Irish Economist living in France first introduced the term "Entrepreneur" and defined the person as the "agent who purchased the means of production for combination into marketable products." Cantillon also described the Entrepreneur as a speculator, direction giver and risk-taker. The elements of risk-taking and risk-bearing justify profit taking. Cantillon therefore also emphasized the right of man to be remunerated for his risk-taking behaviour. According to Jennings (1994), Cantillon recognized three types of economic actors: (1) landowners who are financially independent, (2) entrepreneurs who engage in market exchanges at their own risk in order to profit, and (3) hired people who avoid active decision-making in order to secure contractual guarantees of stable income. Cantillon's entrepreneurs did not initiate change, nor were they innovators. Instead, he used a risk theory of profit as a

means to identify entrepreneurship.

2.1.1.2 Jean-Baptiste Say (1776 - 1832)

The Frenchman, Jean-Baptiste Say developed Cantillon and Adam Smith's analysis. A businessman himself, Say defined the Entrepreneur as the agent or coordinator that combines all the other resources into a productive organism. Say visualized three agents of production: (1) land and other natural agents that contribute to it, (2) capital, and (3) human industry. Say further separated human industry into the functions of the scientist, the entrepreneur, and the workman. Of these the entrepreneur was seen as by far the most important, as the entrepreneur drives the productive process.

2.1.1.3 Joseph A Schumpeter (1883 – 1950)

In 1934 Joseph Schumpeter argued that innovation develops from entrepreneurship. He stated that entrepreneurs may also be capitalists, managers or innovators, but as entrepreneurs, they provide a recombination of preceding factors of production where the outcome of this recombination cannot be clearly predicted. In 1947 Schumpeter stated that it took an individual who possessed the unusual traits and will to "found a private kingdom, a drive to overcome obstacles, a joy in creating, and satisfaction in exercising one's ingenuity" to become an entrepreneur. In Schumpeter's free market system, the entrepreneur implements these new combinations – "he is the key figure and champion of any economic development." (Jennings 1994: 11)

2.1.2 The Behaviorists

The behaviourists refer to specialists in human behaviour and include psychologists and sociologists. These researchers were dominant in the 1960 to 1980 period and focussed on who entrepreneurs are. The most dominant researchers of this era are Weber, McClelland, Rotter and De Vries. (Nieman et al, 2003: 8)

2.1.3 Post 1980

Nieman et al state that post 1980 the field of entrepreneurship exploded and spilled over into almost all the soft sciences and management sciences. It is interesting to note that entrepreneurship, as a discipline, did not follow the same pattern

as other disciplines. Large numbers of researchers, each using a culture, logic and methodology established in their own fields, began to take an interest in the field of entrepreneurship. Some of these are Gras, Cole, Redlich, Cochran, Morris and Kuratko. (Nieman et al, 2003: 6)

2.2 THE ENTREPRENEUR IN FORMAL MODELS

If one should look in the index of noted recent writings on value theory, in neo classical or activity analysis models of the firm, one would find no or scanty reference to the entrepreneur. The theoretical firm is entrepreneurless. According to Jennings (1994: 199) it is not difficult to explain this absence. In its simplest form the theoretical firm must choose among alternative values for a small number of well defined variables: price, output, and perhaps advertising outlay. In making this choice management is taken to consider the cost and revenues associated with each candidate set of values. Explicitly or implicitly the firm is then taken to perform a mathematical calculation that yields optimal (i.e. profit maximizing) values for all of its decisions. In this the entrepreneur has been read out of the model. There is no room for enterprise or initiative. The management group becomes a passive calculator that reacts mechanically to changes imposed on it by fortuitous external development.

However, Jennings (1994:186) hastens to emphasise his view that entrepreneurship is actually an integral part of the modern successful organization and that entrepreneurship should form such a part of any progressive organization. Jennings further explains that relationships exist between environmental -, information-processing -, structural -, and decision-making variables and the organisational activities.

2.3 THE PSYCHOLOGY OF THE ENTREPRENEUR

Bird (1989:418) found that studies of entrepreneurs' needs and values demonstrate that entrepreneurs tend to need and value creative expression. In looking at entrepreneurs as leaders, we must first distinguish leadership from management. In simple terms, leaders think and act strategically (i.e. do the right things) while

managers are concerned with daily operations (i.e., do things right) (Zaleznik, 1977).

2.4 ENTREPRENEURSHIP - INTRODUCTION

Entrepreneurship is elusive and difficult to define. (The word itself is derived from a French root meaning “to undertake.” Therefore Kilby (in Kao, 1991:14) compared it to the Heffalump of Winnie the Pooh fame.) Low and MacMillan (1988:141) stated that entrepreneurship is intertwined with a complex set of contiguous and overlapping constructs such as management of change, innovation, technological and environmental turbulence, new product development, small business management, individualism and industry evolution. Wickham (2001:5) reports on Gartner’s findings that he summarized into 90 different attributes associated with the entrepreneur. These were not just variations on a theme. Many pairs of definitions shared no common attribute. The elusiveness of a clear-cut definition of the entrepreneur and entrepreneurship is highlighted by these findings. Entrepreneurship is the emergence and growth of new business. (Timmons, 1999: 28; Nieman et al, 2003: 9). However Timmons recognizes the fact that some of these new businesses grew into entrepreneurial legends and sites Netscape, Amazon.Com, Sun Microsystems, Home Depot, McDonald’s, Compaq Computer, Intuit, and Staples. As these businesses are mostly large current day multinational organizations, it is clear that they have long passed the stage of being emerging or new businesses. The question can be asked whether these organizations are still entrepreneurial in nature. From the literature study it is clear that these organizations are often referenced as corporate entrepreneurial role models.

This literature study explores both the classical entrepreneur and corporate entrepreneurship.

For the classical entrepreneur the most referenced constructs are:

- Entrepreneurial personality
- Entrepreneurial motivation
- Creativity and Innovation
- Risk-taking
- Entrepreneurial Process

For corporate entrepreneurship the constructs discussed in this study are:

- Corporate vision and direction
  - Entrepreneurial orientation
  - Creativity and Innovation
  - Growth
- Corporate environment
  - Organization structure
  - Controlling the entrepreneurial activity
  - Entrepreneurial culture
  - Measuring Entrepreneurial performance
  - Reward systems

2.5 THE CLASSICAL ENTREPRENEUR

2.5.1 Entrepreneurial personality

The entrepreneur is central to the study of entrepreneurship, for without the key individual who makes things happen, there can be no creative or entrepreneurial result. Timmons (1999:221) concludes from a literature study that the entrepreneurial personality can be summarised into six themes as the desirable and acquirable attitudes and behaviours of entrepreneurs. These are

- Commitment and determination
- Leadership
- Opportunity obsession
- Tolerance of risk, ambiguity, and uncertainty
- Creativity, self-reliance, and ability to adapt
- Motivation to excel

Traits within several of these themes have been studied in greater detail. This was done in order to develop a profile of the entrepreneur to identify possible successful candidates for entrepreneurship (Kao, 1991:21). Kao however concludes

that the trait approach is far from satisfactory as many traits used to describe entrepreneurs could just as easily apply to managers. Kao concludes and is supported by the general literature that the entrepreneur involves seeking and exploiting opportunities while putting one's self at risk for the sake of the venture. (Wickham, 2001: 35; Nieman et al, 2003: 9; Morris & Kuratko, 2002: 21)

The entrepreneur's central question is "What can I do?" (Kao, 1991:22) or "Is there an opportunity here, and how can I exploit it?" (Hisrich et al, 2005: 38). On the other hand, the manager's question is: "How should it be done?" Put in different words the entrepreneur focuses on doing the right things while the manager focuses on doing things right. The relationship between these two role-players in the organization is explored later in this chapter.

2.5.2 Entrepreneurial motivation

It is common knowledge that people work best when they are motivated to do so. The entrepreneur cannot demand effort from someone; they must support the individual and encourage them to offer their efforts. The first person whose motivation the entrepreneur must address is his or her own! (Wickham, 2001: 377). Self-motivation is achieved by understanding why you have chosen to be an entrepreneur, being able to learn from your mistakes and most important to enjoy the rewards of your entrepreneurial success. This is in line with the majority of theoretical models for the study of entrepreneurial performance that emphasize motivation as one of the key elements in the success of small businesses. Entrepreneurial motivation is seen as objectives or goals that entrepreneurs seek to achieve through business ownership. These entrepreneurial objectives are presumed to determine the behavioural patterns of the entrepreneurs and, indirectly, the success of their businesses.

Timmons (1999: 216) refers to the work of McClelland, Atkinson and their colleagues who for more than 35 had years studied individual motivation. Their theory of psychological motivation is generally accepted as part of the literature on entrepreneurship. The theory states that people are motivated by three principle needs: 1) the need for achievement (nAch), 2) the need for power, and 3) the need for affiliation. Timmons further describes nAch as the need to excel and for

measurable personal accomplishment. In order to improve performance, the individual sets realistic and challenging goals and likes to get feedback on how well he or she is doing. The need for power is the need to influence others and to achieve the goal to outperform others or to establish a reputation. The need for affiliation is the need to attain a warm relationship with someone else and/or to enjoy mutual friendship.

From the above it can be seen that recognition and reward are integral to motivation. Cornwall and Perlman support this by emphasizing the practise of using rewards to motivate employees so that they will do what is needed in the entrepreneurial organization, that is, to act in productive, innovative ways to serve organizational goals. The entrepreneurial organization motivates employees to act in these ways by 1) the removal of barriers, and 2) the provision of clear paths and goals. If an organization respect people and empowers them, and if an organization has a culture that supports individuals in their work, this may be all the motivation many people need. (Cornwall and Perlman, 1990:140)

In larger organizations the reward and compensation systems are one of the most visible parts of HRM. Ultimately, employees come to work every day to achieve rewards. These rewards can take any number of forms. According to Morris and Kuratko (2002:244) some people seek financial rewards; others seek power and status; and still others strive for personal and career development, self-actualisation, or social rewards. Clearly, rewards represent a very potent tool to influence employee behaviour on the job, especially the set of rewards over which management has direct control. In this study the focus is on the entrepreneur and Porter and Lawel's (1968) expectancy model as in Morris and Kuratko (2002:244) posits that there is a direct relationship between the employee's motivation to be innovative on the job, take calculated risks, and being proactive as well as the perception of the direct relationships between 1) effort put forward and performance on the appraisal system; 2) good performance appraisal and rewards; and 3) whether the company offers the correct rewards.

2.5.3 Creativity and Innovation

Lumsdaine and Lumsdaine (1995:14) define creativity as playing with imagination and possibilities, leading to new and meaningful connections and outcomes while interacting with ideas, people and the environment. The authors continue and state that when a creative idea has been widely implemented in such a way that it has led to permanent change, innovation has occurred.

Creativity and innovation are not interchangeable concepts. Amabile (in Mauzy and Harriman 2003:7) defines creativity as the generation of novel and appropriate ideas. Innovation on the other hand, implements those ideas and thereby changes the order of things in the world. It is important to recognize the role of creativity in the innovative process because creativity, the generation of new ideas, results in the improved efficiency and effectiveness of a system. The entrepreneur must have the desire to take a good idea through the various development stages. Therefore the successful entrepreneur is able to blend imaginative, creative thinking with systematic, logical processing abilities. (Kuratko and Welsch, 1994: 44)

The entrepreneur has historically been viewed as an independent, a highly self-reliant innovator, and the champion of the free enterprise economy. The successful entrepreneurial venture is usually based on significant innovation. (Wickham, 2001: 24) Creativity involves the adjustment or refinement of existing procedures and/or products, the identification of opportunities and solutions to problems. Any application of new ideas that leads to venture creation or ensures that an enterprise continues to exist, adds value and any person doing so is involved in economic creation. (Nieman et al 2003:15)

It is not the purpose of this study to discuss the constructs of creativity and innovation in detail, but only to highlight the importance of these constructs in the life of successful entrepreneurs.

2.5.4 Creation, innovation and renewal within an existing organisation

Entrepreneurship is about bringing entrepreneurial behaviour into an organisation and focusing on extending the firm's domain of competence and functioning. Innovation is entrepreneurial because it involves new combinations of

resources and the way in which they are used that may dramatically alter bases of competition in an industry or lead to the creation of a new industry.

What follows below is a description of the major components of CE that is used in this study, namely new business venturing, innovativeness, self-renewal, proactiveness, restructuring, and risk-taking.

2.5.4.1 New business venturing

Simon, Houghton and Gurney (1999:146) state that today's companies face dynamic environments that often necessitate entering new areas. These areas may be so different from the companies' current markets that the typical procedures for introducing products may not apply. The existing structures, policies, and practices do not fit the new area. Porter (1987) found that buying other companies that do "fit" the market might be impractical because of high acquisition premiums and distrust between firms. Many companies therefore set up semi-autonomous mini start-ups known as internal corporate venturing.

Jennings (1994:217) found that for large firms with many layers of management and detail control systems, corporate ventures offer a special promise of creating entrepreneurial activity. These large firms try to scale down their manner of operating when they want to enter new business areas. They have discovered the special virtue of building an entrepreneurial organization and harnessing entrepreneurial energy. Block & MacMillan (1993) defines the goal of these start-ups as seeking to develop a whole new business specifically to enter new and emerging markets. The new products normally require their own unique organisational structure, culture and system.

The large firms' manner of operations and control can hinder the success of the corporate venture as the corporation may feel the need to monitor the venture because of its lack of a track record and the corporation's lack of familiarity with the venture's structure, culture and systems. (Block & MacMillan, 1993) If this monitoring and or control or the perceived returns on investment is not to the liking of the corporation, this might lead to the withdrawal of support and the demise of the venture. (Simon et al., 1999). Kuratko & Hodgetts (1995) reports that

many studies found that venture managers need a 'godparent', that is, a senior executive in the organization who will fight for the venture and block corporate resistance. It is however accepted that the conjunction of the two forces might even produce worse results than either would generate on its own. Organisational resistance may stop the venture from taking the right actions, or the godparent might give it the freedom to pursue the wrong ones. The need to balance control has been recognised. (Block & MacMillan, 1993; Burgelman, 1983) This lead to Simon et al. (1999) suggesting the need for an ombudsperson – a person with a great deal of authority in the company that will outrank the godparent.

On the other hand, some companies excel in the creation of internal corporate ventures. One such a company is Minnesota Mining and Manufacturing Company better known as 3M. It kept 97% of the ventures it created in the 1980's. Starting with one venture that produced sandpaper that works underwater, 3M's ventures have generated over 60,000 products ranging from Post-It notepads to street sign reflectors. (Mitsch, 1990)

From this it is clear that venturing can be successful, providing the organization supplies the necessary support and allows the necessary freedom to act in an entrepreneurial manner.

2.5.4.2 Innovativeness

Innovativeness indicates product and service innovation with emphasis on development and innovation technology. It includes new product development, product improvements, new production methods and procedures, as well as new or improved ways of delivering services to the customer. The emphasis here is on concepts or activities that represent a departure from what is currently available. The fundamental question is to what extent is the company doing things that are novel, unique or different? In other words, does the concept address a need that has not previously been addressed? Does it change the way the organisation goes about addressing the need? Is it a dramatic improvement over conventional solutions?

2.5.4.3 Self-renewal

Self-renewal addresses the transformation of organisations through the renewal of key ideas on which they are built. Self-renewal has strategic and organisational change implications and includes the redefinition of the business concept, reorganisation, and the introduction of system-wide changes for innovation. Self-renewal is entrepreneurial because it involves entrepreneurial efforts that result in significant changes to an organisation's business or corporate level strategy or structure. These changes alter pre-existing relationships within the organisation or between the organisation and its external environment.

It follows from the foregoing discussions that both self-renewal and corporate venturing suggest changes in either the strategy or structure of an existing corporation, which may involve innovation. According to Sharma and Chrisman (1999) the principal difference between the two is that new business venturing involves the creation of new businesses whereas self-renewal leads to the reconfiguration of existing businesses within a corporate setting.

2.5.4.4 Proactiveness

This term signifies aggressive posturing relative to competitors. A proactive firm is inclined to take risks through experimentation. It takes initiatives and is bold and aggressive in pursuing opportunities. It attempts to lead rather than follow competitors. Miller (1983:7) sees entrepreneurial companies as acting on rather than reacting to their environment. Morris and Kuratko (2002:44), state that the essence of proactiveness is about implementation. Implementation is about bringing an entrepreneurial concept to fruition. Venkatraman (1989:942) conceives of proactiveness as a continuous search for market opportunities and experimentation with potential responses to changing environmental trends.

2.5.5 Risk-taking

Entrepreneurial risk is defined by Cornwall and Perlman (1990:9) as decision-making about new ventures, products, or processes under conditions of risk and uncertainty. It has the potential for either significant gains or significant losses. Risk-taking in this context is the conscious decision to assume new venture or product risk.

According to Morris and Kuratko (2002:41) risk-taking involves a willingness to pursue opportunities that have a reasonable likelihood of producing losses or significant performance discrepancies. These authors are quick to state that entrepreneurship does not entail reckless decision-making. It involves a realistic awareness of the risks involved. By engaging in numerous experiments, testing markets, and trial runs, the entrepreneur is better able to determine what works and what does not. These authors further argue that this form of quickened learning may come at the expense of minor failures, but it is also likely to ensure more sustainable long-term success. Companies that do not innovate are likely to face a higher risk of not perceiving market and technology shifts that are capitalized on by competitors.

McClelland (1961) as in Kent et al (1982:425) determined that persons with high nAch have moderate risk-taking propensities. Such a determination is especially interesting in the study of entrepreneurs, since all definitions of "entrepreneur" include risk-taking as one of the entrepreneurial constructs.

2.5.6 Entrepreneurial process

Entrepreneurship is not typically characterised as being logical, systematic, or planned and the entrepreneurship process is often perceived as disorderly and un-predictable. A number of attempts have been made at constructing theoretical models of the entrepreneurial process. (Gartner; Greenberger & Saxton; Learned; Herron & Sapienza; Herron & Robinson; Naffziger, Hornsby, & Kuratko; and Bhave as reported by Kuratko, Hornsby & Naffziger, 1997:26)

Moore and Bygrave in Carlock (1994) define the entrepreneurial process as a cycle of four activities:

- Innovation
- A triggering event
- Implementation, and
- Growth

In the cycle, different variables interact with the environment to influence the entrepreneurial process. During the innovation phase, the entrepreneur's personal traits such as risk-taking and experience interact with environmental forces

such as opportunities and role models. The interaction between the individual, organizational, social and environmental variables defines the path or outcome of each entrepreneurial event.

Olson in Ulrich (1998:4) identified four distinct phases of activities in the entrepreneurial process, as can be seen from the figure below. These stages are the identification of an opportunity or problem, thinking creatively and coming up with a set of design, selecting and testing the most appropriate design, and finally implementing the solution leading to new invention.

Figure 2-1 Bygrave's model of the entrepreneurial process (Carlock, 1994:28)

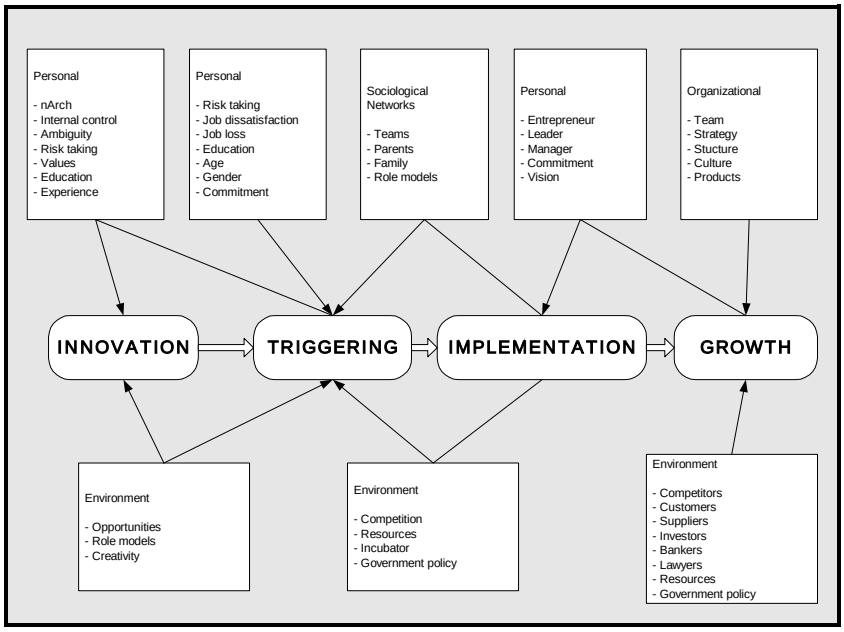
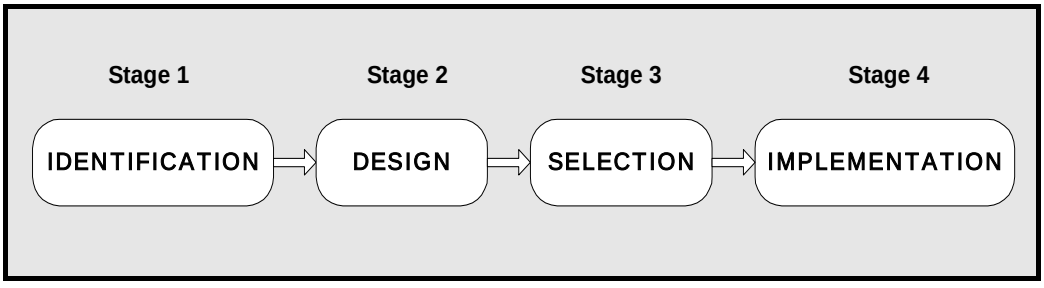


Figure 2-2 Olson's Entrepreneurial Process (Ulrich 1998:4)

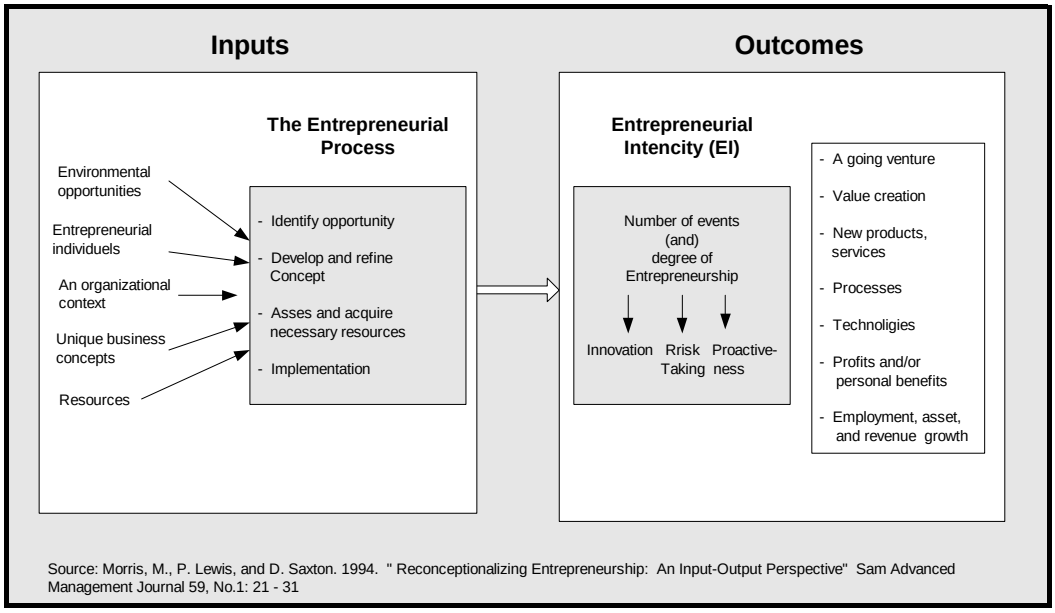


Hisrich and Peters (2002:39) also identified four distinct phases of activities in the entrepreneurial process that broadly corresponds with the phases identified by Olson. They are:

- Identification and evaluation of the opportunity;
- Development of the business plan;
- Determination of the required resources; and
- Management of the resulting enterprise.

Morris and Kuratko (2002:30) describe a more elaborate entrepreneurial process built primarily around inputs and outcomes. The process is shown in the figure below.

Figure 2-3 Morris, Lewis and Sexton's model of Entrepreneurial Inputs and Outputs



Source: Morris, M., P. Lewis, and D. Saxton. 1994. " Reconceptionalizing Entrepreneurship: An Input-Output Perspective" Sam Advanced Management Journal 59, No.1: 21 - 31

From these models it is clear that the base set by Ohlson and by Moore and Bygrave is rather consistent and is only expanded on in terms of detail and final outcome.

2.6 CORPORATE ENTREPRENEURSHIP

The concept of Corporate Entrepreneurship became viable when Pinchott (1995:7) released his book 'Intrapreneuring', in which he coined the term "intra" - within and "preneurship" - derived from entrepreneurship. Morris and Kuratko (2002:31) refer to Pinchott's intrapreneurship as corporate entrepreneurship and describe it as entrepreneurial behaviour inside established midsize and large organisations. In this study CE is dealt with in terms of 1) corporate vision and direction with sub constructs entrepreneurial orientation, creativity and innovation, growth and 2) the corporate environment with constructs organization structure, controlling the entrepreneurial activity, entrepreneurial culture, measuring entrepreneurial performance, and reward systems.

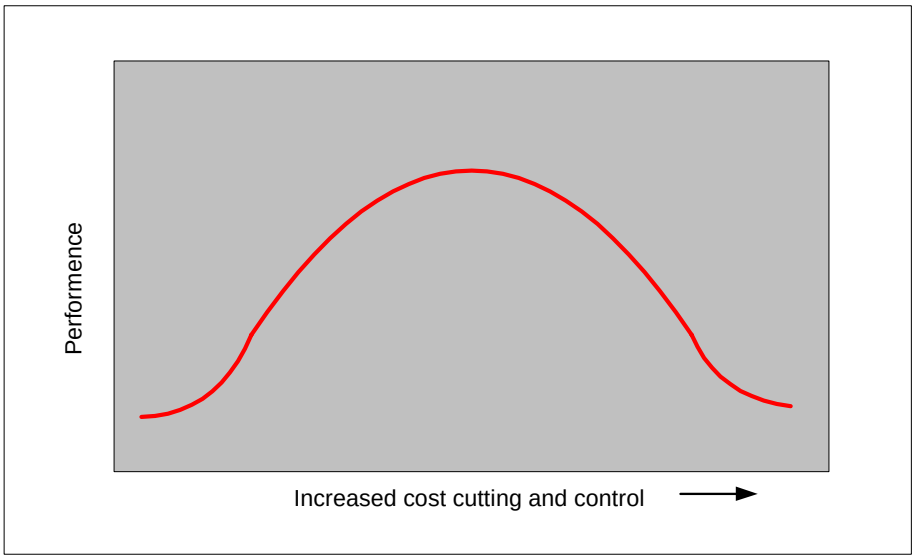
2.6.1 Corporate Entrepreneurial Orientation

Although the concept of entrepreneurship has been limited to new venture creation by some scholars (Vesper, 1985), corporate entrepreneurship may be viewed more broadly as consisting of two types of phenomena and processes: 1) the birth of new business within existing organizations, whether through internal innovation or joint ventures/alliances; and (2) the transformation of organizations through strategic renewal, i.e. the creation of new wealth through the combination of resources. (Guth & Ginsberg, 1990)

According to Dess et al. (1999:89) CE may benefit from new or unique strategic combinations like the use of overall low cost approaches to compete in an entrepreneurial context. This suggests combining a strategic approach with a structural approach to achieve competitive advantage. For example, by encouraging the use of state-of-the-art technologies and the latest techniques for cost-effective inventory control and information system management, firms can address both efficient productivity and quality-enhancement issues. Dess et al. (1999:90) further suggests that the relationship between cost-based strategies and performance may be curvilinear. That is, firms that are over cost-conscious as well as firms that are too lax in controlling costs are both likely to be low performers relative to firms that manage cost as a key element, but not the sole concern of the overall strategy. The

figure below depicts this relationship.

Figure 2-4 Curvilinear Relationship Between Cost-based Strategies and Performance



Source: Dess et al. (1999:90)

According to Joanne G. Sujansky (2005 a, b, c) the great priority of business is to execute a vision in the marketplace so that growth and profitability can be achieved and sustained. For this to happen, vigorous competition must be relentlessly confronted by organizations capable of high performance. These high performing organizations are able to consistently out-perform their rivals because employees are fuelled by a vibrant entrepreneurial character and voluntarily respond to the pressures of necessity.

A Vibrant Entrepreneurial Organization develops and retains people by creating a business environment that:

- **Enables and produces long term, voluntary change in attitudes and behaviour.**

  Any change that is not voluntary is not real change. People will comply with directives and simulate change, but if their heart is not supportive, the results are less than spectacular. It is the voluntary attitude that is

entrepreneurial in character, which forms the basic building block of the Vibrant Entrepreneurial Organization.

- **Supports and expects high productivity while reducing stress.** This is the opposite of what most businesses are experiencing in the workplace today. Downsizing and the maximization of resources, both human and technical, have created destructive workplace environments incapable of supporting the productivity levels and response capabilities demanded in a Vibrant Entrepreneurial Organization

- **Encourages and permits loyalty.**

  People who are loyal proactively look for ways to build and improve their organization's future. When loyalty is in short supply, disagreement and dissention exist at every level. Loyalty is created by leadership and environments must exist that will permit loyalty to emerge.

- **Enables people to take personal risk and allows them the freedom to be accountable.**
  Vibrant Entrepreneurial Organizations encourage their people to take measured risks so that gains can be made and the vision of the business can be advanced. The business develops people who can be consistently trusted to step up to challenges and to respond in effective ways.

- **Produces a winning tradition.**

  Success breeds more success and people who become accustomed to winning want to keep on winning. Indeed, in such environments, losing is unacceptable. Winners take losing personally and do whatever they must do to avoid it.

Sujansky believes that those who make the decision to turn their company into a Vibrant Entrepreneurial Organization must place a high priority on implementing strategies that will permit the emergence of these five characteristics. Strategies that support the creation of a Vibrant Entrepreneurial Organization will measure and test

decisions and choices based on five simple questions:

- Does it contribute to creating an environment that will allow our people to become the best they can be?
- Will it help us to execute our vision in the marketplace?
- Will it model winning behaviour?
- Will it help to develop and retain our best people?
- Will it create a sense of urgency?

Failing to do what is necessary to create an environment that will establish and sustain a Vibrant Entrepreneurial Organization is inexcusable as competition and the speed of change will eventually crush and defeat those organizations that fail to embrace these principles.

2.6.2 Creativity and Innovation

As stated previously, Bird (1989:418) found that studies of entrepreneurs' needs and values demonstrate that entrepreneurs tend to need and value creative expression.

Covin and Miles (1999:47) take the position that there is a commonality among all firms that could reasonably be described as entrepreneurial. This commonality is the presence of innovation. Here innovation refers to the introduction of new products, process, technology, system, technique, resource or capability to the firm or its markets. In addition to this they claim that another element must be present in order to claim an entrepreneurial orientation. This element is the presence of the objective of sustained high performance or improving competitive standing through actions that radically energize organizations or "shake up" the status quo in their markets or industry.

Mauzy and Harriman (2003:7) defined four linked, interacting critical dynamics underlying creativity. They are: motivation, curiosity and fear, the breaking and making of connections, and evaluation. The authors further found that organizational climate has an overwhelming influence on the success of creativity as

creativity does not happen in a vacuum and needs a sympathetic environment.

Kuratko and Welsch (1994:45) describe creative thinking as a process of four commonly agreed upon phases. Most experts agree on the general nature and relationship between these phases although they refer to them by a variety of names. Kuratko and Welsch named the four phases:

i. Background or knowledge accumulation;
ii. Incubation;
iii. Idea experience and
iv. Evaluation and implementation.

Kornwell and Perlman (1990:159) identified three conditions in organizations that help support creativity:

i. Impediments removed;
ii. Empowerment and
iii. Supportive culture.

The removal of impediments refers to the removal of:

- Dysfunctional bureaucracy, including rigid formal communication
- Organizational politics and infighting
- Manager's over confidence in the organization's ability to compete in the marketplace
- The belief that innovation will come without effort.

Empowerment refers to the creative leadership that shifts from motivating to empowering employees. Motivation assumes the manager knows where to go and induces the subordinates to follow. Empowerment assumes that new ideas can be found for any problem and who knows best to find them than the employee. (Miller, 1988:115)

Perhaps the most important condition influencing creativity is organizational culture. Creativity can never be a quick fix. It must become a part of managing and a way of making decisions. This can only come about if the culture supports and actively rewards creative activities. (Kornwell & Perlman, 1990:160)

These findings are supported by Machet as in Sutherland (2001:56) that found a hierarchy of three practices to ensure corporate entrepreneurship:

Firstly, it is necessary to remove inhibitory practices that constrain people and prevent recruitment being handled entrepreneurial, such as a bureaucratic stranglehold on the speed at which hiring of highly desirable people can take place, or an inflexible salary structure that leads to the loss of potential employees who could significantly improve your company's competitive position, or having line managers who are untrained in valid selection techniques doing interviewing. The number of job offers made by the organization that is turned down should be measured.

The second level is the use of stimulatory practices that reward innovative, risky and proactive behaviour. Magic often happens at the edge of chaos. Managers should be measured on and rewarded for the extent to which they personally attract and retain outstanding subordinates. The performance management system should enable the management of human capital as the personal responsibility of each manager.

Thirdly, Machet found the need to create systems to embed these activities in the organization. Organizations must be flexible, fleet of foot; there must be a high level of autonomy at the operating level, robust debate must be allowed and a learning orientation developed. The company's recruitment function should be measured against these criteria.

Having defined corporate entrepreneurship as the presence of innovation plus the presence of the objective of rejuvenating or purposefully redefining organizations, markets, or industries in order to create or sustain competitive superiority, it is possible to envision at least four forms of this phenomenon. (Covin & Miles,

1999:50). These forms are:

- Sustained regeneration – A new product introduction or the entrance of a new (to the firm) but existing market.
- Organizational rejuvenation – A major, internally focused innovation aimed at improving firm functioning or strategy implementation.
- Strategic renewal – The pursuit of a new strategic direction.
- Domain redefinition – The creation and exploitation of a new, previously unoccupied product/market arena.

The key attributes of these forms are summarised in the table below.

Table 2-1 Some Key Attributes of the Four Forms of Corporate Entrepreneurship

Form of corporate entrepreneurship	Focus of Corporate Entrepreneurship	Typical basis for Competitive Advantage	Typical Frequency of New Entrepreneurial Acts	Magnitude of Negative Impact if New Entrepreneurial Act is Unsuccessful
Sustained Regeneration	New Products or New Markets	Differentiation	High Frequency	Low
Organizational Rejuvenation	The Organization	Cost Leadership	Moderate Frequency	Low to moderate
Strategic Renewal	Business Strategy	Varies with specific form manifestation	Less Frequency	Moderate to high

Domain Redefinition	Creation and Exploitation of Product-Market Arenas	Quick Response	Infrequent	Varies with specific Form Manifestation and Contextual Considerations

Source: Covin and Miles (1999: 57)

Covin & Miles (1999: 59) concludes that there is a poor understanding of the reasons why corporate entrepreneurship often produce superior firm performance. Their response to this is that corporate entrepreneurship has a positive reputation as a generally effective behavioural phenomenon because the organizational actions associated with this phenomenon can often be linked to recognized bases of competitive advantage. A second reason proposed by Covin and Miles is that at least one of the aforementioned forms of corporate entrepreneurship will represent appropriate, defensible, and value-enhancing behaviour in any given firm's specific competitive context.

2.6.3 Growth

A strategy is generally perceived as a goal-oriented course of action that requires the deployment of resources. In a competitive environment, business enterprises require technological and organizational innovations to achieve their corporate objectives. An innovation is a successful introduction into an applied situation of means or ends that are new to the situation.

The final focused chapter in this thesis is on the role of entrepreneurial growth strategies and the need and use there off in successful entrepreneurial organisations. Growth is the very essence of entrepreneurship. However, knowing a growth rate is only an expression of what has happened in he firm. The real need according to Sexton and Smilor (1998) is to know what actions or best practices have impacted on the growth of the firm so that researchers can predict growth before it actually occurs. Studies of this type will help move the field from a body of knowledge that helps us to better train and educate students to one that has real-time practical applications for entrepreneurs trying to expand their businesses.

It is probably fair to say that no two business owners or managers regard growth in the same light and growth can be attained in many ways. The four most common growth objectives involve market share, sales, return on investment and diversification. (Tuller,1994). Within the electricity utility industry, growth in service levels will also be studied.

This could be a thesis on its own, but in this research the focus is on broad concepts rather than on the detail of the subject matter. Again the chapter will focus on entrepreneurial growth strategies in the corporate environment, and corporate management's understanding of it, and its acceptability within the corporate world. The results of the literature study will dictate the research questions to be posed to electricity utilities regarding this subject matter.

The literature study will also focus on how entrepreneurial corporate organizations develop and deploy growth strategies and how this can be applied within the South African electricity utility industry.

According to Wickham (2001:303) business growth is critical to entrepreneurial success. The potential for growth is one of the factors that distinguish the entrepreneurial venture from the small business. Growth is a dynamic process. It involves deployment and change within the organization, and changes the way in which the organization interacts with its environment. Wickham identifies four particular perspectives of importance: the financial, the strategic, the structural and the organizational.

Financial growth relates to the development of the business as a commercial entity. It is concerned with the increase in turnover, the cost and investment needed to achieve that turnover and the resulting profits. It is also interested in the increase in assets and the value of the business.

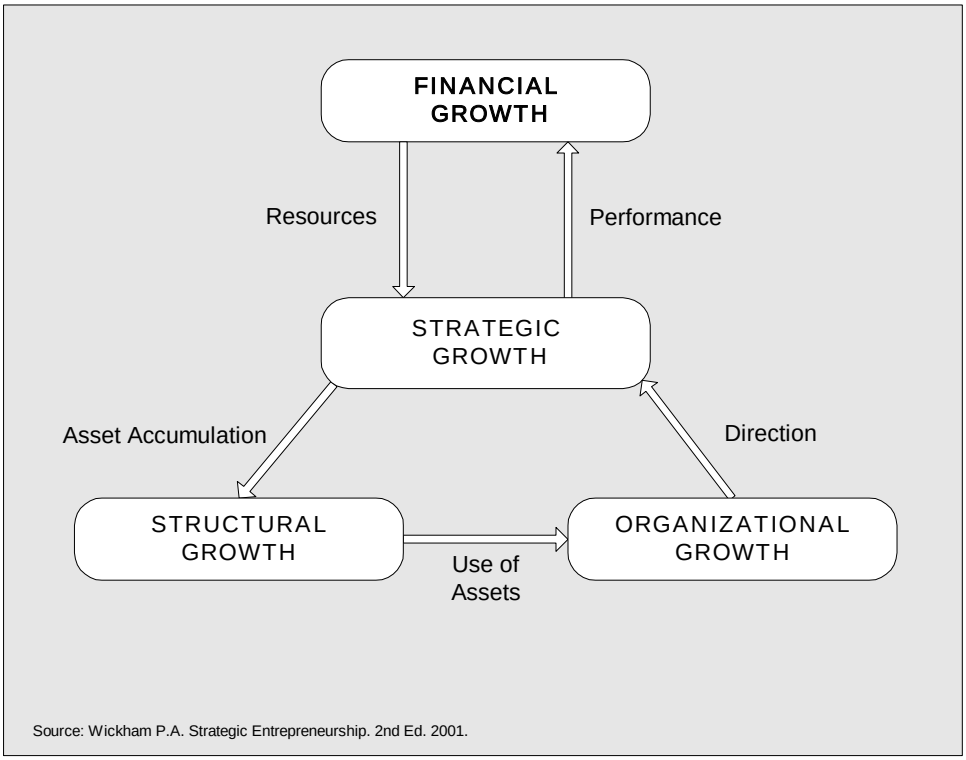
Strategic growth relates to the changes that take place in the way the organization interacts with its environment as a coherent, strategic whole by developing sustainable competitive advantages.

Structural growth relates to the changes in the way the organization organizes its internal systems, in particular, managerial roles and responsibilities, reporting relationships, communication links and resource control systems.

Organizational growth relates to the changes in the organizations processes, culture and attitudes. It is also concerned with the changes that must take place in the entrepreneur's role and leadership style as the business moves from a small to a large firm.

Wickham (2001:303) states that structural -, financial - and organizational growth are not independent of each other and that they are just different facets of the same underlying process. At the heart of the growth process is the awarding of valuable resources by external markets because it has demonstrated that it can make better use of them and create more value from them, than can the alternatives on offer. This model is shown graphically below.

Figure 2-5 The dynamics of growth for the entrepreneurial venture



Crijns and Ooghe as in Nieman and Pretorius (2004:24) found in a review of

successful business enterprises that a number of strategic organizational characteristics emerge namely:

- Market domination through size, cost advantages, technology, or process.
- Differentiation through uniqueness of identity or product
- Product leadership through quality, branding and value for customers
- Flexibility through speed and ability to change direction and gain advantage from new opportunities.
- Innovation – doing things differently and better quicker
- Future oriented through marketing, development of distribution channels and product and capacity building.
- Export – derive income from export markets and exploit the global market
- Related growth – growing businesses seek growth in related segment or niche markets

These strategic characteristics should be considered as part of any growth-oriented organization's strategy. The entrepreneurial traits discussed above support these organizational characteristics discussed below.

Covin and Slevin (1991:7) stated that the domain of entrepreneurship is no longer restricted in a conceptional sense to the independent new venture creation process as proposed by Low and MacMillan (1988:139).

As can be seen from this, corporate entrepreneurship has long been recognized as a potentially viable means for promoting and sustaining corporate competitiveness. Zahra and Covin (1995:43-58) reporting on (Covin & Miles, 1999), (Schollhammer, 1982), (Miller, 1983), (Khandwalla, 1987), (Guth & Ginsberg, 1990), (Naman & Slevin, 1993) and (Lumpkin & Dess, 1996) have noted that corporate entrepreneurship can be used to improve competitive position and transform corporations, their markets and industries as opportunities for value creating innovation are developed and exploited. This conventional wisdom is supported by the empirical evidence provided in a study by Zahra and Covin (1995). Their study examined the longitudinal impact of corporate entrepreneurship on a

financial performance index composed of both growth and profitability indicators. Using data collected from three samples and a total of 108 firms, they identified a positive and strengthening linkage between corporate entrepreneurial behaviour and subsequent financial performance.

Good examples of entrepreneurial firms are 3M, Motorola and Mitsubishi. Although each is broadly diversified across multiple business segments, they share the common attributes of entrepreneurial culture, flexible structure, rapid decision making capabilities and discontent with the status quo. These firms are constantly striving for a broader market presence or greater market share. They view their capacities for innovation as essential core competencies that must be protected, nourished and leveraged through corporate strategies of continual product /service development.

2.6.4 Organizational structure

Dess et al. (1999:91) discuss the question whether contemporary organizational forms are always more compatible with CE than traditional structures, and come to the conclusion that traditional organizational models, built around rigid hierarchies and clearly defined boundaries, are poorly suited for today's entrepreneurial corporations. The authors propose three organization designs to reduce boundaries, namely:

- The modular type – focuses on its core functional activities and outsources its component and business service requirements to specialists.
- The virtual type – describes a company that is part of a continually evolving network of independent businesses that share skills, costs and access to each other's markets through alliances.
- The barrier-free type – characterised by fluid, ambiguous, and deliberately ill-designed tasks and roles with fewer layers of management, smaller scale business units, and use of process teams and work groups, open vertical and horizontal communication, and accountability for results rather than an emphasis on activety.

Turner (2002:33) defines entrepreneurial organizations as organizations that promote entrepreneurial activity adapting structure, management and processes accordingly in order to gain the required agility, speed, creativity and drive to act profitably on specific opportunities. In doing so they are able to cultivate an entrepreneurial culture that harnesses the benefits of uncertainty and risk-oriented endeavours.

Kao (1991:5) assumes that entrepreneurship and creativity cannot be studied exclusively from one frame of reference such as the person or the organisation, but must be dealt with the interrelationship of three elements namely the person, the task and the organisational context. The person and the task are obvious, the organisational context is the immediate setting in which creative and entrepreneurial work takes place. Such issues as organisational structure and systems, the definition of work roles, and group culture significantly affect the nature of the creative and entrepreneurial environment. Such factors may limit or facilitate creativity and entrepreneurship.

Cornwall and Perlman (1990:108) defines organisational structure as the design of an organisation. It includes its number of units, divisions and subsidiaries, what each does and is responsible for. Structure is the formal pattern of how people and jobs are grouped. Traditional organisations depend on bureaucracy (Weber 1952) to ensure that work is accomplished efficiently. Bureaucratic structure emphasises efficiency by removing error, idiosyncrasy, and human element, and by reinforcing conformity and obedience. In a bureaucratic structure, power, knowledge and data tend to stay at the top of the organisation. This structure is rational and impersonal and is based on centralised decision-making, formalised rules and procedures, and highly specialised tasks.

An entrepreneurial organisation wants to avoid a bureaucratic structure for the following reasons:

- Innovative ideas get lost in this form of communication process
- Alternative paths to reach the goal is limited
- No or very little room for variety and change in processes and procedures

Clifford and Cavanaugh (1985) as in Cornwall and Perlman (1990:109), in their study of successful midsize high growth companies, go so far as to state that bureaucracy and business success are irreconcilable.

An organic structure enhances innovation and entrepreneurship. An organic entrepreneurial structure has fluidity and flexibility, minimal hierarchy, only necessary rules and emphasis on horizontal boundary spanning, do not specify rigid rules and allows different courses of action for new idea development. Sun Microsystems is a billion dollar company that has succeeded as an organic company.

2.6.5 Controlling the entrepreneurial activity

A major theme in the life of many entrepreneurs is the need for internal focus of control. They do not want to be managed or work in a bureaucratic organisation. In many situations it is the entrepreneur's inability to submit to and accept organisational rules and regulations that drove them to become entrepreneurs in the first place. In the corporate environment this fact must be noted and managed with utmost care.

As management grapple with the myriad elements of a control system, it is worth stepping back and assessing overall characteristics of the controls that are in place. According to Morris and Kuratko (2002: 221) the principle outcomes (normally sort through control efforts) include risk reduction, elimination of uncertainty, highly efficient operations, goal conformance and specific role definitions. Unfortunately, outcomes such as these tend to be inconsistent with entrepreneurship. Yet it is the authors view that control systems can actually facilitate entrepreneurial behaviour in firms provided it is designed with the entrepreneur in mind. Control therefore focuses on loose, broad guidelines, decentralisation, flexibility, discretion, moving forward, people and communication-based systems. These views are supportive of those previously published by Cornwall and Perlman (1990: 204)

2.6.6 Entrepreneurial culture

Cornwall and Perlman (1990: 66) defines organisational culture as an organisation's reality that shapes all that goes on within the organisation. A culture is reflected in an organisation's philosophies, rules, norms, values, climate, symbols, heroes

and almost everything its members do. The authors further state that entrepreneurial organisations must have well thought-out, passionately felt values that give people meaning for the work they perform.

Morris and Kuratko (2002: 255) define the following six elements of culture:

- Values such as creativity, integrity, perseverance, ownership, achievement and individualism.
- Rules of conduct referring to everything from ethical behaviour to how an employee dresses
- Vocabulary: The language acronyms, jargon, signs, gossip and even song commonly used in the company
- Methodology: The perception of how things actually gets accomplished in the company including politicking, rule bending, sponsorship and innovation.
- Rituals: Rites, ceremonies, taboos, parties, retirement and rewards
- Myths and stories: The histories, sagas and legends of the organisation including a sense of who are the heroes in the companies.

The authors continue by picturing culture at three different levels: assumptions, values and artefacts. Assumptions are taken for granted, values are at a greater level of awareness whilst artefacts are visible but often not decipherable. The inference is that, if the goal is to create work environments that support entrepreneurship, culture underlies all the other components of the workplace. (i.e. rewards systems, structures, control systems and strategic direction)

2.6.7 Creating the Venture's culture.

Osland and Yaprak (1995) stated that a venture's culture plays an important role in developing innovative products and encourage an aggressive posture. This posture and innovative orientation do not form part of established organisation's culture, which then compel these organisations to go the venturing route in order to create independent ventures within. A good example of this is General Motors. As a stodgy, huge, bureaucratic organization it found it difficult to compete in the increasingly hostile environment. It formed the Saturn venture to promote

creativity, communication, and participation. Ultimately, Saturn played a role in revamping many of the automobile industry's practices. (Mintzberg & Quinn, 1996) Kodak, on the other hand had 4000 proposals for new ventures, but opted to accept only 14. After receiving some initial funding, the ventures had to turn an almost immediate profit to avoid termination. Over time Kodak slowly decreased the venture manager's autonomy. This eventually killed the entrepreneurial spirit. (Kanter et al., 1991)

Ginsberg and Hay (1994) suggest that recruiting a small committed venture team can play an important role in moulding the venture's culture. Kanter (1989) found that working closely together could foster creativity by increasing communication and interaction. Layman (1993) reported on Jean-Rene Fourtou, chairman and CEO of Rhône-Poulenc Rorer of France that has been very successful in utilising these principles and that he doubled the company's sales and became the tenth largest international chemical company in the world.

However, in addition to emphasising creativity, the venture manager must create bias to act. Simon et al. (1999) state that while a brief, but intense planning period can avoid many early and potentially fatal mistakes, one can only plan so much when moving into unknown territory.

The table below shows Simon et al's roles and actions for the players in internal venture creation and control.

Table 2-2 Roles and actions of Venture Leaders

VENTURE MANAGER	VENTURE GODPARENT	VENTURE OMBUDSMAN
Runs the venture: need autonomy	Protects the venture from organizational resistance: helps provide autonomy	Monitors venture progress: balances need for autonomy and control
Develops innovative, high quality products	Argues for a high level of support and against removal of support during corporate downturns	Decides markets to enter based on fit with corporation
Pursue aggressive strategies	Blocks corporate interference in day-to-day activities	Determines the number and size of ventures in the portfolio
Moulds a culture based on creativity and bias to act	Opposes inadequate rewards and unjust punishment	Uses milestones to provide venture support and managers compensation

2.6.8 Measuring entrepreneurial performance

The performance evaluation system refers to management's formal method of evaluating (measuring) the employees work output. This might be something as simple as a letter indicating the employees' performance has been excellent, good, average, poor or as involved as a multiple item rating survey subjectively filled out by multiple managers and peers and also incorporating the employees inputs. (Morris and Kuratko, 2002: 245)

Cornwall and Perlman (1990: 132) defines four critical dimensions to consider in judging entrepreneurial performance. These are:

- Financial results of entrepreneurial initiatives: These include volume, profit, ROI and other standard measures of financial performance.
- Non financial results of entrepreneurial initiatives: These include both tangible gains such as better utilisation of productive capacity, technological improvements and intangible gains such as an enhanced industry reputation or an improved image in the marketplace.
- Offshoot entrepreneurial initiatives: Even less successful initiatives may be judged as worth while if the learning from this experience allowed a successful second generation initiative.
- Human Resource Development from entrepreneurial initiatives: Even if it was judged as less than successful on the criteria above, an entrepreneurial initiative could still succeed in improving the technical, production, marketing and other capabilities and skills of the people in the organisation.

All entrepreneurial organisations need criteria such as those listed above if they are to implement and manage a reward system successfully. Performance must be defined.

2.6.9 Reward systems

Rewards have three major functions in the entrepreneurial organisation. They are used to (1) recruit people, (2) motivate, direct and guide employees, (3) retain organisational members. (Cornwall and Perlman, 1990: 139) A reward system is the incentives available within an organisation, the criteria by which these incentives can be gained and the process by which these rewards are distributed.

In support of this Morris and Kuratko (2002: 248) defined 9 principles to guide the use of awards programmes to encourage entrepreneurship. These principles are shown in the table below:

Table 2-3 Morris & Kuratko – Principles to guide award programmes for entrepreneurship

Principle	Description
1	Emphasises success rather than failure
2	Deliver recognition and reward in an open and publicised way
3	Provide recognition in a personal and honest manner
4	Tailor recognition and reward to the unique needs of the people involved- have many options available
5	Timing is crucial – recognise contributions throughout a project close to the time of achievement
6	Avoid the perception that awards are being given in a paternalistic and random way
7	Be sure people understand why they receive awards and the criteria used
8	Follow up on the recognition or awards- reinforce it, meetings, news letters and annual reviews
9	Recognise recognition – recognise people who recognise others for doing what is best for the company

Turner (2002:186) reiterates the fundamental that reward for entrepreneurial behaviour is the same as for instilling and developing it: ownership. Entrepreneurial organisations must comprise of people who have a personal stake. This does not necessarily mean having stock or shares but does mean “ownership” in the success of the organisation.

2.7 ENTREPRENEURSHIP AND MARKETING RELATIONSHIP

Synergy between marketing and entrepreneurship is needed to attune to customer's needs, develop innovative products to satisfy those needs, and implement profitable marketing programs. (Barrett & Weinstein, 1998; Hills & LaForge, 1992) The literature supports a strong relationship between corporate entrepreneurship and the marketing function. (Davis, Morris, & Allen, 1991; Slater & Naver, 1995; D'Aveni, 1994; Barrett & Weinstein, 1997).

The Austrian School of Economics led the way in establishing the interface between the two disciplines. (Barrett, Balloun, & Weinstein, 2000) Jacobson (1992:787) stated that entrepreneurs understand the discrepancy between *what is* and *what could be*, and that entrepreneurship is an "action that successfully directs the flow of resources towards fulfilment of consumer needs." According to Barrett et al, a rich research tradition has established that market orientation is the direct link between marketing and corporate entrepreneurship. Naver and Slater's (1990) work is closely aligned with this. These scholars define market orientation as having three tenets: customer orientation, competitive orientation and inter-functional orientation. Hence the firm:

- Is proactive in obtaining intelligence/ research on customers and competition
- Is innovative by reconfiguring its resources to formulate a strategic response, and
- Implements the response, which entails some degree of risk and uncertainty.

In their research on the relationship between corporate entrepreneurship and business performance with a focus on whether the implementation of the marketing mix factors of promotion, product quality, and price are not moderating variables between CE and business performance, Barrett et al. (2000) found the following:

- The marketing mix factors of product, price, and promotion are not in general moderating variables of the corporate entrepreneurship – business performance relationship
- Corporate entrepreneurship is positively correlated with business performance

- The correlation is stronger the larger the firm.

In summery Barrett et al. (2000) found that their research showed that the more management is (1) proactive towards customers and competition, (2) innovative in its products and processes, and (3) realistic in its risk-taking behaviour, the stronger the firm's business performance will be.

CHAPTER 3: LITERATURE REVIEW - APPLIED THEORY

3.1 INTRODUCTION

Chapter 2 discussed the literature on entrepreneurship in general and the concepts associated with the classical entrepreneur and corporate entrepreneurship. In this chapter the critical elements and dimensions that constitute corporate entrepreneurship are examined, and the relationship of CE to the key variables of organizational culture, management strategies, organizational success and organizational demographics, are evaluated. It also explores the literature on recent findings regarding CE in Electricity utilities.

3.2 CORPORATE ENTREPRENEURSHIP

Morris and Kuratko (2002:85) refer to Pinchott's intrapreneurship as corporate entrepreneurship and describe it as entrepreneurial behaviour inside established midsize and large organizations. In this study CE is dealt with in terms of

- Corporate vision and direction with sub constructs entrepreneurial orientation, motivation, creativity and innovation, business venturing, and growth;
- The corporate environment with constructs organization structure, controlling the entrepreneurial activity, entrepreneurial culture, measuring entrepreneurial performance, and reward systems.

Before these constructs can be discussed it is necessary to define and understand the South African Electricity utility. The literature refers to International organizations similar to the South African utility as state enterprises. These enterprises are discussed in 3.2.1.

3.2.1 The definition and culture of utilities

Morris and Jones (1999) studied 152 public sector managers in South Africa to determine the role of entrepreneurship in public sector organizations. They focused on entrepreneurship as a manageable process with underlying dimensions of

innovativeness, risk taking and proactiveness.

According to Morris and Jones (1999:71), public sector organizations are often conceptualised as monopolistic entities facing captive demand, enjoying guaranteed sources and levels of financing, and being relatively immune from the influences of voters, stakeholders and political institutions such as legislatures and courts. (Etzioni-Halevey, 1983; Litan & Nordhaus, 1983; Stein, 1995; Weidenbaum, 1992) Not only are most of the components of this stereotype inaccurate, but also the contemporary public sector organization faces unprecedented demands from a society that grows more complex and interdependent by the day (Lewis, 1980; Mitchell & Scott, 1987; Skoldberg, 1994). These utilities mostly originated from or are still part of the government sector and can be seen as public enterprises, a hybrid of public and private organizations that is considered to be a more efficient organizational form for some government programs. (Moon, 1999).

On the surface, public sector organizations would seem to have much in common with large corporations. Both types of organizations typically have formalized hierarchies, established stakeholder groups with competing demands, deeply entrenched cultures, detailed rules and procedures to guide operations, a desire on the part of managers for power and security and fairly rigid systems governing financial controls, cost allocations, budgeting and employee rewards. Managers in both types of organizations are often more concerned with internal than external developments and tend to focus more on considerations of process than on outcomes. With such comparisons one must however keep in mind the considerable diversity that exists among organizations in both sectors, and particularly among those in the public sector. (Morris & Jones, 1999). Because of these commonalities this study assessed the literature both for corporate and public sector organizations, keeping in mind the differences that do exist.

Referring back to Morris and Jones's study of 152 South African public sector Managers, the study made the following findings and conclusions:

At the level of the individual, entrepreneurship was mostly associated with self confidence, strong drive, strong leadership abilities, good organisational

skills, vision and self discipline – and least associated with luck and good political connections.

Of the respondents 38.8% agreed, 36.7% disagreed and 27.5% neither agreed or disagreed with the statement that people with entrepreneurial characteristics are born that way.

At the level of recognition, a strong leader at the top, good planning systems, a customer driven orientation, efficient operations and hands – on management were the leading characteristics.

Nearly half (48.6%) of the respondents associated entrepreneurship with a type of person and only 8% saw it as an organisational characteristic

Most managers (58.6%) saw a role for entrepreneurship in their organisations

Perceived payoffs for higher levels of entrepreneurship were:

i. Increased efficiency and effectiveness (39.9%)
ii. Improved service delivery (28.2%)
iii. Cost reduction (21.2%)
iv. Improved employee morale (19.1%)
v. Reduced dependency on tax revenue (9%)

The environment in public sector organisations can be designed in ways that help employees develop their entrepreneurial tendencies (88.5%)

The greatest opportunities for entrepreneurship were perceived to be at top management level (41.5%), then in a variety of functional areas (29.2%) and middle management (12.3%)

The South African civil services environment discourages the entrepreneurial individual – 23% strongly agree and 54% agree.

The leading obstacles to entrepreneurship are:

i. Inadequate rewards and incentives (27.3%)
ii. Bureaucracy and red tape (19.5%) and
iii. Autocratic management (13.6%)

Close to two thirds (63.5%) of respondents indicated that their organisations had developed new services over the last two years.

The most important things organisations could do to encourage entrepreneurship are:

i. Improved rewards and recognition for innovation and risk taking (29.1%)
ii. Active promotion of employee participation, empowerment and accountability (27.4%)
iii. Elimination of red tape (7.7%)

Further insights were uncovered by examining relationships among variables in the survey. To aid this analysis, composite indices were constructed for "applicability of entrepreneurship in the public sector organisations," "obstacles to entrepreneurship," and "entrepreneurial performance." Responses to the five scaled Cronbach reliability coefficient of.70, and were subsequently summated to produce a ratio–scaled index. The same procedure was followed in producing an index from the fifteen scaled items measuring the seriousness of various obstacles to entrepreneurial performance (Cronbach = .87)

Correlation analysis was then conducted. The results indicated that two of the three indices were related. Specifically, a positive association was found between the perceived applicability of entrepreneurship and how entrepreneurial the organisation was currently perceived to be (r=.20, p=.02) and a negative association was identified between the seriousness of perceived obstacles and entrepreneurial performance (r=-.30, p=.00). Further, given the emphasis in the literature on the

employee resistance to change, it is noteworthy that receptivity to change was negatively correlated with entrepreneurial performance (r=-.38, p=.00)

In their final analysis Morris and Jones (1999), concluded that they are not preparing entrepreneurship as a comprehensive framework intended to replace various models of public sector management, including models rooted in bureaucracy. However, the emergence of alternative models and the findings of their research suggest that conventional bureaucracy is an increasingly inadequate solution and that entrepreneurship must be an integral component of whatever model of frameworks are adopted.

Entrepreneurship implies an innovative proactive role for government in steering society toward improved quality of life. This includes generating alternative revenues, improving internal processes, and developing novel solutions to inadequately satisfied social and economic needs.

Galal as in Prokopenko and Pavlin (1991:8) explains that after the Second World War, public enterprises became an all important instrument with which governments all over the world stimulated economic development in order to achieve certain social goals. Besides pursuing commercial objectives, i.e. maximization of profit, these enterprises were expected to generate employment, assist in regional development, provide social services and/or sell output at lower than market prices and ensure a more equal distribution of income. Despite this it cannot be denied that public enterprises made positive contributions to the development process in many countries, especially in developing countries where, in the absence of other sources of entrepreneurship, they played a major role in the industrialization process. (Ahmed, 1982)

Galal (1989:114) states that in order to ensure the achievement of non – commercial objectives, governments exercised strong control over public enterprises. However, instead of controlling outcome, they controlled internal processes. This led to excessive and cumbersome probing political and bureaucratic intervention in operational decisions by multiple layers of government agencies. This further led to a progressive unwillingness on the part of managers to take risk.

Juneja (1990:85) as in Prokopenko and Pavlin (1991:9) found that due to this and to public enterprise's rigid salary scales and low remuneration, managers with high professional skills and entrepreneurial spirit could not be attracted. It was further found that given the soft budget constraints and non – commercial objectives, there is no compulsion to make profits in public enterprises. Since the state is the financier, the capital for risky and capital intensive projects is usually readily available. From this it is clear that public enterprises are perceived to comply with Weber's (1952) description of a highly bureaucratic organization.

Clifford and Cavanaugh (1985) as in Kao (1990:109) hypothesized that bureaucracy and business success are irreconcilable. Timmons and his colleagues (Kau,1990:20) summarized characteristics of the entrepreneur distilled from 50 research studies. These traits include:

- Total commitment, determination and perseverance
- Drive to achieve and grow
- Opportunity and goal orientation
- Taking initiative and personal responsibility
- Persistent problem solving
- Realism and a sense of humour
- Seeking and using feedback
- Internal locus of control
- Calculated risk-taking and risk seeking
- Low need for status and power
- Integrity and liability

Comparing these findings with those of Prokopenko and Pavlin on public enterprises mentioned above, Clifford and Cavanaugh's hypotheses do seem credible. However, from the literature it is also clear that entrepreneurial traits can be acquired by any organization, provided the acquisition become part of the organization's strategy to become entrepreneurial. This holds equally true for public enterprises. Possible alternative entrepreneurial solutions according to Prokopenko and Pavlin for turning

public enterprise around are:

- Changing organizational culture
- Devolving decision making
- Creative remuneration
- Creating passion and a sense of belonging
- By transforming the enterprise stock ownership companies

The authors site examples of these alternative entrepreneurial solutions from the developing world as well as communist and socialist countries.

From the literature mentioned above it is clear that South African Electricity utilities can be treated as a typical Prokopenko and Pavlin public enterprise for the following reasons:

- The utilities operate as geographical monopolies
- The utilities form part of either Local Government or the State Owned National distributor: Eskom
- Utilities operate in highly politicised environments
- Delivering social packages is very high on the agenda
- Reward system are highly structured and negotiated on a national forum
- Efficiency and effectiveness are delivered as lip service
- Job creation is important.

Determining the actual status of the utility will be dealt with in the data analysis and findings in later chapters of this thesis.

3.2.2 Management Strategies

Bartlett and Ghoshal (1997:92) explain that managers oversee the transformation process through which inputs are transformed into outputs. To carry out these responsibilities efficiently and effectively, they must understand how the organization interacts with the external environments and how the different parts of the

organization work together.

Hirschmann (1999) reviewed the development of management or as he calls it 'development administration', in third world bureaucracies. He concludes that in poor countries the hopes for the bureaucracy are not promising. It is becoming acceptable once again to acknowledge that the state and its core bureaucratic arm have an essential role to play in development. It is therefore no longer excusable to treat the public service as mere object or medium of development. As the utilities will evolve from these bureaucracies, this reality will have to be considered.

Sandford (2000) poses the question whether entrepreneurial middle management in public administration are loose cannons and rule breakers, or enterprising leaders? Critics see entrepreneurs as people prone to rule breaking, self-promotion and unwarranted risk taking, while proponents view them as exercising leadership and taking astute initiatives. Two cases are discussed. The evidence from both strongly supports the proponents' views. Innovators are creatively solving public-sector problems and are usually proactive in that they deal with problems before they escalate to crises. They use appropriate organizational channels to build support for their ideas. They take their opponents seriously and attempt to win support for their ideas through persuasion or accommodation.

In support of this, Sutherland (Feb 2001) found that in the highly competitive global world of work, attracting employees who have the knowledge, skills and attitudes to ensure the medium term survival of one's company is a critical success factor. "Gold collar workers," as scarce knowledge workers are now being called, need firstly to be attracted to your company and then made to decide to join the organization.

Kuratko (2001:28) discusses the role of entrepreneurial actions in the success of a healthcare company and postulates that as the 21st century unfolds, entrepreneurial actions are viewed as critical pathways to competitive advantage and improved performance. This author further discusses the theory and practical experience of Acordia Inc. - how they developed and prospered through their strategic entrepreneurial vision since 1986.

Kuratko (2001:31) further explains that entrepreneurship includes acts of creation, renewal, or innovation that occur within or outside an organization. When

these acts take place in an established firm, particularly a large one, like Acordia, they describe corporate entrepreneurship. Entrepreneurship is especially important for firms facing rapid changes in industry and market structures, customers' needs, technology, and societal values. A firm's strategy is the set of commitments and actions taken to develop and exploit a competitive advantage in the marketplace.

Because they are the source of how firms create value, being able to develop and exploit one or more competitive advantages is a universal objective of all companies.

A competitive advantage "is the result of an enduring value differential between the products or services of one organization and those of its competitors in the minds of customers."

Companies able to exploit the competitive advantages they own today, while simultaneously making decisions to shape the advantages they intend to own and use tomorrow, increase the probability of long term survival, growth, and financial success, to organize people and tasks in ways that make it possible for entrepreneurial actions to flourish, to have sufficient resources to support entrepreneurial actions, to use rewards and compensation systems that reinforce individuals' and teams' entrepreneurial actions and to encourage risk taking, as measured by individuals' willingness to accept risks and tolerate failure.

Morris and Kuratko (2002:312) focus on the entrepreneurial challenge confronting the modern (global) organization. In the USA an average of 600,000 new incorporations were formed in the last ten years. Corporations realized that the same entrepreneurial spirit in people who developed these new ventures might be present within the corporate boundaries. The new century therefore sees corporate strategies focussing heavily on innovation and entrepreneurial thinking. The authors postulate that there are many similarities and some real difference between the start-up and corporate entrepreneur. There are also fundamental differences in the way the entrepreneurial organization sets up its strategy, and is managed, structured and monitored.

According to Morris and Kuratko (2002:6) traditional management functions consists of planning, organizing, leading and controlling where planning is the process of setting objectives and then determining the steps needed to attain them. In

carrying out this process, organizations often rely on many different aspects of planning, including the formulation of purposes or missions, objectives, strategies, policies, procedures, rules, programmes and budgets. Organizing is the process of assigning duties and coordinating employee efforts in order to ensure maximum efficiency. Leadership is the process of influencing people to direct their efforts towards the achievement of some particular goal. To be good leaders, managers must be knowledgeable about human behaviour, the concept of leadership and communication. The controlling process consists of three steps:

i. Establishing of standards
ii. Comparison of results against standards and
iii. Correction of deviations.

According to Morris and Kuratko (2002:16) the ability to manage an entrepreneurial mindset is the most vital requirement for business success. Growth means embracing change, and the management of change is one of the most underdeveloped skills among managers. Seeking and capitalizing on opportunity, taking risks beyond security, and having the tenacity to push an innovative idea through to reality represent the essence of what entrepreneurs do. In formulating the organization's strategies management must take full cognisance of the last statement.

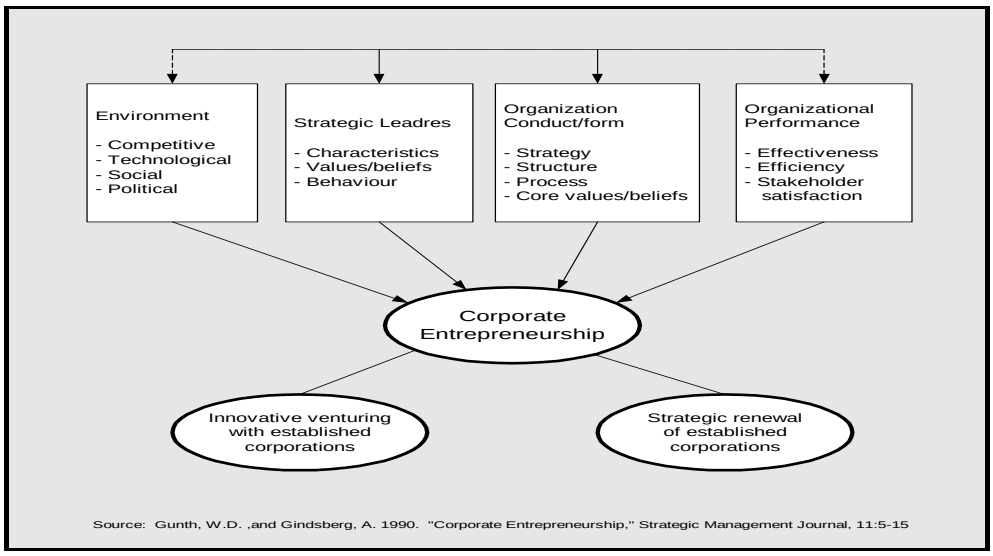
According to Morris and Kuratko (2002) this should be addressed by management through the development and promotion of:

- An appropriate company culture by addressing the following entrepreneurial constructs:
  - The rate of new product and/or service introduction to the market;
  - The emphasis on continuous improvement in methods of production and service delivery;
  - Risk taking by key executives;
  - The use of "idea people" and "brain storming"

- Growth strategies;
- Risk strategies; and
- Conflict strategies.
- Reward strategies;
- Organization Structure.

Guth and Ginsberg (1990:12) provide a framework for developing knowledge about corporate entrepreneurship. They argue that the domain of corporate entrepreneurship encompasses two types of processes: internal innovation (venturing through the creation of new businesses within existing organizations) and strategic renewal initiatives that transform operations within organizations. Figure 3-1 illustrates this model.

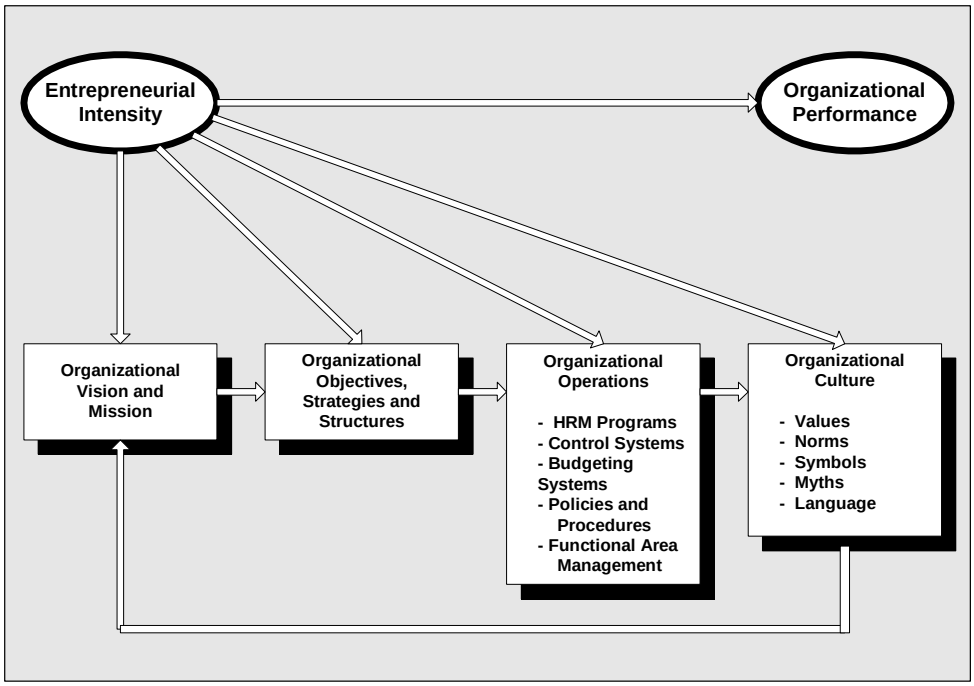
Figure 3-1 Fitting corporate entrepreneurship into strategic management



Yet another perspective approaches entrepreneurship as an overall orientation within a company. The focus here is on the integration of entrepreneurship throughout the entire organisation, rather than merely viewing entrepreneurship as a discreet activity or event. Originally developed by Covin and Slevin Figure 3.2 indicates that entrepreneurial orientation or intensity has a direct and positive influence

on company performance. It does so because it is interwoven with the vision and mission of the organisation; the strategies, objectives, structures; operations and overall organisational culture. The major purpose of this integrative model is to allow for considerable managerial intervention and thus reduce the view of corporate entrepreneurship as mysterious. (Morris & Kuratko, 2002: 34)

Figure 3-2 Strategic Integration of Entrepreneurship throughout the organisation



3.2.3 The role of middle management

Shaker, Zahra and Hansen (2000:90) state that for decades, Senior Executive Officers around the globe have followed a system of centralised planning, where key decisions about strategic directions and resource allocations were made at the top. In these enterprises, middle managers were expected to implement the policies emanated from the top of their organisational structure. There was very little room for deviation from corporate mandates. In privatised enterprises, however, established rules are being revisited and rewritten to allow middle managers to lead the redefinition of the strategic direction of the organisation and units. Middle managers understand their businesses. This expertise, combined with their position

in the hierarchy, gives middle managers a unique perspective about the desired changes in the company's philosophy and operating procedure in order to succeed in changing markets. Middle managers can also support those entrepreneurial initiatives of their subordinates and champion promising ideas that are compatible with the mission of the firm. Middle managers need to connect entrepreneurs with existing or emerging power centres that determine the fate of their innovative ventures.

Though privatised companies are under pressure to reduce their operating costs to achieve competitive parity, middle management need to retain and re-skill the labour force. There is no substitute for effective training, but exposure to new ideas, systems, and techniques can promote creativity, encourage entrepreneurship, and foster innovation.

In short, entrepreneurs in privatised companies will lead the revitalisation of such companies if allowed to do so. The revitalisation will take the form of:

- New missions
- New management systems
- New standard operating procedures
- Access to new technologies
- Opportunities for collaboration
- Changes in organizational structures
- Changes in organizational cultures
- Alignment of incentives for management and employees
- Re-skilling the labour force

Entrepreneurship can enhance national competitiveness by promoting innovation, creating new knowledge, accumulating skills and capabilities, and creating jobs. (Shaker et al. 2000:96)

Electricity utilities are by nature a high technology environment, often dominated by Technocrats and Engineers. Whittaker (2001:82-83) confirms the major differences

between Engineers and Entrepreneurs as shown in the table below:

Table 3-1 Worldview of Engineers vs. Entrepreneurs

Engineers	Entrepreneur
Conservative	Visionary
Studies in minute detail	Sees the broad scope
Indifferent communicator	Excellent communicator
Proactiveness (tries to anticipate everything)	Reactive (deals with situations and events as they arise)
Risk Averse	Risk Taking
Seeks technological feasibility	Seeks economic success
Practical	Optimistic
Wants predictable future	Has contingent futures

Based on two case studies Whittaker (2001:83) reports that that it is a credible strategy for entrepreneurs to position them between the source of capital and the source of technology, and in transmitting information across the barrier, to enhance it in such a way as to add urgency, excitement, and tension to the message. Whittaker further concludes that in his evaluation of the case studies it would not have been in the best interest of the projects for the engineers to have direct contact with the capital providers.

From this it can be seen that the REDs will benefit in promoting the entrepreneurial middle manager and this can be done by enabling the revitalisation mentioned above as proposed by Shaker, Zahra and Hansen (2000:90).

The literature converges on five organizational factors that may foster middle management activities in entrepreneurial organisations. (Hornsby et al. 2000:253)

They are:

- The appropriate use of rewards

  The literature stresses that an effective reward system that spurs entrepreneurial activity must consider goals, feedback, emphasis on individual responsibility and results based incentives.
- Gaining of top management support.

  An active willingness of senior management to facilitate and promote entrepreneurial activity in the organization, including innovative ideas as well as providing necessary resources, expertise and protection is present.
- Resource availability.

  Middle management must perceive the availability of resources for innovative activities to encourage experimentation and risk taking.
- Supportive organizational structure.

  The structure must foster the administrative mechanisms by which ideas are evaluated, chosen and implemented.
- Risk-taking and tolerance for failure.
  - Middle managers must perceive an environment that encourages calculated risk-taking while maintaining reasonable tolerance for failure.

From this it is clear that middle management should, like the entrepreneur also experience a sense of belonging and importance in order to promote growth in the organization.

3.2.4 Changing the electricity industry

Francis (2002) reports that the electricity crisis in California, the bankruptcy of Pacific Gas & Electric Co., and the failure of Enron - once the world's largest energy trader - have stalled moves by other states toward a competitive system. Should this be allowed? Can entrepreneurs make a difference? Isaac & Larsen (2002) postulates that as more utility markets are deregulated and competition is introduced, there is an increasing need to understand how the planning methods used under monopoly have to change to take the new deregulated environment into account. They argue that deregulation has changed the fundamental assumptions, making the

planning methods used under monopoly less useful after deregulation. They reviewed a number of methods that utilities should consider using when they formulate strategy in deregulated markets.

3.2.5 Measuring Corporate Entrepreneurship

In conclusion: Morris and Kuratko (2003:15) refer to Pinchott's intrapreneurship as corporate entrepreneurship and describe it as entrepreneurial behaviour inside established midsize and large organisations. They continue to state that the quest for competitive advantage can no longer be found simply in lower costs, or higher quality, or better service. Instead, it lies in adaptability, flexibility, speed, aggressiveness, and innovativeness – in short: entrepreneurship. Morris developed and published the so-called Entrepreneurial Performance Index (EPI) (Morris and Kuratko, 2003) as a CE measurement instrument and focuses on the influence of CE on performance. Morris and Sexton (1996:9) established the reliability and validity of the EPI instrument.

The EPI measures the following factors:

- Company orientation
- New product/service/process introduction
- Key business behavioral dimensions

This is done using 18 five-point Likert type questions.

3.3 THE ROLE OF ORGANIZATIONAL COMPENSATION SYSTEMS

From paragraph 3.2.3 it can be seen that recognition and reward are integral to motivation. Cornwall and Perlman support this by emphasizing the practice of using rewards to motivate employees so that they will do what is needed in the entrepreneurial organization, that is, to act in productive, innovative ways to serve organizational goals. The entrepreneurial organization motivates employees to act in these ways by 1) the removal of barriers, and 2) the provision of clear paths and goals. If an organization respects people and empower them, and if an organization has a culture that supports individuals in their work, this may be all the motivation many people need. (Cornwall and Perlman, 1990: 140)

In larger organizations the reward and compensation systems are one of the most visible parts of HRM. Ultimately, employees come to work every day to achieve rewards. These rewards can take any number of forms. According to Morris and Kuratko (2002: 244) some people seek financial rewards; others seek power and status; and still others strive for personal and career development, self-actualisation, or social rewards. Clearly, rewards represent a very potent tool to influence employee behaviour on the job, especially the set of rewards over which management has direct control. In this study the focus is on the entrepreneur and Porter and Lawer's expectancy model as in Morris and Kuratko (2002:244) posits that there is a direct relationship between the employee's motivation to be innovative on the job, take calculated risks, and proactiveness and the perception on the direct relationships between 1) effort put forward and performance on the appraisal system; 2) good performance appraisal and rewards; and 3) whether the company offers the correct rewards.

Hornsby et al (2000:253) studied middle managers' perception of the internal environment for corporate entrepreneurship and focussed on their participation in corporate entrepreneurship activities. Five factors were identified:

- The appropriate use of awards
- Gaining of top management support
- Resource availability
- Supportive organisational structures
- Risk taking and tolerance for failure

The results of the study confirmed that these five factors represent a parsimonious description of the internal organisational factors that influence middle management to foster entrepreneurial activity within established companies.

The test instrument for this study therefore needs to measure the company's compensation structure in terms of the evaluation basis and the rigidity of earning potential. This can be achieved by evaluating the organization's compensation and reward system in terms of the focus of the rewards as the rewards could be:

- Outcomes based with unlimited earning potential for employees.
- Value based with reasonably unlimited earning potential for employees.
- Team based with reasonable earning potential for employees.
- Short-term performance data based, with some additional earning potential for employees.
- Hierarchy based, with fixed earning potential for employees.

3.4 SUCCESS

Wickham (2001:123 - 136) defines success in terms of four interacting aspects, i.e.

- The performance of the venture;
- The people who have expectations from the venture;
- The nature of those expectations; and
- Actual outcomes relative to expectations.

Zahra and Covin (1995) did a longitudinal analysis of the contextual influences on the corporate entrepreneurship performance relationship. The data for this study was collected from US based manufacturing companies between 1983 and 1990. This study found that corporate entrepreneurship (CE) is positively associated with company financial performance and that the strength of the relationship tends to grow over time. In addition it was found that the environment in which CE is practised could have a strong and persistent impact on the effectiveness of an established firm's entrepreneurial behaviour.

The performance of the venture is indicated by a variety of quantitative measures. These relate to its financial performance and the presence it creates for itself in the marketplace. The performance of the venture as an organization provides

the means by which the individual stakeholders can fulfil their own goals. Personal goals are manifested at three levels:

- The economic – monetary rewards;
- The social – fulfilling relationships with other people; and
- The self-developmental – the achievement of personal, intellectual and spiritual satisfaction and growth.

Success, then, is not a simple thing. The organisation's financial and strategic performance is only part of the picture. Success is achieved if the organization uses its performance to meet, or better, to exceed the financial, social and personal growth expectations of the people who have an interest in it. (Wickham, 2001:123 - 124)

Finally, based on the research on success of organizations by Naman and Slevin (1993) thirteen variables are used to measure the performance construct. Three of the items are profitability indicators (revenue, return on revenue and return on assets). The three other variables are growth indicators (growth in revenue, growth in profits and growth in employment). Respondents are asked to indicate how satisfied they are with the performance of their firm vis-à-vis competitors along each of the six performance measures. A five-point Likert scale ranging from very unsatisfied (1) to very satisfied (5) is used for that purpose.

CHAPTER 4: METHODOLOGY

4.1 INTRODUCTION

This chapter focuses on the research methodology used in this study. It furnishes a detailed description of the measurement instrument, descriptive statistics on responses to the instrument, and the various statistical techniques used in the analysis of the data of the study. Keep in mind that the purpose of this study is to examine the relationship between corporate entrepreneurship and corporate performance in the South African Electrical Distribution Industry as stated in the management question: ***"Will Electricity Utilities that foster corporate entrepreneurial behavior outperform utilities that don't?"*** The study will further investigate the relationship between corporate entrepreneurship (CE) and corporate performance in relation to the biographic variables measured in the instrument.

4.2 RESEARCH DESIGN

Cooper and Schindler (2001) summarizes the definitions of research design as 'the blueprint for the collection, measurement, and analysis of data….' and 'the plan and structure of investigation so conceived as to obtain answers to research questions. The plan is the overall scheme or program of the research.' The design for this thesis is thus focused on creating and executing a program to get answers to the research questions.

This research is designed as a formal causal statistical study with the objective of answering the research and management questions and to discover/define future research opportunities.

4.2.1 Methodology

Despite this being a formal study to test the hypotheses, an exploratory literature study, referred to in Chapters 2 and 3, and was first done to

- Understand the management dilemma better.

- Look for ways others might have addressed the management question.
- Gather background information to help formulate investigative questions.
- Identify sources for and actual questions that might be used as measurement questions.

Cooper and Schindler (2001) support the practice of an exploratory study of some intensity, preceding the formal study.

Once this phase was completed a first phase instrument was developed and possible subjects were identified and invited to participate in the validation of the instrument. After validation, data was collected from a non-random group of subjects using the Internet and a self-reporting instrument. This is an **exploratory study** in which it is envisaged to determine the influence of an entrepreneurial environment within a utility on the performance and success of that utility. (Cooper and Schindler, 2001:139). **Correlation** between these two main factors and demographical factors will also be established. It will also represent a **cross-sectional study**, presenting a "snapshot" of the South African electricity distribution industry with the focus on intrapreneurship and success.

4.2.2 Hypotheses

The primary focus of the study is to test the hypothesis formulated from the management question. This question revolves around EDI Management's dilemma, on what they should do to improve their organization's performance and chances of being successful both in the eyes of the consumer and of the owner. Many answers could be formulated but with the field of this study being focused on Entrepreneurship, it is hypothesized that:

H_0: Non-entrepreneurial Electricity Utilities do not perform significantly worse than Entrepreneurial Electricity Utilities. ($\mu_{\text{non entrp}} = \mu_{\text{entrep}}$)

H_a: Entrepreneurial Electricity Utilities perform significantly better than Non-entrepreneurial Electricity Utilities. ($\mu_{\text{non entrp}} < \mu_{\text{entrep}}$)

From these hypotheses it is clear that the correlation between the entrepreneurial orientation and the success of electricity utilities will be tested. Correlation is a measure of the relation between two or more variables.

During the exploratory study for the development of the instrument it became clear that other propositions should also be set to guide the research. These are:

P_1 South African electricity utility managers do not perceive their utility's strategies to be entrepreneurial.

P_2 South African electricity utility managers do not perceive their utility's top-level decision making to be entrepreneurial.

P_3 South African electricity utility managers do not perceive their utilities to be financially successful.

P_4 South African electricity utility managers do not perceive their utilities to be socially successful.

From the above it is clear that the research instrument should therefore at least measure variables like profitability, growth, entrepreneurial environment, and entrepreneurial performance.

4.2.3 Measurement instrument

The measurement instrument developed by the researcher for this research consists of four sub elements. The first part of the instrument measures organization size and field of business. The second part is based on Morris' instrument, and used with permission from Morris, measures an organization's Entrepreneurial Performance Index (EPI) (Morris & Kuratko, 2002). The third part of the measurement instrument measures the organization's performance and is based on performance variables that were previously used by Naman and Slevin (1993) and Beal (2000) in their research on success of organizations. The fourth part defines the demographical variables of the respondent.

Reliability, or the degree to which the instrument supplies consistent results, is tested by means of the Cronbach's alpha technique.

4.2.3.1 Measuring Entrepreneurial Orientation

The EPI instrument measures the organization's entrepreneurial orientation.

The EPI is designed to measure the following constructs:

- Company orientation
- New product/service/process introduction
- Key business behavioural dimensions.

This is done with 18 five-point Likert type questions. The reliability and validity of the EPI instrument have already been established by Morris and Sexton (1996: 9) but is confirmed in this study by Cronbach's alpha indicating high alpha levels.

4.2.3.2 Measuring Success (Performance)

Based on the research on success of organizations by Naman and Slevin (1993) and Beal (2000) thirteen variables are used to measure the performance construct. Three of these variables are profitability indicators (revenue, return on revenue, and return on assets). The three other variables are growth indicators (growth in revenue, growth in profits and growth in employment). Respondents are asked to indicate how satisfied they are with the performance of their firm vis-à-vis competitors along each of the six performance measures. A five-point Likert scale ranging from very unsatisfied (1) to very satisfied (5) is used for that purpose. Again the reliability and validity of the instrument is tested using the Cronbach's alpha technique.

4.2.3.3 Control Variables

Control Variables: Firm size and firm age is included as control variables to account for alternative explanations. The total number of employees in the firm will measure firm size. Firm size is included as a control variable because small ventures may be more amenable to the speed and flexibility required of entrepreneurship.

However, smaller firms may lack the resources needed to sustain entrepreneurship. Firm age is measured by the number of years the respondent had been in

the present position. Younger firms may exhibit more EI in their desire to achieve full capacity. It is also necessary to control for the age of the firm since the performance measures used in the study are chiefly growth and business volume.

4.2.3.4 Demographics

The demographical variables define the demographics of each respondent and will be used to analyze the correlation of these independent variables and the dependent variables established through factor analysis.

4.2.3.5 Tests and expected results

The literature study further indicated that most of the questions in the instrument will result in ratio data and that these results would need to be correlated in order to make some inferences on the subject matter. The research data was first summarized and described through **Descriptive Statistics**. In order to establish whether the number of variables could be reduced, **Factor Analysis** was then done. Following this, statistical processes were applied to make an **Inference** from the data and analysis results. These processes are:

- **Chronbach's Alpha test**
    - to test the probability of a Type I error
    - set at $\alpha = 0.05$ for this study
- **Principle component analysis**
    - to calculate the eigenvalues for new variables
- **Kaiser Criterion test**
    - to determine optimum number of factors
- **Scree test**
    - to validate the number of factors

- **Factor loading, communality and rotated factor loading**
    - to determine association of original variables with new factors;
- **Factor correlation**
- **Factor score covariance**
- **Pearson Chi-square test**
    - for determining the significance of the relationship between categorical variables;
- **Spearman Correlation Coefficient** (Spearman's Rho)
    - to measure the linear relationship between variables;
- **Analysis of Variance (ANOVA)**
    - **Least Squares Means** used in this study
    - Used for hypothesis testing and inference.

4.2.4 Testing and implementation

The instrument was developed; tested for **external - and internal validity**; tested for **reliability** and then pilot tested to ensure **practicality**. The instrument was refined and then it was distributed to an estimated 680 role players in the South African electricity utilities.

The responses were tested for **consistency** and finally the results were analyzed in order to reject or not reject the different hypotheses and propositions. If the alternative hypothesis is accepted (as expected from the literature study), comparison measures are constructed and analyzed separately by linear regressions. The role of analysis of variance (ANOVA) is to provide an overall assessment of the strength of the evidence about all comparisons, while taking into account that they are correlated.

Finally the results are discussed in this report's Chapter 5 and recommendations from the findings are made to advise Management of the REDs on a way forward in terms of Corporate Entrepreneurship and its relationship to Corporate Success.

4.3 DATA COLLECTION

Data is based on an empirical and secondary data study. The focus of this study is on documenting primary data collected from senior role-players in the South African Electricity Utilities

Of the approximate 450 self-reporting questionnaires 138 (30,7%) were returned. Of the approximate 230 invitations sent to managers in the electricity distribution industry via e-mail, 39 (16,5%) responded. In this study 177 responses were obtained. The questionnaire was already coded when published and this coding is used in the data analysis. The dataset was then dealt with as discussed below.

4.4 PREPARATION OF THE DATA

The data was coded, captured, and then evaluated in terms of frequency counts in order to ensure:

- Clean data, i.e. no discrepancies and invalid information in the dataset.
- Acceptable distributions.

The variables are coded as shown in the table below:

Table 4-1 Coding of variables

Variable Number	Description	Code
1	Nature of business	V1
2	Number of employees	V2
3	Company has a high rate of new product introduced	V3

4	Company emphasises continuous improvement of service/product delivery	V4
5	Company key executives actively explore chancy growth opportunities - risk-taking	V5
6	Company seeks unusual solutions through idea people	V7
7	Company top management emphasises proven product and service	V8
8	Top management makes cautious adjustment to problems	V9
9	Top management practices and actively search for big opportunities	V10
10	Top management has set rapid growth as the dominant goal	V11
11	Top management makes large bold decisions despite uncertainty of outcomes	12
12	Top management compromises among conflicting demands	V13
13	Top management makes decisions with steady growth and stability as primary concerns	V14
14	Company introduced new products/services in last year	V15
15	Degree of new product/service that did not previously exist	V16
16	Company structure allows movement	V17
17	The rewards system is based on	V18
18	Organizational revenue for last financial year	V19
19	Organizational post tax profit as % of revenue for last financial year	V20
20	Post tax profit	V21
21	Growth in revenue from previous year	V22
22	Growth in post tax profit from previous year	V23

23	Growth in employment from previous year	V24
24	Satisfaction with performance of profit on revenue compared to competition	V25
25	Satisfaction with performance of profit on assets compared to competition	V26
26	Satisfaction with performance of growth in revenue compared to competition	V27
27	Satisfaction with performance of growth in post-tax profit compared to competition	V28
28	Satisfaction with performance of growth in employment compared to competition	V29
29	Satisfaction with performance on environmental protection compared to competition	V30
30	Satisfaction with performance in customer satisfaction compared to competition	V31
31	Respondent's age	VV32
32	Respondent's gender	V33
33	Highest level of education	VV34*
34	Business area	V35
35	Position in utility	VV36*
36	Organizational position	VV37*
37	Years in this position	VV38*
38	Nature of utility	VV39*

(* - Refer Table 4-1 where regrouped variables are coded as VV32 to VV39)

In order to use the Chi-square analysis proposed later in this chapter, the frequencies of the responses to variables should be in excess of five. (Coopers and Schiindler, 2001, p500). From the evaluation of the data it became clear that the demographic results should be regrouped in order to comply with these criteria. The

demographic results are regrouped into a maximum of three responses instead of the five-to-nine responses possible per variable.

4.5 DATA ANALYSIS

4.5.1 Reliability through Cronbach's Alpha

Reliability of measurement is the degree to which the measurement supplies consistent results. Evaluating the calculated Cronbach's Alpha assesses the internal consistency or homogeneity among the test items. An alpha value in excess of 0.6 indicates an acceptable internal level of consistency**.**

4.5.2 Factor Analysis

The instrument for this research supplies 36 different variables as described above. Statistically this is an unmanageable number of variables to interpret. **Factor Analysis** has the objective of reducing to a manageable number many variables that belong together and have overlapping measurement characteristics (Cooper and Schindler, 2001). It begins with construction of a new set of variables based on the relationships in the correlation matrix. The most frequently used approach to this is the principal component analysis. This method transforms a set of variables into a new set of composite variables that are not correlated with each other. These linear combinations of variables, called factors, account for the variance in the data as a whole. The best combination makes up the first factor. The second factor is defined as the best linear combination of variables for explaining the variance not accounted for by the first factor. In turn there can be a third, fourth, and k^{th} factor, each being the best linear combination of variables not accounted for by the previous factors. (Cooper and Schindler, 2001:592). Numerical results from a factor study are **correlation coefficients** between the factor and the variables and are called **loadings**. Eigenvalues are the sum of the squares of the variances of the factor values. Divided by the number of variables, this number indicates the **total variance explained by the factor**.

4.5.3 Testing for statistical significance

The single sample of data obtained from the instruments is at least ordinal allowing for non-parametric tests to be done. Cooper and Schindler (2001, p498) propose the **chi-square test (χ^2)** as the most commonly used test for non-parametric one-sample tests. This test is used for testing the significant differences between the observed distribution and the expected distribution based on the null hypothesis. The value of χ^2 is the measure that expresses the extent of the divergence between expected and observed values, the larger the divergence, the larger the χ^2 value.

The **desired level of significance (α**) must then be chosen. The exact level to choose is largely determined by how much **Type I** error risk one is prepared to take. Mason and Lind (1990) indicate that a α of 0,05 for consumer research, 0,01 for quality assurance and 0,10 for political poling should be used. As this study is more of an 'organization political' nature than a quality research, the 0,05 level of significance is used – this means that the decision to reject/not reject H_0 is taken with a 95% level of confidence. Finally the degrees of freedom must be calculated, the critical value for χ^2 determined, and the calculated value of χ^2 must be compared to it in order to interpret the results.

4.5.4 Correlation

Karl Pearson (1857 – 1936) developed a formula to calculate the product moment correlation coefficient ***r*** for continuously related values. This coefficient varies over a range of –1 through 0 to +1. The designated *r* symbolises the coefficient's estimate of linear association based on the sampling data. The coefficient ρ represents the population correlation. Pearson's *r* is used as a measure of association for interval and ratio data (Cooper and Schindler, 2001:532)

In the early 1900's Spearman further developed the Pearson formula specifically to test correlation between ranked variables. (Brase & Brase, 1983:412). In this study the variable is ranked and therefore the Spearman test is applied to test for the existence of a monotone relationship between the variables.

4.5.5 GLM Procedure

The General Linear Model (GLM) procedure is an extension of Analysis of Variance (ANOVA) in the sense that it analysis the variance within and between groups of data or Factors. The variance in this instance is referred to as Mean Squares. (Brase and Brase, 1983:378). The test statistic is the F ratio. Scheffé's test indicates which groups do have statistically significant variances, provided all the sample sizes are the same. If this is not the case the less rigid Least Square Means (LSM) test should be used as sample size is not important for this test.

The LSM test is used for this study. The correlation between the dependant factors and the independent variable are evaluated and discussed. This is done by means of the Least Squares Measurement methodology (Cooper and Schindler, 2001)

CHAPTER 5: RESULTS AND FINDINGS

5.1 INTRODUCTION

The results and findings of this study is discussed in this chapter focusing on three main areas namely descriptive statistics, factor analysis, and correlation analysis.

5.2 DESCRIPTIVE STATISTICS

5.2.1 Biographic variables

The demographic (independent) variables where regrouped. The new response group consists of the combination of the old response groups shown below and is as follows for those variables that were altered:

Age

New responses	Old responses
Under 36	25 and under, 26 – 35
36 to 55	36 – 55
Above 55	46 – 55, 65+

Level of education

New response	Old responses
High School and College	High School, College
Under Graduate	Under Graduate
Post Graduate	Graduate: Masters, Graduate: Doctorate

Position in utility

New response	Old responses
Management	Top Management, Senior Management, Management
Supervisor	Senior Supervisor, Specialist Group
Political	Political Leadership, Other

Time in this position

New response	Old responses
0 to 5 years	<1y, 1 - 2y, 3 – 5y
6 to 15 years	6 – 9y, 10 – 15y
More than 15 years	> 15 years

5.2.2 Demographic variables

Demographic variables on which information was obtained were as follows:

- Age
- Gender
- Level of education
- Business Area
- Work function
- Organizational position
- Years in position
- Nature of utility

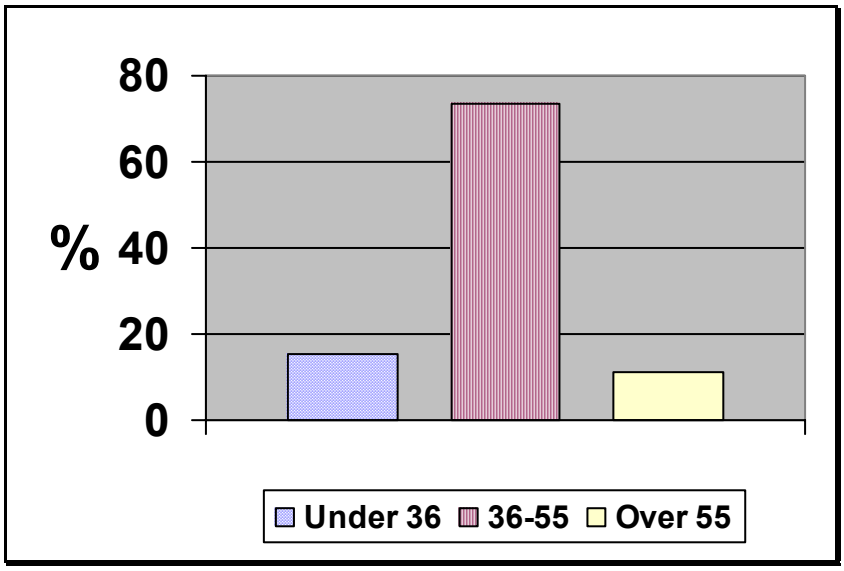
The biographical profiles of the samples are presented in order to get a clear picture of the survey group. The different distributions are shown in the Tables below.

5.2.3 Demographic statistics variables

Table 5-1 Age of respondents

Variable	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Under 36	27	15.25	27	15.25
36-55	130	73.45	157	88.70
Over 55	20	11.30	177	100.00

Figure 5-1 Age of respondents

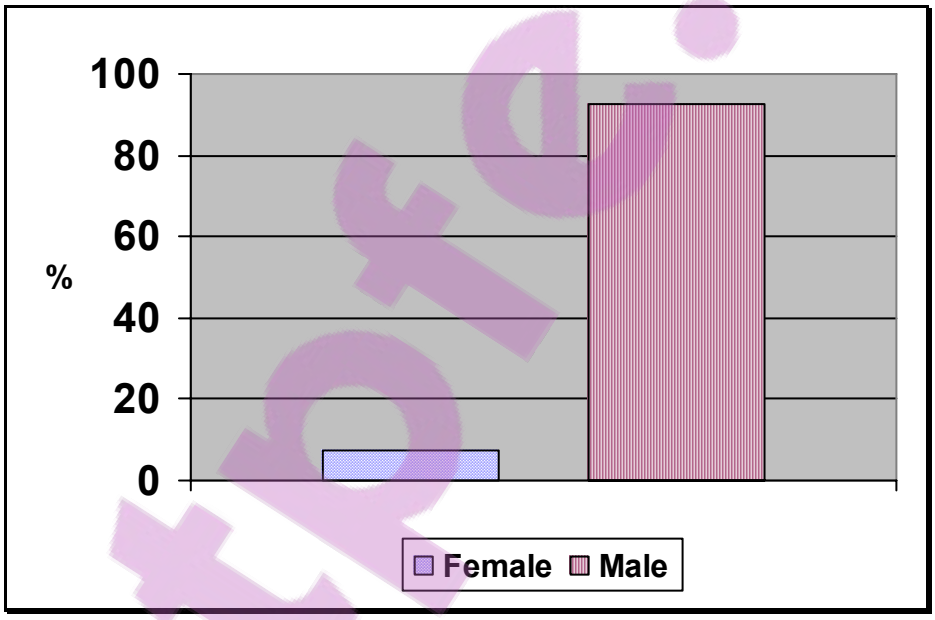


As the sample was drawn from the management of the South African Distribution Utilities, the resulting 73.45% in the 36 to 55 year age group is acceptable.

Table 5-2 Gender

Variable	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Female	13	7.39	13	7.39
Male	163	92.61	176	100.00

Figure 5-2 Gender

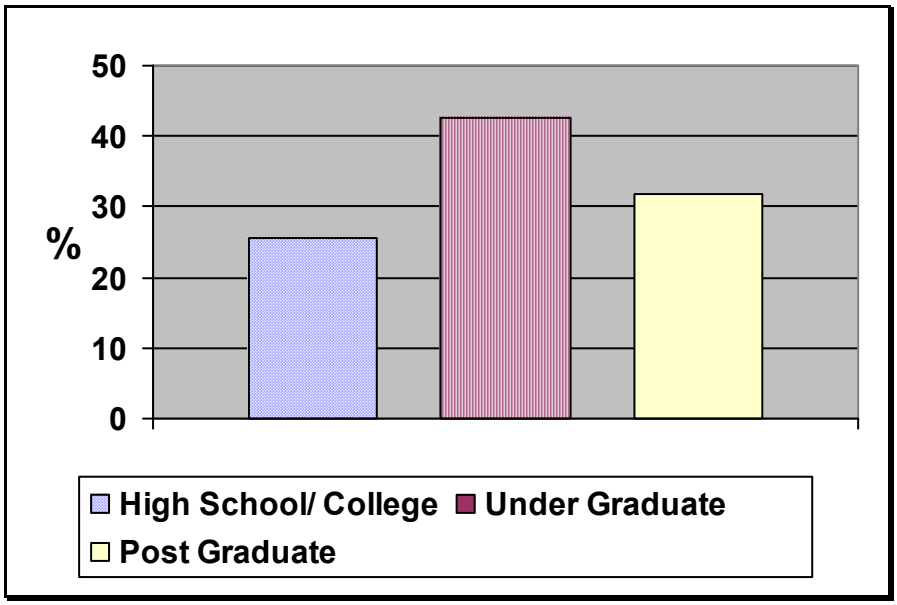


The female response of 7.39% is very low and not in line with the national gender presentation in the utilities industry, but is in line with the statistics for female professionals in the electricity industry.

Table 5-3 Level of education

Variable	Frequency	Percent	Cumulative Frequency	Cumulative Percent
High School/ College	45	25.57	45	25.57
Under Graduate	75	42.61	120	68.18
Post Graduate	56	31.82	176	100.00

Figure 5-3 Level of education

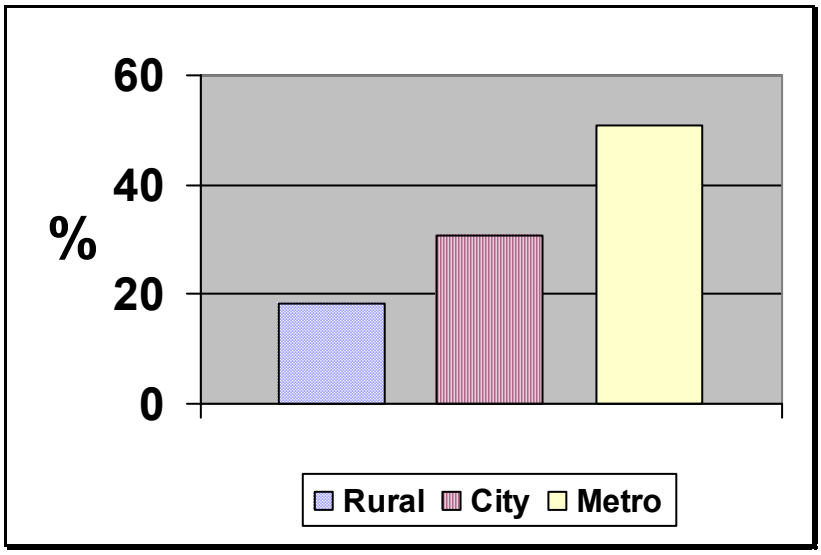


With the respondents from the management structures and with almost 85% of the respondents older than 36 years, it is understandable that 73.43% of the respondents have an undergraduate degree with 31.82% qualified at a post graduate level.

Table 5-4 Business Area

Variable	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Rural	32	18.29	32	18.29
City	54	30.86	86	49.14
Metro	89	50.86	175	100.00

Figure 5-4 Business area

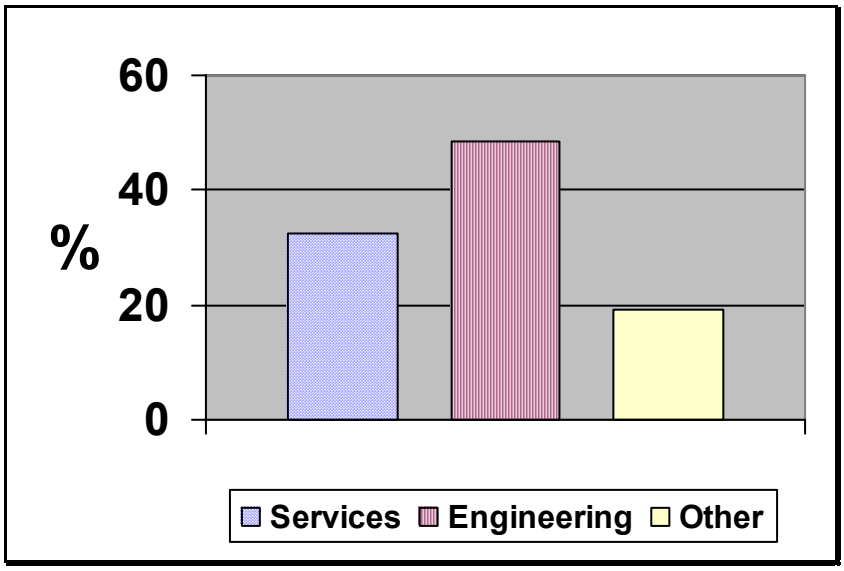


Of the responses, 50.86% came from the six metropolitan distribution areas, 30.86% from the cities and the rest (18.29%) came from the rural distribution areas. This is a reasonable representation of the organizational sizes, management distribution and power consumption in South Africa.

Table 5-5 Work function

Variable	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Services	56	32.37	56	32.37
Engineering	84	48.55	140	80.92
Other	33	19.08	173	100.00

Figure 5-5 Work function

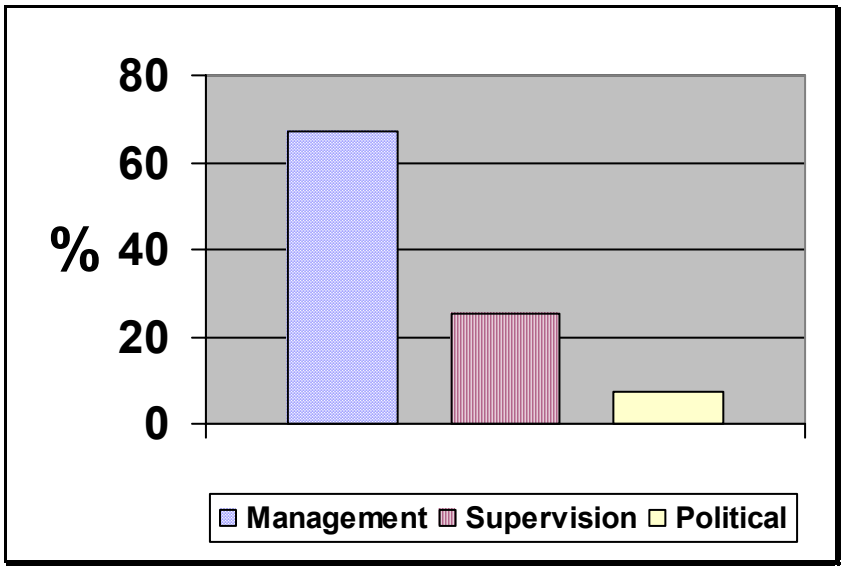


A reasonably even spread of responses came from the services (32.37%) and engineering (48.55%) leg of the electricity distribution utilities. The balance (19.08%) came from political and supplier respondents associated with the distribution utilities.

Table 5-6 Organizational position

Variable	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Management	119	67.23	119	67.23
Supervision	45	25.42	164	92.66
Political	13	7.34	177	100.00

Figure 5-6 Organizational position

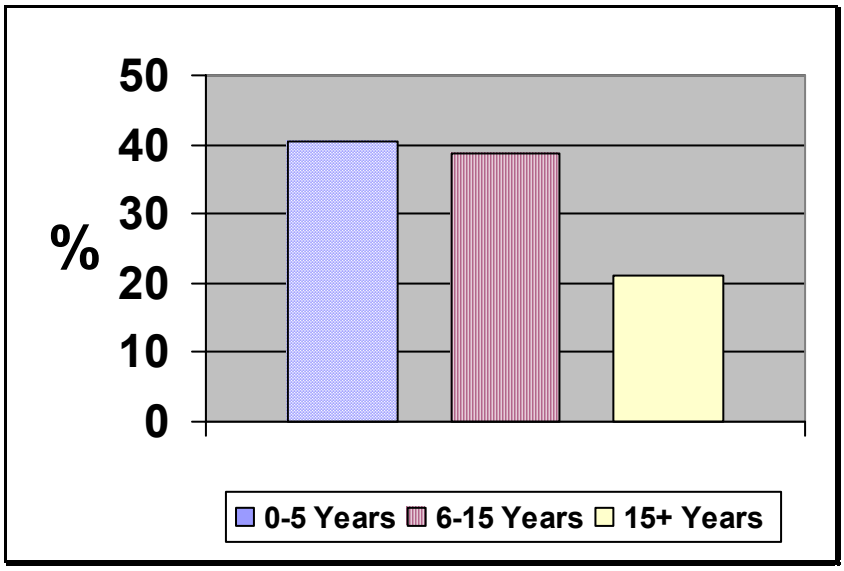


The 67.23% response from management is satisfactory as this was the target group. However, as supervisors are generally involved in the final execution of the projects, the 25.42% responses from this group can be seen as a moderating factor. The balance (7.34%) came from political respondents associated with the distribution utilities.

Table 5-7 Years in position

Variable	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0-5 Years	71	40.34	71	40.34
6-15 Years	68	38.64	139	78.98
15+ Years	37	21.02	176	100.00

Figure 5-7 Years in position

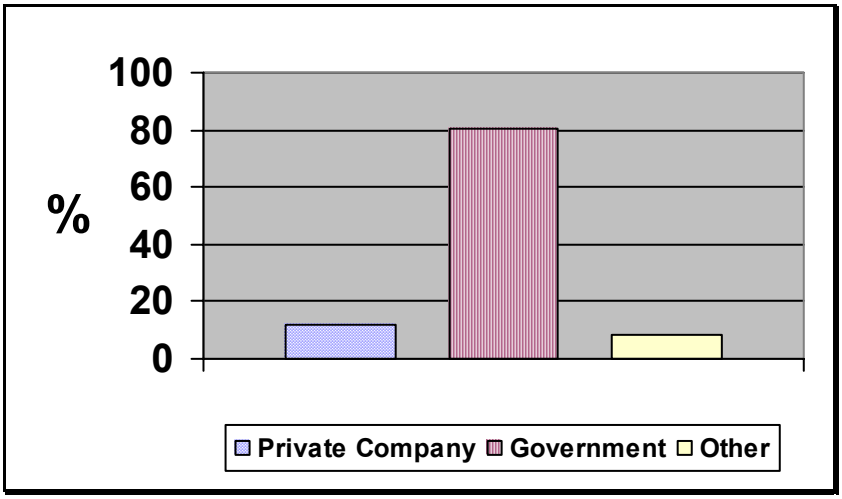


The distribution of respondents came out reasonably even between respondents that have been in their present position for 0-5 Years at 40.34% compared to those in the position for 6-15 years at 38.64%. As could be expected the management structures should also have its share of very experienced people with more than 15 years experience. These represented 21.02% of the respondents.

Table 5-8 Nature of utility

Variable	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Private Company	20	11.63	20	11.63
Government	138	80.23	158	91.86
Other	14	8.14	172	100.00

Figure 5-8 Nature of utility



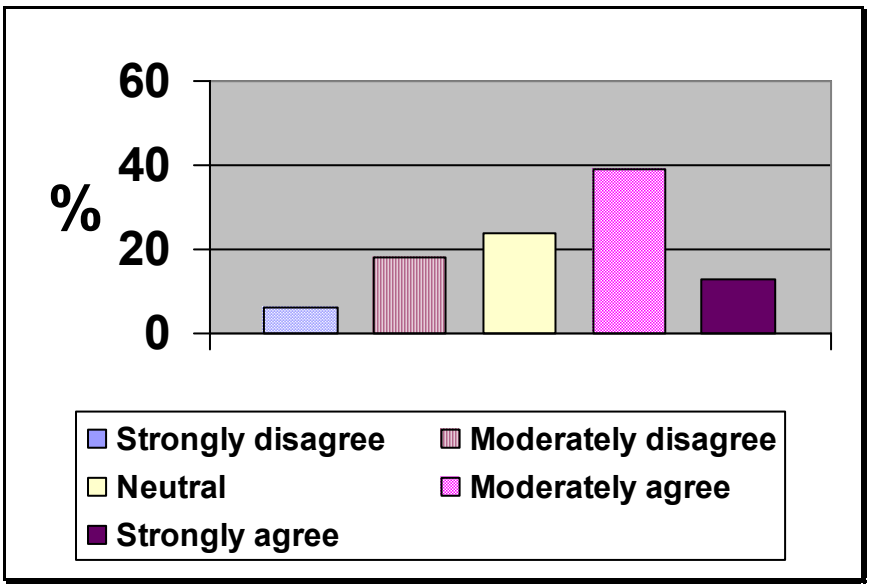
Eskom and Local government are the major component of power distributors in South Africa as can be seen from the 80.23% of responses received. The 11.63% private companies would be respondents from the two private distribution companies City Power (Johannesburg) and Centelec (Bloemfontein), and the 8.14% other responses would be consultants and equipment suppliers to the industry that attended the AMEU convention.

5.2.4 Company orientation statistics

Table 5-9 Company has a high rate of new products introduced

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	11	6.21	11	6.21
2	Moderately disagree	32	18.08	43	24.29
3	Neutral	42	23.73	85	48.02
4	Moderately agree	69	38.98	154	87.01
5	Strongly agree	23	12.99	177	100.00
6	Missing	0		177	

Figure 5-9 Company has a high rate of new product introduced

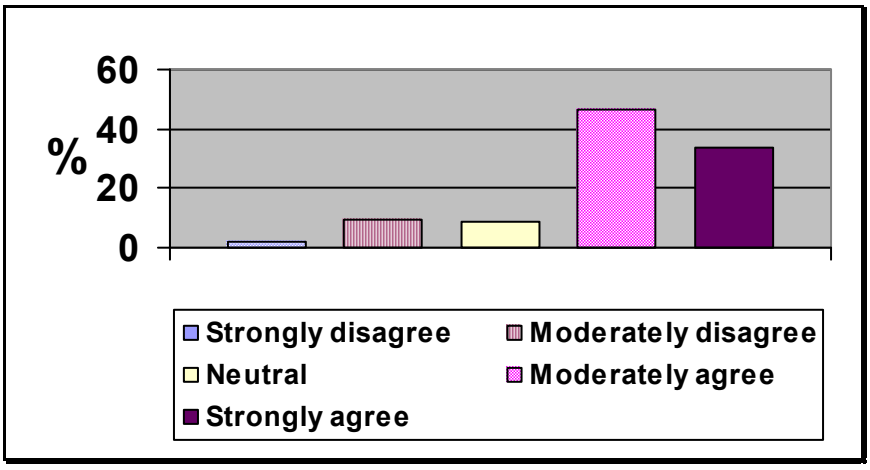


From the table it is clear that the major part (52%) of the respondents perceived their organizations to be introducing new service or products to their market. The instrument did not distinguish between product and service.

Table 5-10 Company emphasises continuous improvement of service/product delivery

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	3	1.70	3	1.70
2	Moderately disagree	17	9.66	20	11.36
3	Neutral	15	8.52	35	19.89
4	Moderately agree	82	46.59	117	66.48
5	Strongly agree	59	33.52	176	100.00
6	Missing	1		177	

Figure 5-10 Company emphasises continuous improvement of service/product

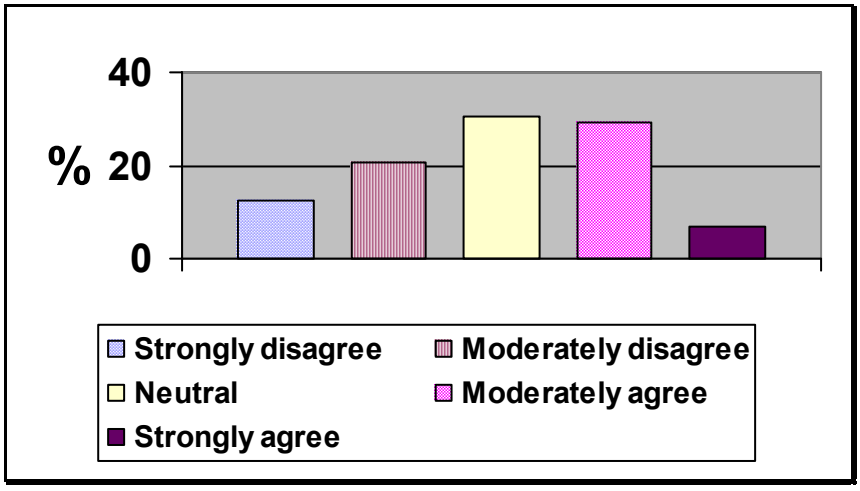


The majority of respondents (80.11%) agreed that they perceive an emphasis on continuous improvement of service and/or product. Although it was not tested in the instrument, it is clear from the daily press that government is particularly anxious to improve electricity delivery both in quality and in broad based availability to the South African communities. This delivery must be executed through the management of the electricity distribution utilities.

Table 5-11 Company key executives actively explore chancy growth opportunities - risk-taking

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	22	12.64	22	12.64
2	Moderately disagree	36	20.69	58	33.33
3	Neutral	53	30.46	111	63.79
4	Moderately agree	51	29.31	162	93.10
5	Strongly agree	12	6.90	174	100.00
6	Missing	3		177	

Figure 5-11 Company key executives actively explore chancy growth opportunities - risk-taking

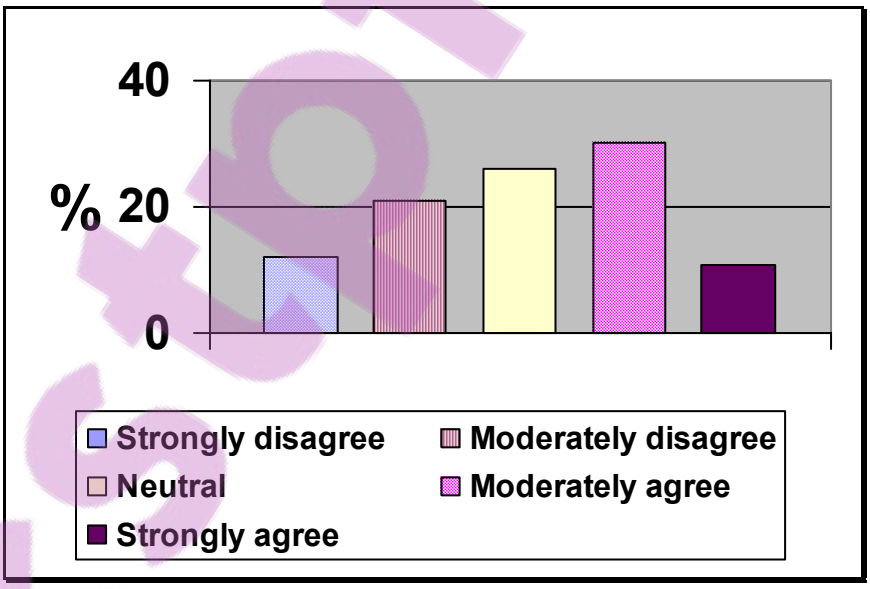


Despite the perception on improved service delivery, the respondents indicated a 63.79% perception that top executives do not explore chancy growth opportunities or participate in risk-taking.

Table 5-12 Company seeks unusual solutions through idea people

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	21	11.93	21	11.93
2	Moderately disagree	37	21.02	58	32.95
3	Neutral	46	26.14	104	59.09
4	Moderately agree	53	30.11	157	89.20
5	Strongly agree	19	10.80	176	100.00
6	Missing	1		177	

Figure 5-12 Company seeks unusual solutions through idea people

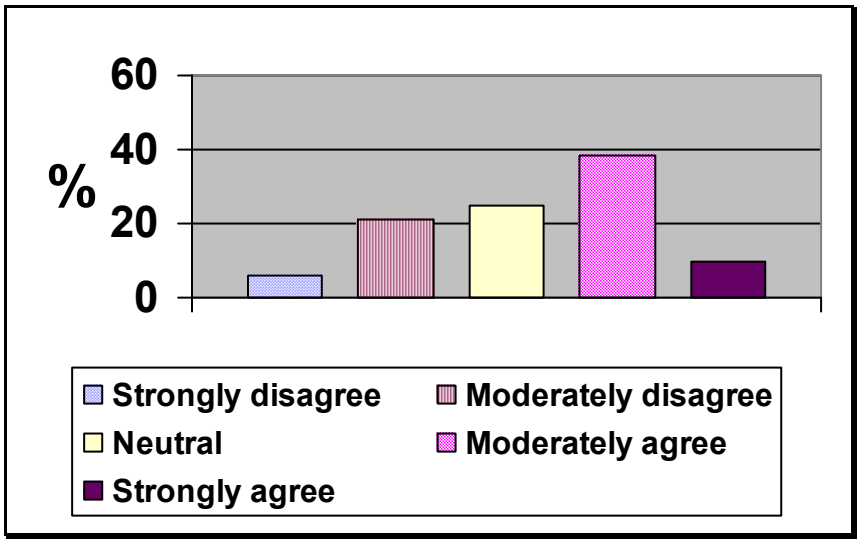


Respondents seem to be uncertain of their organization's use of idea people as 26.14% indicated a neutral vote. The balance voted 32.95% disagreeing with, and 40.91% agreeing with the statement that their organization do make use of idea people.

Table 5-13 Company top management emphasises proven products and services

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	10	5.68	10	5.68
2	Moderately disagree	37	21.02	47	26.70
3	Neutral	44	25.00	91	51.70
4	Moderately agree	68	38.64	159	90.34
5	Strongly agree	17	9.66	176	100.00
6	Missing	1		177	

Figure 5-13 Company top management emphasises proven products and services

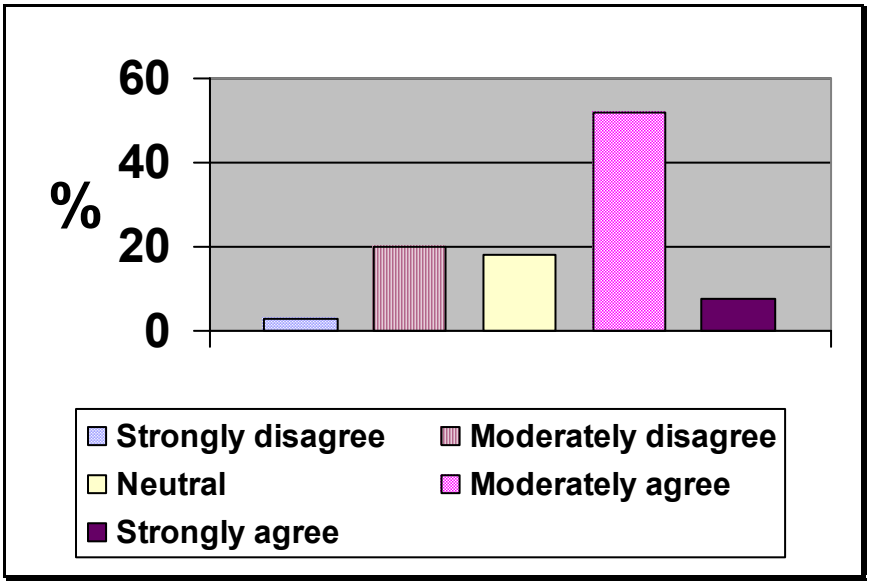


Respondents show uncertainty about their top management's emphasis on proven products as 25.00% indicated a neutral vote. The balance voted 26.7% disagreeing with, and 48.3% agreeing with the statement.

Table 5-14 Top management makes cautious adjustment to problems

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	5	2.84	5	2.84
2	Moderately disagree	35	19.89	40	22.73
3	Neutral	32	18.18	72	40.91
4	Moderately agree	91	51.70	163	92.61
5	Strongly agree	13	7.39	176	100.00
6	Missing	1		177	

Figure 5-14 Top management makes cautious adjustment to problems

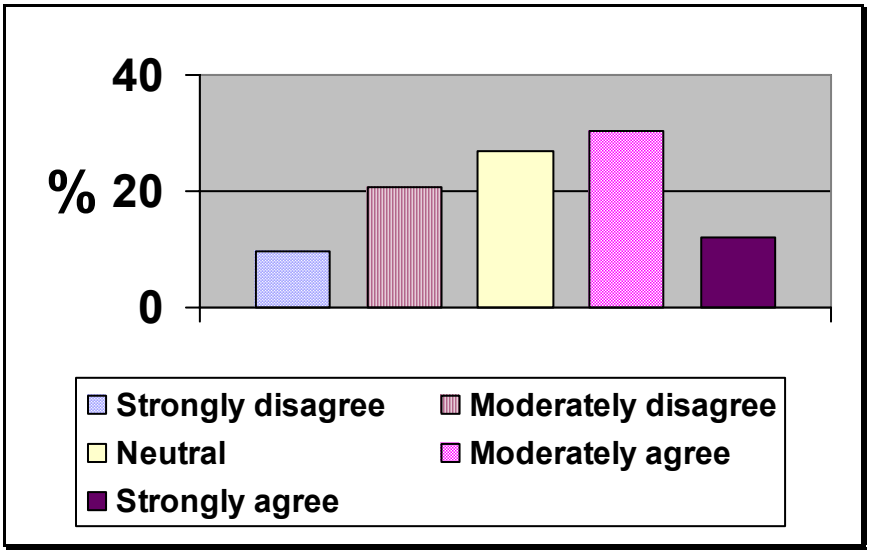


Here a clear perception towards management's cautious adjustment to problems is seen with 59.09% of the respondents indicating their agreement with the statement.

Table 5-15 Top management practices an active search for big opportunities

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	17	9.77	17	9.77
2	Moderately disagree	36	20.69	53	30.46
3	Neutral	47	27.01	100	57.47
4	Moderately agree	53	30.46	153	87.93
5	Strongly agree	21	12.07	174	100.00
6	Missing	3		177	

Figure 5-15 Top management practices an active search for big opportunities

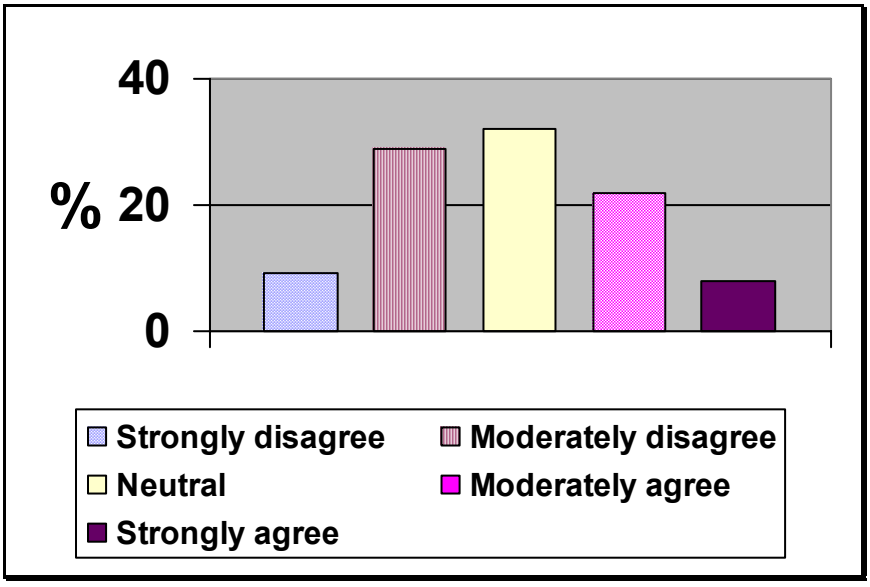


A bias towards top management's inactiveness in a search for big opportunities can be seen from the graph despite the fact that 30.46% moderately agree with the statement. The perception might again be fueled by the fact that top management in the industry is under huge pressure to deliver a broad based quality service with limited resources. Those closest to this challenge will be in the minority responding to this instrument.

Table 5-16 Top management has set rapid growth as the dominant goal

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	16	9.20	16	9.20
2	Moderately disagree	50	28.74	66	37.93
3	Neutral	56	32.18	122	70.11
4	Moderately agree	38	21.84	160	91.95
5	Strongly agree	14	8.05	174	100.00
6	Missing	3		177	

Figure 5-16 Top management has set rapid growth as the dominant goal

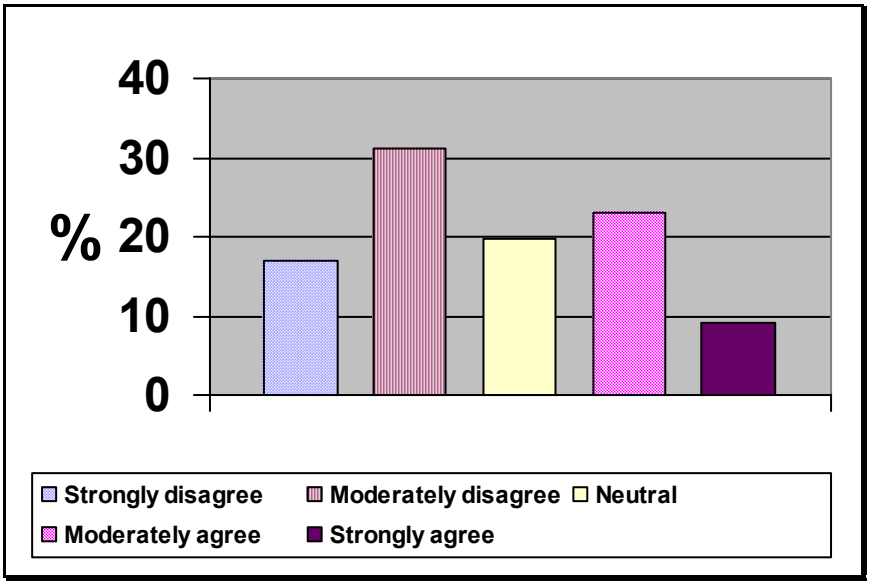


The perception on growth as top management's dominant goal seems to be very normally distributed with 37.93% disagreeing, 32.18% being neutral, and 29.89% agreeing with the statement.

Table 5-17 Top management makes large bold decisions despite uncertainties of outcomes

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	30	16.95	30	16.95
2	Moderately disagree	55	31.07	85	48.02
3	Neutral	35	19.77	120	67.80
4	Moderately agree	41	23.16	161	90.96
5	Strongly agree	16	9.04	177	100.00
6	Missing	0		177	

Figure 5-17 Top management makes large bold decisions despite uncertainties of outcomes

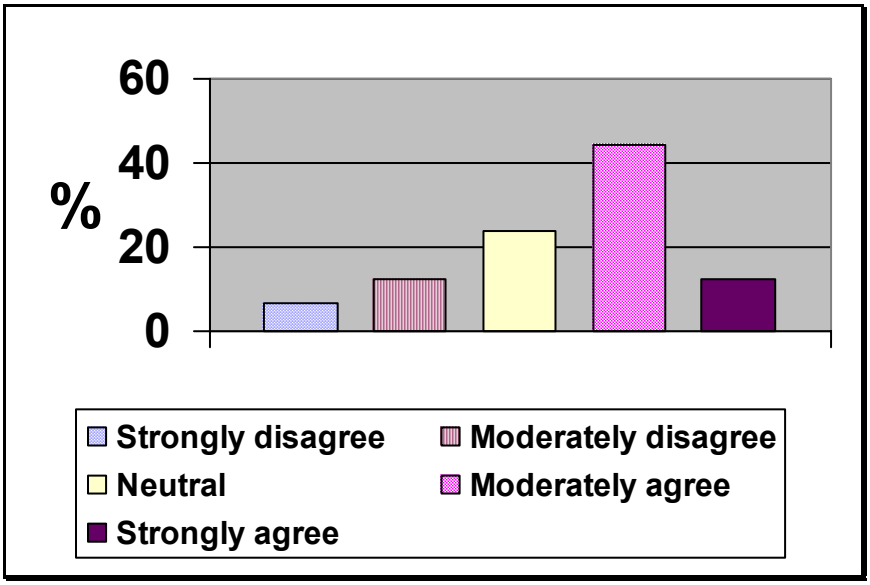


With 16.95% of the respondents strongly disagreeing, 31.07% moderately disagreeing, 19.77% being neutral, 23.16% moderately agreeing, and 9.04% strongly agreeing the distribution among the respondents seem to be fairly well spread out.

Table 5-18 Top management compromises among conflicting demands

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	12	6.82	12	6.82
2	Moderately disagree	22	12.50	34	19.32
3	Neutral	42	23.86	76	43.18
4	Moderately agree	78	44.32	154	87.50
5	Strongly agree	22	12.50	176	100.00
6	Missing	1		177	

Figure 5-18 Top management compromises among conflicting demands

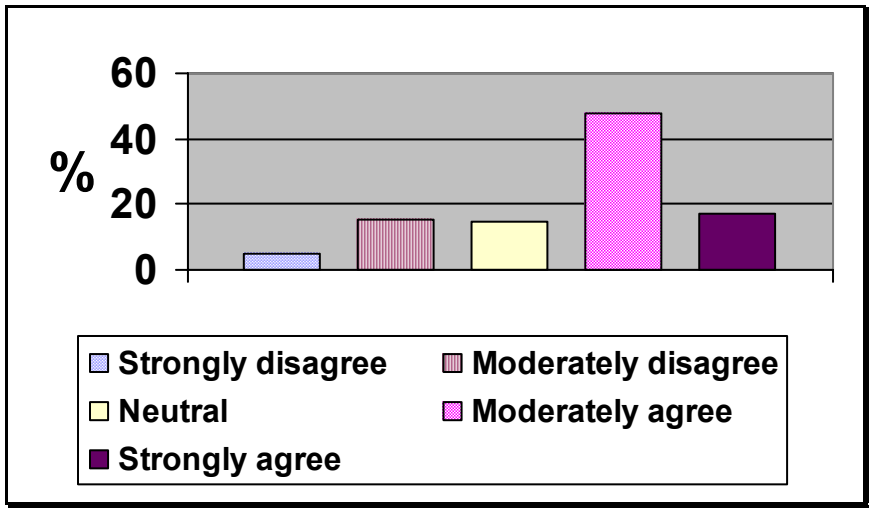


With 44.32% moderately agreeing and 12.50% strongly agreeing with this statement, it seems to support the perception that top management needs to supply electricity on a broad base with limited resources, leading to compromises.

Table 5-19 Top management makes decisions with steady growth and stability as primary concerns

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Strongly disagree	9	5.08	9	5.08
2	Moderately disagree	27	15.25	36	20.34
3	Neutral	26	14.69	62	35.03
4	Moderately agree	85	48.02	147	83.05
5	Strongly agree	30	16.95	177	100.00
6	Missing	0		177	

Figure 5-19 Top management makes decisions with steady growth and stability as primary concerns



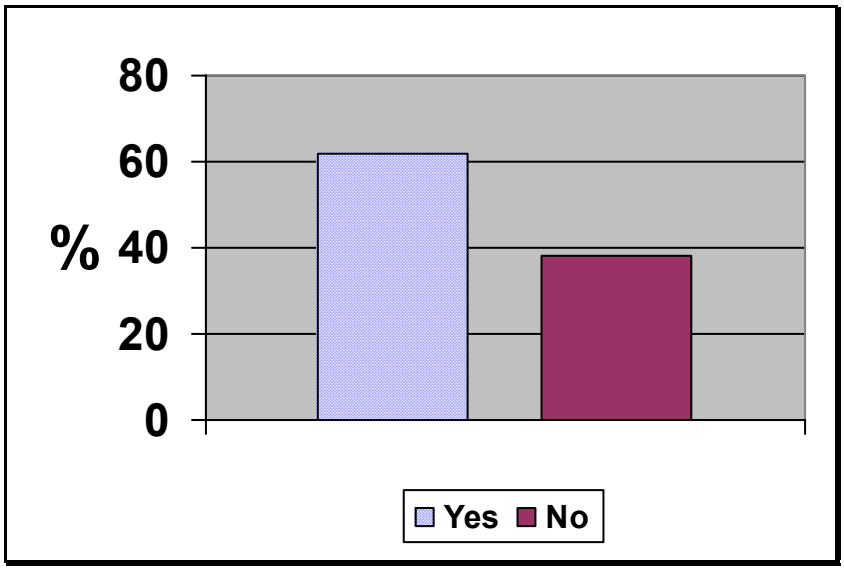
The major part of the respondents 64.97% agree that top management makes decisions with steady growth and stability as primary concerns. In the electricity distribution industry owned by government it can be accepted that the respondents most probably focused on stability rather than growth – although this was not tested.

5.2.5 New product/service introduction statistics

Table 5-20 Company introduced new products / services in last year

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Yes	109	61.93	109	61.93
2	No	67	38.07	176	100.00
3	Missing	1		177	

Figure 5-20 Company introduced new products / services in last year

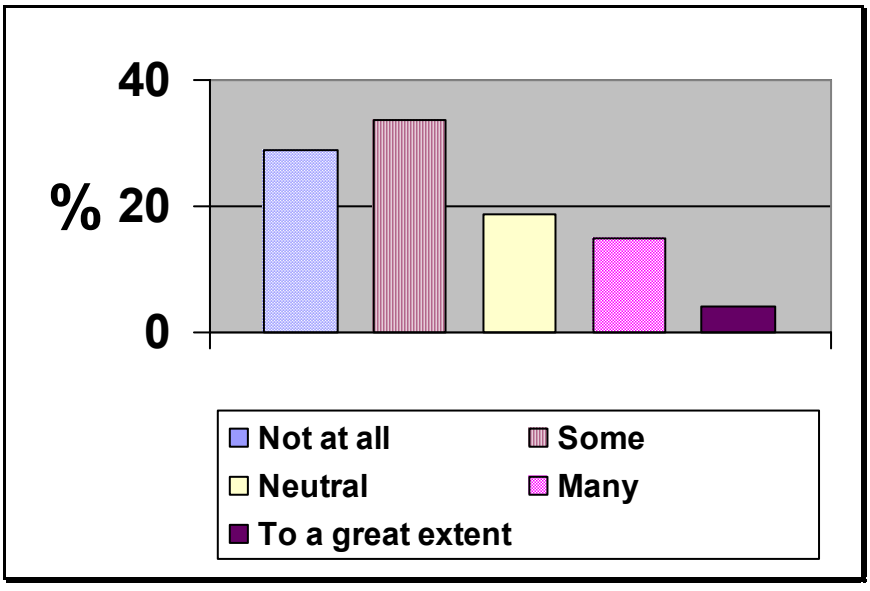


Of the respondents 61.93% indicated that they introduced new products or services during the last year.

Table 5-21 Degree of new products/services that did not previously exist

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Not at all	51	28.98	51	28.98
2	Some	59	33.52	110	62.50
3	Neutral	33	18.75	143	81.25
4	Many	26	14.77	169	96.02
5	To a great extent	7	3.98	176	100.00
6	Missing	1		177	

Figure 5-21 Degree of new products/services that did not previously exist



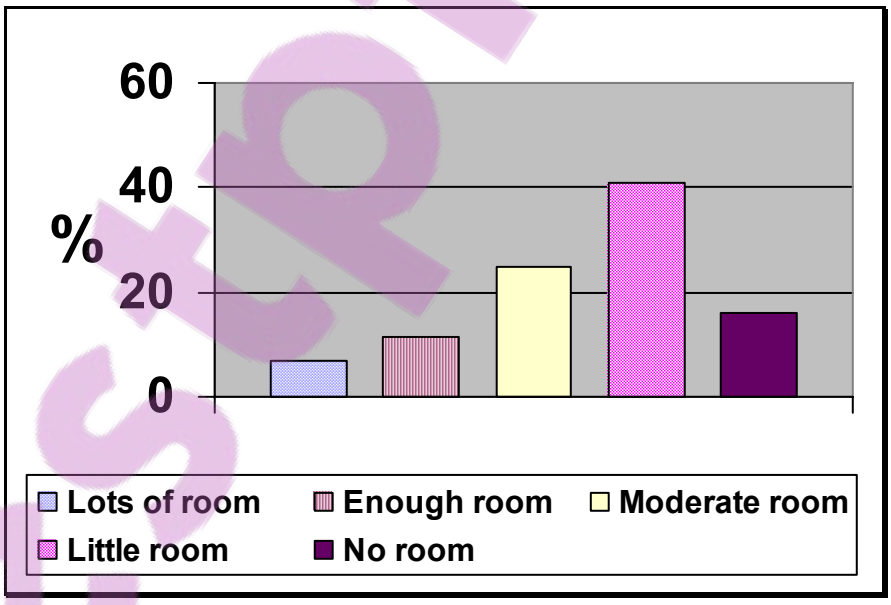
Of the 61.93% respondents that indicated new product/service introduction the majority (81.25%) indicated that the product was not new to the market. These introductions will, in all probability, be changes to the way services are delivered.

5.2.6 Business behavioral statistics

Table 5-22 Company structure allows movement

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Lots of room	12	6.82	12	6.82
2	Enough room	20	11.36	32	18.18
3	Moderate room	44	25.00	76	43.18
4	Little room	72	40.91	148	84.09
5	No room	28	15.91	176	100.00
6	Missing	1		177	

Figure 5-22 Company structure allows movement

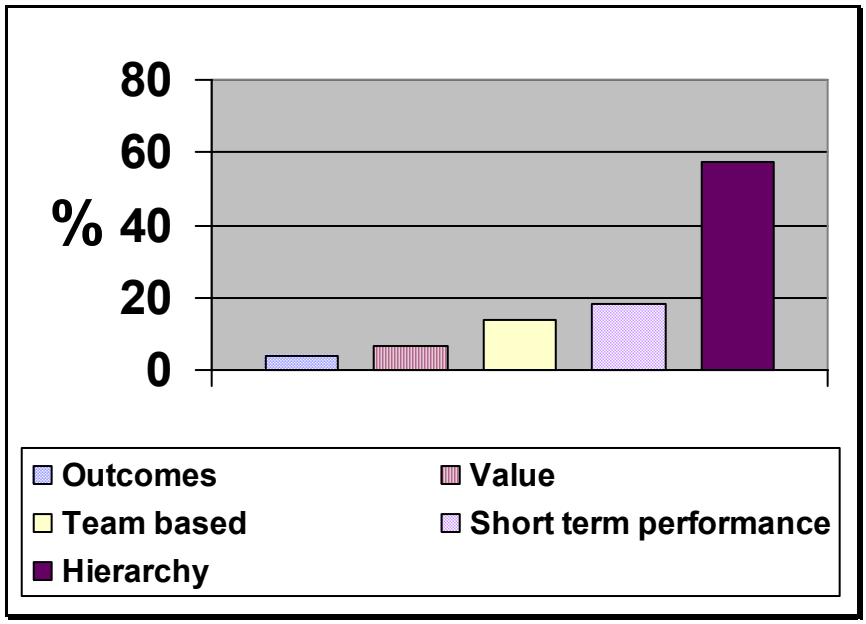


The perception of respondents regarding their mobility within the organizations structures is rather negative with 56.82% indicating little or no room for movement. This indicates a general rigid hierarchical structure.

Table 5-23 Reward system is based on:

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Outcomes	7	3.98	7	3.98
2	Value	12	6.82	19	10.80
3	Team based	24	13.64	43	24.43
4	Short term performance	32	18.18	75	42.61
5	Hierarchy	101	57.39	176	100.00
6	Missing	1		177	

Figure 5-23 Reward system is based on:



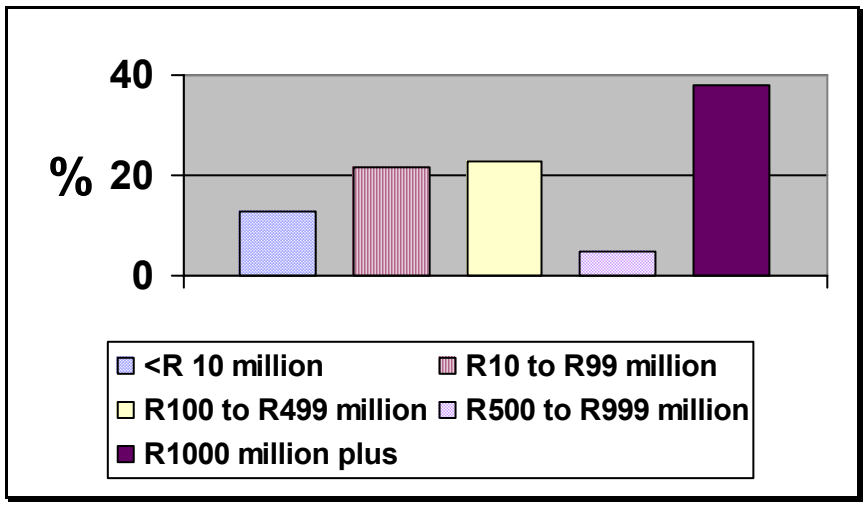
The reward systems are generally perceived to be very rigid and hierarchical in nature as 57.39% of the respondents associated with this type of reward system. This is in line with the rigid hierarchy found in the previous item.

5.2.7 Performance statistics

Table 5-24 Organizational revenue for last financial year

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	<R 10 million	21	12.88	21	12.88
2	R10 to R99 million	35	21.47	56	34.36
3	R100 to R499 million	37	22.70	93	57.06
4	R500 to R999 million	8	4.91	101	61.96
5	R1000 million plus	62	38.04	163	100.00
6	Missing	14		177	

Figure 5-24 Organizational revenue for last financial year

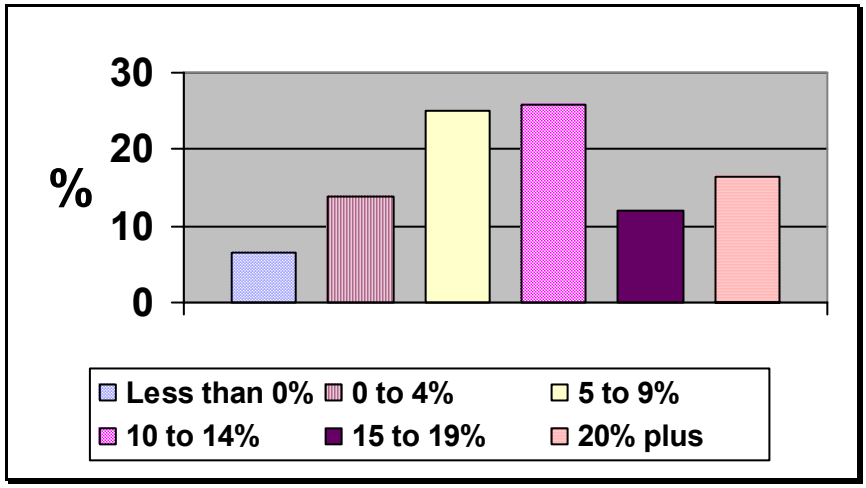


The large dip in respondents for the R500 – R999 million bracket (4.91%) is odd and cannot be explained as the spread of utilities in terms of size do not follow the same pattern. The large non-response component (14 of 177) is also disturbing, indicating a not-interested attitude by managers towards the financial performance of their business.

Table 5-25 Organizational post tax profit as % of revenue for last financial year

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Less than 0%	10	6.62	10	6.62
2	0 to 4%	21	13.91	31	20.53
3	5 to 9%	38	25.17	69	45.70
4	10 to 14%	39	25.83	108	71.52
5	15 to19%	18	11.92	126	83.44
6	20% plus	25	16.56	151	100.00
7	Missing	26		177	

Figure 5-25 Organizational post tax profit as % of revenue for last financial year

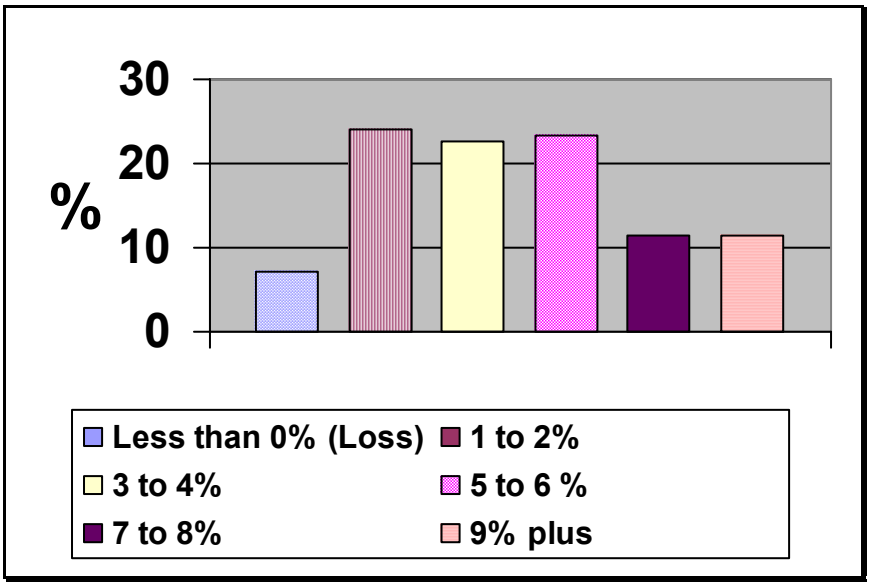


Of the respondents 6.62% indicated that their organizations actually made a loss, whereas 64.91% made a profit between 0 and 15% (the maximum level suggested by the National Electricity Regulator), 28.48% exceeded the suggested profit margin of 15%. Again the 26 of 177 non-responses is disturbing!

Table 5-26 Post-tax profit

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Less than 0% (Loss)	10	7.09	10	7.09
2	1 to 2%	34	24.11	44	31.21
3	3 to 4%	32	22.70	76	53.90
4	5 to 6 %	33	23.40	109	77.30
5	7 to8%	16	11.35	125	88.65
6	9% plus	16	11.35	141	100.00
7	Missing	36		177	

Figure 5-26 Post-tax profit

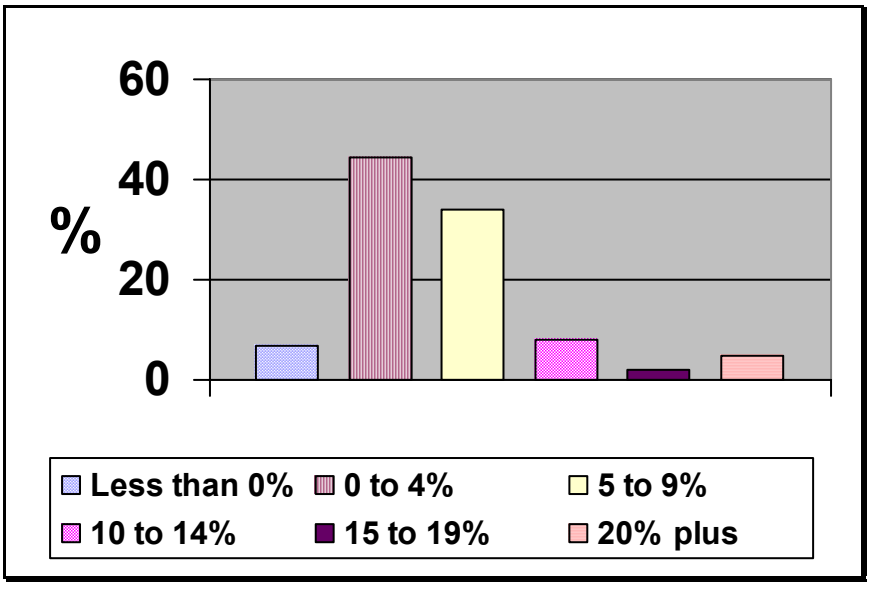


Of the respondents 70.21% indicated a post tax profit of between 1 and 6%. This is inline with the industry standard experienced and reported in the USA.

Table 5-27 Growth in revenue from previous year

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Less than 0%	11	6.79	11	6.79
2	0 to 4%	72	44.44	83	51.23
3	5 to 9%	55	33.95	138	85.19
4	10 to 14%	13	8.02	151	93.21
5	15 to 19%	3	1.85	154	95.06
6	20% plus	8	4.94	162	100.00
7	Missing	15		177	

Figure 5-27 Growth in revenue from previous year

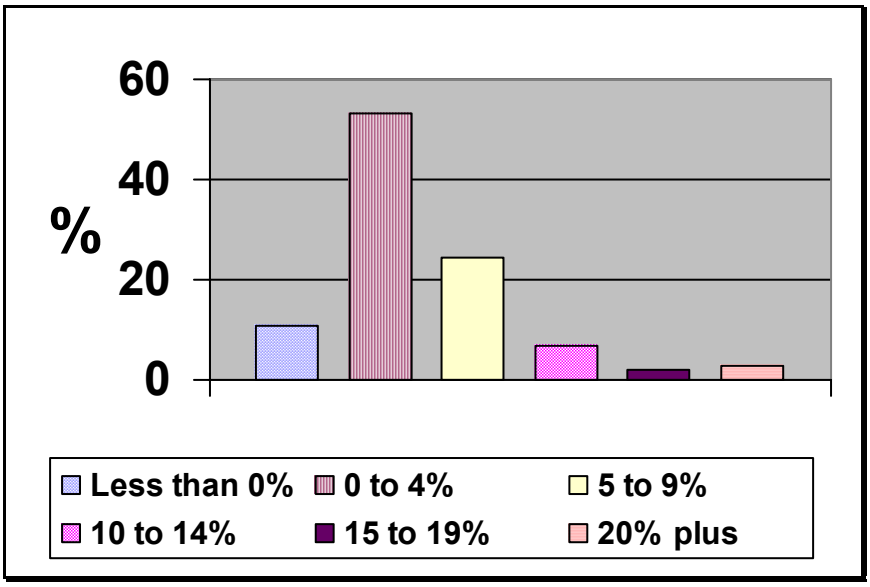


Of the respondents 48.76% indicated a growth of 5% plus. With a maximum increase in tariffs of 5.4% allowed by the NER, this indicates a real growth in sales. It need be noted that 6.79% of the respondents indicated an extraordinary growth of beyond 15%!

Table 5-28: Growth in post-tax profit from previous year

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Less than 0%	16	10.81	16	10.81
2	0 to 4%	79	53.38	95	64.19
3	5 to 9%	36	24.32	131	88.51
4	10 to 14%	10	6.76	141	95.27
5	15 to 19%	3	2.03	144	97.30
6	20% plus	4	2.70	148	100.00
7	Missing	29		177	

Figure 5-28: Growth in post-tax profit from previous year

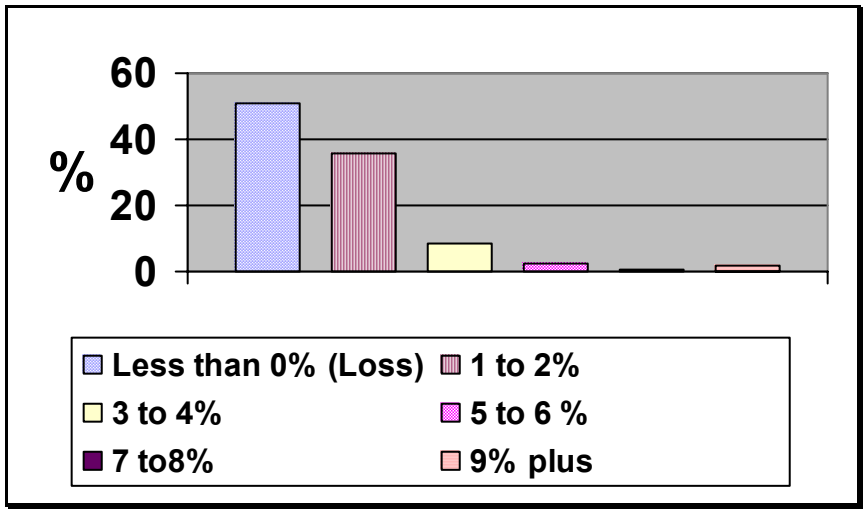


The post tax growth of 10.81% of respondents improved negatively indicating a major real negative growth, 53.38% experienced a growth below 4% also indicating a real negative growth. Only 35.81% of the respondents exceeded 5% and with a CPIX of in the order of 6% this means a small percentage real growth.

Table 5-29 Growth in employment from previous year

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Less than 0% (Loss)	82	50.62	82	50.62
2	1 to 2%	58	35.80	140	86.42
3	3 to 4%	14	8.64	154	95.06
4	5 to 6 %	4	2.47	158	97.53
5	7 to8%	1	0.62	159	98.15
6	9% plus	3	1.85	162	100.00
7	Missing	15		177	

Figure 5-29 Growth in employment from previous year

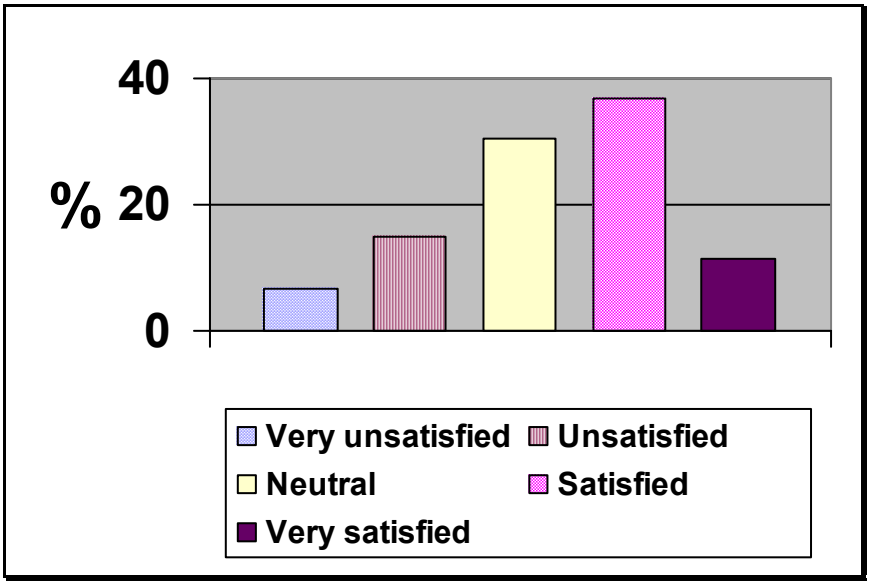


A disturbing 50.62% of the respondents indicated that they experienced a negative growth in employment compared to the previous year. This means job losses which is quite the opposite of the major drive by the National Government. With a net population growth in excess of 3% only 13.58% of the respondents indicated that they were addressing the need for jobs.

Table 5-30 Satisfaction with performance of profit on revenue compared to competition

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Very unsatisfied	11	6.55	11	6.55
2	Unsatisfied	25	14.88	36	21.43
3	Neutral	51	30.36	87	51.79
4	Satisfied	62	36.90	149	88.69
5	Very satisfied	19	11.31	168	100.00
6	Missing	9		177	

Figure 5-30 Satisfaction with performance of profit on revenue compared to competition

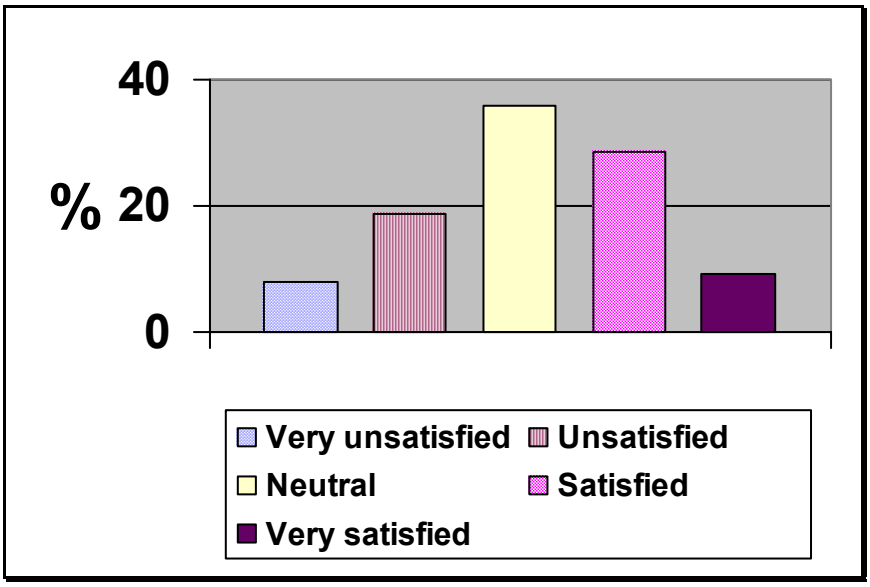


Most of the respondents indicated that they were either neutral (30.36%) or satisfied (36.90%) with their performance compared to that of their competitors. Nine respondents did not form an opinion on this item, whilst 21.43% knew that they were unsatisfied or very unsatisfied with their performance.

Table 5-31 Satisfaction with performance of profit on assets compared to competition

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Very unsatisfied	13	7.88	13	7.88
2	Unsatisfied	31	18.79	44	26.67
3	Neutral	59	35.76	103	62.42
4	Satisfied	47	28.48	150	90.91
5	Very satisfied	15	9.09	165	100.00
6	Missing	12		177	

Figure 5-31 Satisfaction with performance of profit on assets compared to competition

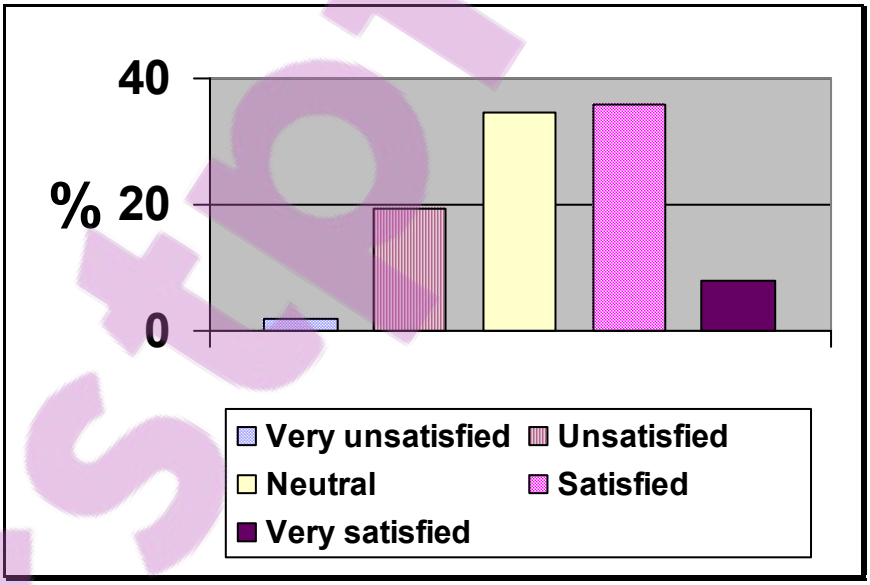


A normal distribution around the neutral position is depicted in the graph showing an expected equal number of satisfied and unsatisfied respondents when they compare their performance on this statistic with the competitor's.

Table 5-32 Satisfaction with performance of growth in revenue compared to competition

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Very unsatisfied	3	1.83	3	1.83
2	Unsatisfied	32	19.51	35	21.34
3	Neutral	57	34.76	92	56.10
4	Satisfied	59	35.98	151	92.07
5	Very satisfied	13	7.93	164	100.00
6	Missing	13		177	

Figure 5-32 Satisfaction with performance of growth in revenue compared to competition

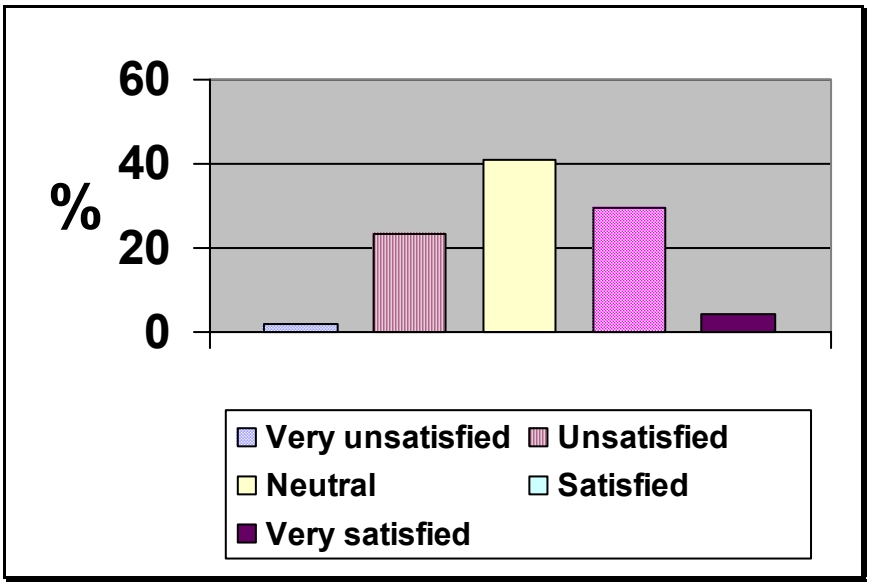


A reasonably normal distribution around the neutral position with a slight skew towards a perceived dissatisfaction is displayed. A high non-response of 13 out of 177 is disturbing.

Table 5-33 Satisfaction with performance of growth in post-tax profit compared to competition

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Very unsatisfied	3	1.89	3	1.89
2	Unsatisfied	37	23.27	40	25.16
3	Neutral	65	40.88	105	66.04
4	Satisfied	47	29.56	152	95.60
5	Very satisfied	7	4.40	159	100.00
6	Missing	18		177	

Figure 5-33 Satisfaction with performance of growth in post-tax profit compared to competition

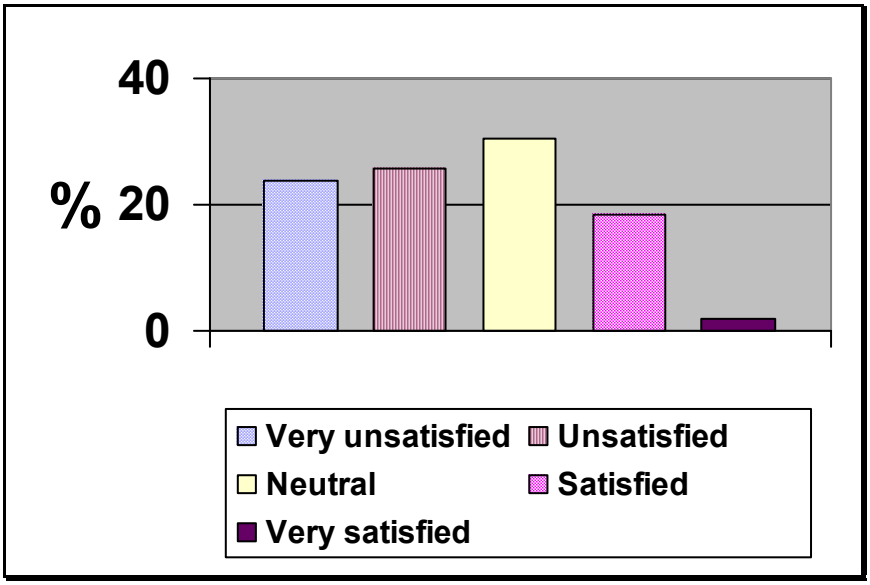


A reasonably normal distribution around the neutral position with a slight skew towards a perceived satisfaction is displayed. A high non-response of 18 out of 177 is disturbing.

Table 5-34 Satisfaction with performance of growth in employment compared to competition

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Very unsatisfied	40	23.81	40	23.81
2	Unsatisfied	43	25.60	83	49.40
3	Neutral	51	30.36	134	79.76
4	Satisfied	31	18.45	165	98.21
5	Very satisfied	3	1.79	168	100.00
6	Missing	9		177	

Figure 5-34 Satisfaction with performance of growth in employment compared to competition

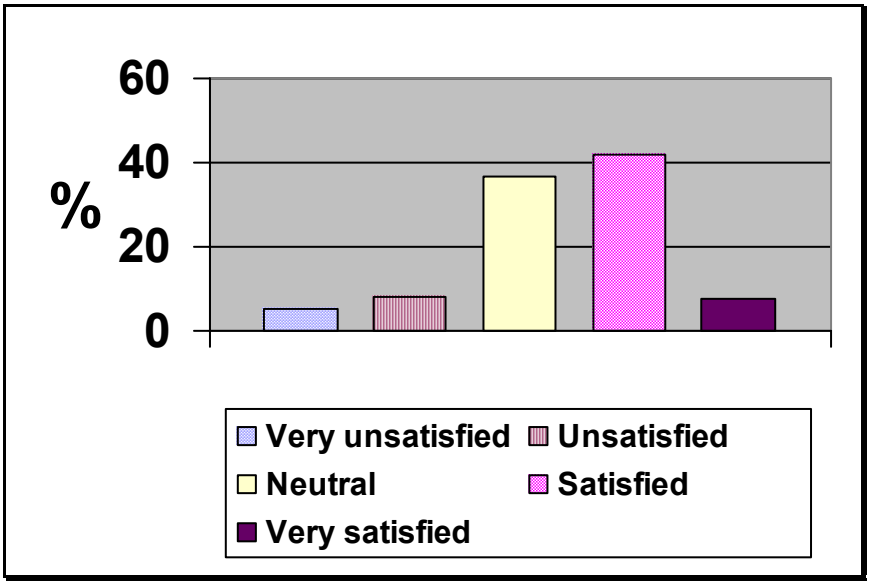


A very high level of dissatisfaction (49.41%) is displayed by the respondents. Only 20.24% shows some form of satisfaction.

Table 5-35 Satisfaction with performance on environmental protection compared to competition

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Very unsatisfied	9	5.33	9	5.33
2	Unsatisfied	14	8.28	23	13.61
3	Neutral	62	36.69	85	50.30
4	Satisfied	71	42.01	156	92.31
5	Very satisfied	13	7.69	169	100.00
6	Missing	8		177	

Figure 5-35 Satisfaction with performance on environmental protection compared to competition

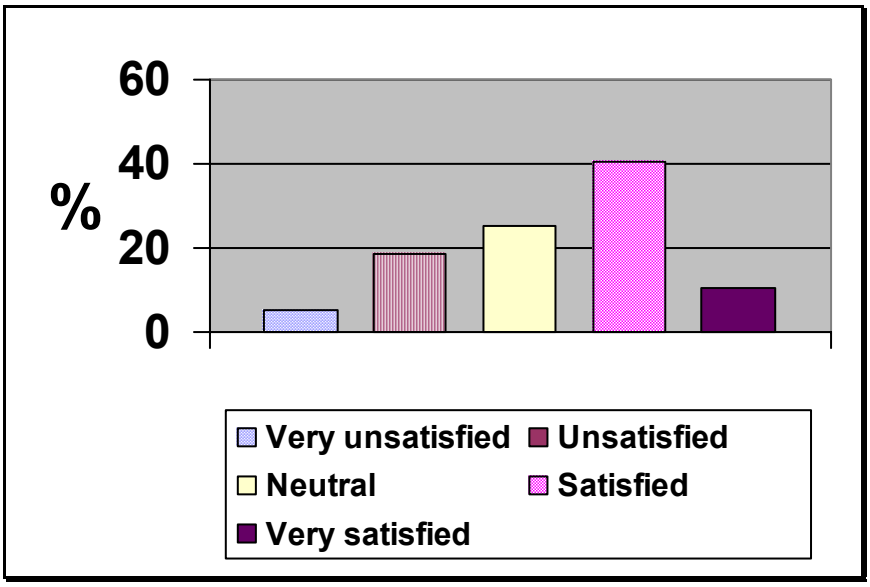


On this political sensitive softer issue the reported satisfaction is much higher with 49.7% of the respondents indicating satisfaction, 36.69% remaining neutral and only 13.61% respondents indicating dissatisfaction.

Table 5-36 Satisfaction with performance in customer satisfaction compared to competition

Variable		Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	Very unsatisfied	9	5.33	9	5.33
2	Unsatisfied	31	18.34	40	23.67
3	Neutral	43	25.44	83	49.11
4	Satisfied	68	40.24	151	89.35
5	Very satisfied	18	10.65	169	100.00
6	Missing	8		177	

Figure 5-36 Satisfaction with performance in customer satisfaction compared to competition



A high percentage (50.89%) indicated satisfaction with their performance in terms of customer satisfaction, with 23.67% indicating dissatisfaction.

5.3 FACTOR ANALYSIS

Using BMDP4M Factor Analysis statistical tools from BMDP Statistical Software Inc. the data for the two test items namely Company Orientation and Satisfaction with Organizational Performance, was analysed delivering the following results:

5.3.1 Company Orientation

5.3.1.1 Reliability through Cronbach's Alpha

Reliability of measurement is the degree to which the measurement supplies consistent results. Evaluating the calculated Cronbach's Alpha assesses the internal consistency or homogeneity among the test items. An alpha value in excess of 0,6 indicates an acceptable internal level of consistency. The calculated values in the tables below reflect the squared multiple correlations (SMC) of each variable with all other variables and Cronbach's Alpha with that variable removed.

Table 5-37 Calculated Squared Multiple Correlations and Cronbach's Alpha for Company Orientation

VARIABLE		SMC	ALPHA
Description	Code		
Rate of new product introduction	V3	0.38558	0.6199
Emphasis on continuous improvement	V4	0.40754	0.6371
Chancy growth & Risk-taking	V5	0.40706	0.6358
Using idea people	V7	0.43943	0.6270
Emphasis on proven product	V8	0.17403	0.7041
Cautious adjustments to problems	V9	0.13463	0.7165
Search for big opportunities	V10	0.51677	0.6230
Rapid growth as dominant goal	V11	0.32461	0.6592
Compromise among demands	V13	0.14625	0.7300
ALL VARIABLES			0.6908

Some variables seem to be missing and this is explained as follows. During the initial analysis 'bold decisions under uncertainty' (V12) loaded very low on both factors (0,283 and -0,038), while 'steady growth and stability as primary concern' (V14) loaded low but opposing on both factors (-0,362 and 0,316). This resulted in these factors being eliminated from the subsequent analysis.

As all the alpha values are in excess of 0.6 and none of the individual variable alphas are higher than the total alpha value, all variables are appropriate and the internal level of consistency of the instrument is acceptable.

5.3.1.2 Determining the optimum number of factors

Using principal component analysis (Cooper & Schindler 2001:592) the eigenvalues for the new factors were calculated from the factor study's correlation coefficients or loadings. (Eigenvalues are the sum of the squares of the variances of the factor values). The results of these calculations are shown in the table and graph below. When divided by the number of variables, the eigenvalue yields an estimate of the amount of total variance explained by the factor.

Table 5-38 Eigenvalues for Company Orientation variables

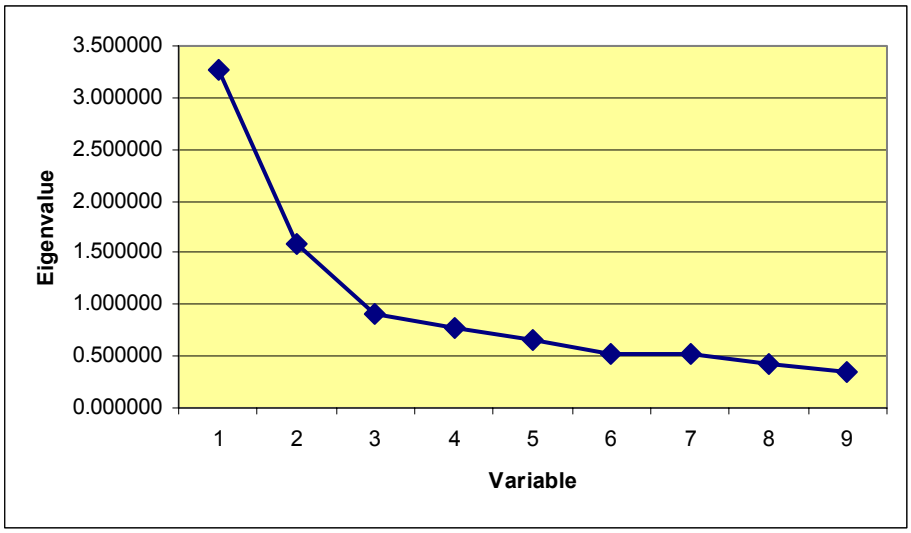
New Variable	Eigenvalue	% Variance	Cum Eigenvalue	Cum % Variance
1	3.259590	36.22	3.26	36.22
2	1.580070	17.56	4.84	53.77
3	0.915076	10.17	5.75	63.94
4	0.774816	8.61	6.53	72.55
5	0.648655	7.21	7.18	79.76
6	0.525894	5.84	7.70	85.60
7	0.514275	5.71	8.22	91.32
8	0.427337	4.75	8.65	96.06
9	0.354280	3.94	9.00	100.00

In the second column (*Eigenvalue*) above, we find the variance on the new factors that were successively extracted. In the third column, these values are expressed as a percent of the total variance (in this study, 9). As we can see, factor 1 account for 36, 22 percent of the variance, factor 2 for 17, 56 percent, and so on. As expected, the sum of the eigenvalues is equal to the number of variables. The third column contains the cumulative variance extracted. The variances extracted by the factors are called the *eigenvalues*. Now that a measure of how much variance each successive factor extracts, the question of how many factors to retain can be addressed. By its nature this is an arbitrary decision. However, there are some guidelines that are commonly used, and that, in practice, seem to yield the best results. Two criterions are discussed below.

- **The Kaiser criterion.** First, only factors with eigenvalues greater than 1 are retained. In essence this implies that, unless a factor extracts at least as much as the equivalent of one original variable, it is dropped. This criterion proposed by Kaiser in 1960, is probably the one most widely used. (Brase & Brase, 1983). In this study the Kaiser criterion for Company Orientation shown in Table 5-38 above, results in the retention of only two factors (principal components).

- **The Scree test:** A graphical method is the *Scree* test first proposed by Cattell in 1966. (Brase & Brase, 1983). The eigenvalues shown above are plotted in a simple line plot as shown below. Cattell (1966) suggests finding the place where the smooth decrease of eigenvalues appears to level off to the right of the plot. To the right of this point, presumably, one finds only "factorial scree" -- "scree" is the geological term referring to the debris which collects on the lower part of a rocky slope. According to this criterion, we could probably retain 2 or 3 factors in this study for Company Orientation shown in Table 5-38 above.

Figure 5-37 Scree chart of eigenvalues for Company Orientation variables



In evaluating both these criteria, it is accepted that only two Factors will be used in the analysis of the data in terms of entrepreneurial orientation.

5.3.1.3 Naming the factors

The following hypothesis are made and investigated in this research:

H_0: Non-entrepreneurial Electricity Utilities do not perform significantly worse than Entrepreneurial Electricity Utilities.

H_a: Entrepreneurial Electricity Utilities performs significantly better than Non-entrepreneurial Electricity Utilities.

From this it is clear that the two main constructs under investigation are:

1. Entrepreneurial orientation of the organization, and

2. Performance of the organization.

In executing the factor analysis program the results for Company Orientation represented by new variables 1 to 9 are obtained and displayed in Table 5–39 below.

Table 5-39 Loadings for Company Orientation variables

VARIABLE		Unrotated Factors			Rotated Factors	
Description	**Code**	**Factor 1**	**Factor 2**	**Communality**	**Factor 1**	**Factor 2**
Rate of new product introduction	V3	0.646	0.212	0.4618	0.658	0.209
Emphasis on continuous improvement	V4	0.680	-0.023	0.4623	0.678	-0.026
Chancy growth & Risk-taking	V5	0.697	-0.031	0.4863	0.695	-0.034
Use idea people	V7	0.716	0.002	0.5121	0.716	-0.002
Emphasis on proven product	V8	0.023	0.647	0.4186	0.061	0.647
Cautious adjustments to problems	V9	-0.014	0.459	0.2111	0.013	0.460
Search for big opportunities	V10	0.748	-0.050	0.5620	0.745	-0.053
Rapid growth as dominant goal	V11	0.538	-0.069	0.2946	0.534	-0.71
Compromise among demands	V13	-0.108	0.466	0.2287	-0.081	0.467
VP		2.738	0.900		2.738	0.903

Only variables loading higher than 0.3 are considered and therefore when

evaluating the questions associated with the variables the following constructs comes to the fore:

Factor 1: New product/services introduction; Emphasis on continuous improvement; Risk taking and exploring chancy growth opportunities; Seeking unusual novel solutions via "idea people"; Active search for big opportunities; and Rapid growth as dominant goal.

Morris and Kuratko (2002), based on the work by Zahra (1991) and Sharma and Chrisman (1999) define these activities as being prevalent in organizations displaying entrepreneurial orientation and describe the construct as "Corporate Entrepreneurship". Factor 1 will therefore be named 'Entrepreneurial Orientation' and coded ENTREPL in the data analysis.

Factor 1 = Entrepreneurial Orientation

Factor 2: Emphasize proven products and avoid heavy new development; cautious, pragmatic step-at-a-time adjustment to problems; compromises among the conflicting demands of owners, government, management, customers, employees, suppliers, etc.

As these activities describe the opposite of entrepreneurial activities as described in Factor 1 the factor is named 'Non-entrepreneurial Orientation' and coded NENTEPL. 'Non-entrepreneurial Orientation' is used in this study for Factor 2.

Factor 2 = Non-Entrepreneurial Orientation

5.3.1.4 Factor correlation

Table 5-40 Factor correlation for rotated factors

	Factor 1	Factor 2
Factor 1	1.000	
Factor 2	-0.055	1.000

Table 5-41 Factor score covariance

	Factor 1	Factor 2
Factor 1	0.842	
Factor 2	-0.047	0.578

5.3.2 Satisfaction with Organizational Performance

5.3.2.1 Reliability through Cronbach's Alpha

Table 5-42 Calculated Squared Multiple Correlations and Cronbach's Alpha for Satisfaction with Organizational Performance

VARIABLE		SMC	ALPHA
Description	**Code**		
Profit on revenue	V25	0.57591	0.7949
Profit on assets	V26	0.57222	0.7976
Growth in revenue	V27	0.57222	0.7971
Growth in post tax profit	V28	0.59848	0.7967

Growth in employment	V29	0.31419	0.8363
Environmental protection	V30	0.43750	0.8088
Customer satisfaction	V31	0.30088	0.8258
ALL VARIABLES			0.8315

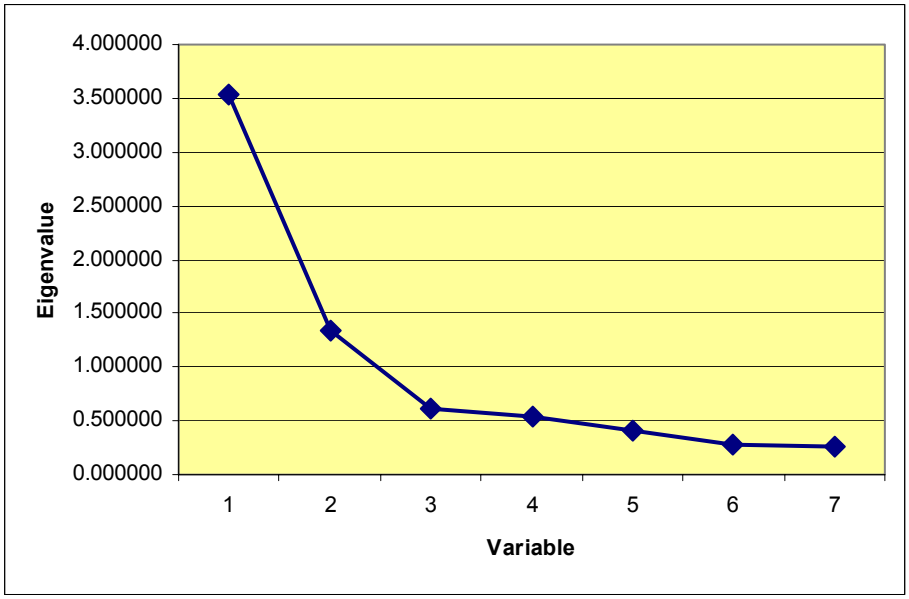
As all the alpha values are in excess of 0.6 and none of the individual variable alphas are higher than the total alpha value, all variables are appropriate and the internal level of consistency of the instrument is acceptable.

5.3.2.2 Determining the optimum number of factors

Table 5-43 Eigenvalues for Satisfaction with Organizational Performance

New Variable	Eigenvalue	% Variance	Cum Eigenvalue	Cum % Variance
Profit on revenue	3.541900	50.60	3.54	50.60
Profit on assets	1.332930	19.04	4.87	69.64
Growth in revenue	0.619257	8.85	5.49	78.49
Growth in post tax profit	0.543835	7.77	6.04	86.26
Growth in employment	0.411482	5.88	6.45	92.13
Environmental protection	0.284861	4.07	6.73	96.20
Customer satisfaction	0.265728	3.80	7.00	100.00

Figure 5-38 Scree chart of eigenvalues for Satisfaction with Organizational Performance



Once again in evaluating both the Kaiser and Scree criteria, it is accepted that again only two Factors will be used in the analysis of the data in terms of entrepreneurial performance.

In executing the factor analysis program the results for entrepreneurial orientation represented by variables V25 to V31 are obtained and displayed in Table 4 – 43 below.

Table 5-44 Loadings for Satisfaction with Organizational Performance variables

VARIABLE		Unrotated Factors			Rotated Factors	
		Factor 1	Factor 2	Communality	Factor 1	Factor 2
Profit on revenue	V25	0.763	-0.159	0.6075	0.760	0.037
Profit on assets	V26	0.754	-0.188	0.6033	0.775	0.003
Growth in revenue	V27	0.775	-0.183	0.6340	0.789	0.015
Growth in post tax profit	V28	0.793	0.233	0.6836	0.844	-0.036
Growth in employment	V29	0.404	0.527	0.4410	-0.085	0.702
Environmental protection	V30	0.604	0.538	0.6547	0.072	0.771
Customer satisfaction	V31	0.475	0.404	0.3892	0.072	-0.585
VP		3.134	0.879		2.531	1.433

Only variables loading higher than 0.3 are considered and therefore when evaluating the questions associated with the variables the following constructs come to the fore:

- Factor 3: Profit on revenue and assets; Growth in revenue and post tax profit.

Nieman, Hough, and Nieuwenhuizen (2003) define these indicators (amongst others) as signs pointing to a successful venture. As this success is directly

associated with profit Factor 3 is named '**Financial Success'**.

Factor 3 = Financial Success

- Factor 4: Growth in employment, Environmental protection, and development: Customer satisfaction.

As these indicators describe the so-called softer or social issues, Factor 2 is named '**Social Success'**.

Factor 4 = Social Success

5.3.2.3 Factor correlation

Table 5-45 Factor correlation

	Factor 1	Factor 2
Factor 1	1.000	
Factor 2	0.495	1.000

Table 5-46 Factor score covariance

	Factor 1	Factor 2
Factor 1	0.879	
Factor 2	0.481	0.776

5.4 CORRELATION

5.4.1 New product/service introduction in relationship with uniqueness, management structure, and reward systems

Table 5-47 Table of Product Uniqueness by New Products

	Frequency Percent Row % Col %	YES	NO	TOTAL
IS PRODUCT UNIQUE?	NOT AT ALL	5 2.86 9.80 4.59	46 26.29 90.20 69.70	51 29.14
	SOME	54 30.86 93.10 49.54	4 2.29 6.90 6.06	58 33.14
	NEUTRAL	17 9.71 51.52 15.6	16 9.14 48.48 24.24	33 18.86
	MANY	26 14.86 100.00 23.85	0 0.00 0.00 0.00	26 14.86
	GREAT EXT	7 4.00 100.00 6.42	0 0.00 0.00 0.00	7 4.00
	TOTAL	109 62.29	66 37.71	175 100.00

Table 5-48 Table of Management Structure by New Products

	V17	V15		TOTAL
	Frequency Percent Row % Col %	YES	NO	
ROOM TO MOVE:	LOT OF	7 4.00 58.33 6.48	5 2.86 41.67 7.46	12 6.86
	ENOUGH	15 8.57 75.00 13.89	5 2.86 25.00 7.46	20 11.43
	MODERATE	33 18.86 75.00 30.56	11 6.29 25.00 16.42	44 25.15
	LITTLE	40 22.86 56.34 37.04	31 17.71 43.66 46.27	71 40.57
	NO ROOM	13 7.43 46.43 12.04	15 8.57 53.57 22.39	28 16.00
	TOTAL	108 61.71	67 38.29	175 100.00

Table 5-49 Table of Reward Systems by New Products

	V17	V15		TOTAL
	Frequency Percent Row % Col %	YES	NO	
REWARD SYSTEMS BASED ON:	OUTCOMES	5 2.86 71.43 4.63	2 1.14 28.57 2.99	7 4.00
	VALUE	10 5.71 83.33 9.26	2 1.14 16.67 2.99	12 6.86
	TEAM	18 10.29 75.00 16.67	6 3.43 25.00 8.96	24 13.71
	SHORTERM	26 14.86 81.25 24.07	6 3.43 18.75 8.96	32 18.29
	HIERARCHY	49 28.00 49.00 45.37	51 29.14 51.00 76.12	100 57.14
	TOTAL	108 61.71	67 38.29	175 100.00

5.4.2 Correlation of new product creation with management structure and reward systems

- Using the one sample chi square test the independency of the amount of new products of Management structure and Reward
- The null hypothesis for this test is that the dependant variable: new product creation is independent of the management structure and of reward systems of the sampled organisations.
- The alternative hypothesis is that new product creation is not independent of management structure and reward systems.
- The H_O will be rejected if the P value is greater than the accepted α, in this study α = 0.05

Table 5-50 **Chi-Square** Statistics for the Management Structure related to New Products

Statistic	DF	Value	Prob
Chi-square	4	8.4766	0.0756
Likelihood ratio Chi- square	4	8.6702	0.0699
Mantel – Haenszel Chi- square	1	4.0223	0.0449
Phi Coefficient		0.2201	
Contingency Coefficient		0.2149	
Cramer's V		0.2201	

The Chi-square P value of 0.0756 is bigger than 0.05 and therefore H_0 is redundant at the 5% significance level.

Table 5-51 Chi-square statistics for the Reward Systems related to New Products

Statistic	DF	Value	Prob
Chi-square	4	16.4566	0.0025
Likelihood ratio Chi- square	4	17.2502	0.0017
Mantel – Haenszel Chi- square	1	9.8106	0.0017
Phi Coefficient		0.3067	
Contingency Coefficient		0.2932	
Cramer's V		0.3067	

The Chi-square P value of 0.0025 is lower than the 0.05 significance level and therefore H_0 is rejected. The alternative hypothesis is accepted. However, a warning was generated by the programme indicating that 30% of the cells have expected counts less than 5 and that the Chi-square test may not be valid.

Spearman correlation coefficients

The Spearman correlation coefficient indicates the monotone relationship between ranked variables. The first group of variables measures the financial performance of the organisation where as the next group of variables measure the respondents' perception of the performance of the organisation. Applying the Spearman correlation coefficient test to the two variable groups, it is found that the P value of 0.0119 is smaller than $\alpha = 0.05$. This implies that the Ho: Rho= 0 can be rejected indicating that there is a correlation between the financial performance of the organisation and respondents' perception of performance. (Brase & Brase, 1983).

5.5 ANOVA

The variance analysis in this section aims to identify differences in the factors between demographic factors (respondent's age, level of education, business area, work function, organisational position, years in position and the nature of utility) and company orientation (Management structure and Reward systems).

5.5.1 Entrepreneurial orientation

Table 5-52 Analysis of variance results for Factor 1- Entrepreneurial Orientation by All Demographics and Business Behaviour

Source	DF	Sum of	Mean	F value	Pr > F
Model	15	38.8461320	2.5897421	5.44	< 0.0001
Error	149	70.9956189	0.4764807		
Corrected total	164	109.8417508			

R-square = 0.353655 Coeff Var = 21.52356

Root MSE = 0.690276 ENTREPL Mean = 3.207071

The R^2 indicates that the model accounts for 35.4% of the variation in Entrepreneurial Orientation. The overall F test is significant ($F = 5.44$, $p < 0.0001$), indicating that the model as a whole accounts for a significant amount of the variation in Entrepreneurial Orientation. Thus, it is appropriate to proceed to test the effects.

Table 5-53 ANOVA of the factors regarding Entrepreneurial Orientation

Effect		DF	Type III Sum of Squares	Mean Square	F value	Pr > F
VV32	**Age**	2	0.49630776	0.24815388	0.52	0.5951
VV34	**Education**	2	0.17499564	0.08749782	0.18	0.8324
VV35	**Business Area**	2	3.26938087	1.63469044	3.43	0.0349 *
VV37	**Work Function**	2	0.49596869	0.24798434	0.52	0.5953
VV38	**Experience**	2	4.11407302	2.05703651	4.32	0.0150 *
VV17	**Management Structure**	3	18.09899036	6.03299679	12.66	< 0.0001 *
VV18	**Reward System**	2	2.54222946	1.27111473	2.67	0.0727

At a significance level of 5% ($\alpha = 0.05$), there is a significant difference between business area ($F = 3.43$, $p = 0.0349$), experience ($F = 4.42$, $p = 0.0150$), and management structure ($F = 12.66$, $p < 0.0001$), for entrepreneurial orientation. This suggests that there is indeed a straight line relationship between the mentioned effects and entrepreneurial orientation.

Table 5-54 Exceedence probability values for differences in Entrepreneurial Orientation between Business Areas [Pr > \|t\| for H_0: LSMean (i) = LSMean (j)]

Business Area	Rural	City	Metro	Scheffe's test α = 0.05
Rural	-	0.4247	0.2130	-
City	0.4247	-	0.0104*	> Metro
Metro	0.2130	0.0104*	-	-

Significant difference (* = P < 0.05) for entrepreneurial orientation exists only between respondents from the Metro and City groups. Scheffe's test indicates the direction of difference at the α = 0.05 significance level.

Table 5-55 Exceedence probability values for differences in Entrepreneurial Orientation between Years Experience [Pr > |t| for H_0: LSMean (i) = LSMean (j)]

Years Experience	> 15 y	0 – 5 y	6- 15 y	Scheffe's test α = 0.05
> 15 y	-	0.1208	0.5365	-
0 – 5 y	0.1208	-	0.0040	-
6- 15 y	0.5365	0.0040	-	-

Highly significant differences (P < 0.01) for entrepreneurial orientation exist only between respondents from 0-5 y and 6 – 15 y groups. Scheffe's test indicates the direction of difference at the α = 0.05 significance level.

Table 5-56 Exceedence probability values for differences in Entrepreneurial Orientation between Management Structure (Room to move) [Pr > |t| for H_0: LSMean (i) = LSMean (j)]

Management Structure	Enough	Moderate	Little	No Room	Scheffe's test α = 0.05
Enough	-	0.8128	0.0039 *	< 0.0001*	> Little > No Room
Moderate	0.8128	-	0.0005 *	< 0.0001*	> Little > No Room
Little	0.0039	0.0005	-	0.0046 *	-
No Room	< 0.0001	< 0.0001	0.0046	-	-

Highly significant differences (* = P < 0.01) for entrepreneurial orientation exist between respondents from:

- Enough and No Room
- Enough and Little
- Moderate and No Room
- Moderate and Little
- Little and No Room

Scheffe's test indicates the direction of difference at the α = 0.05 significance level.

Table 5-57 Exceedence probability values for differences in Entrepreneurial Orientation between Reward Systems (Based on variability of outcomes) [Pr > |t| for H_0: LSMean (i) = LSMean (j)]

Reward System	Most	Some	Fixed	Scheffe's test α = 0.05
Most	-	0.7202	0.0947 *	> Fixed
Some	0.7202	-	0.0468 *	> Fixed
Fixed	0.0947	0.0468	-	

Significant differences (P < 0.05) for entrepreneurial orientation exist only between respondents from Fixed and Some variability groups.

Less significant differences (P < 0.10) for entrepreneurial orientation exist only between respondents from Fixed and Most variability groups.

Scheffe's test indicates the direction of difference at the 95% confidence level (α = 0.05).

5.5.2 Non Entrepreneurial orientation

Table 5-58 ANOVA for Non-entrepreneurial Orientation related to Demographics and Business Behaviour

Source	DF	Sum of Squares	Mean Square	F value	Pr > F
Model	15	5.76788965	0.38452598	0.69	0.7871
Error	149	82.50416422	0.55371922		
Corrected total	164	88.27205387			

R-square = 0.065342 Coeff Var = 28.24701

Root MSE = 0.744123 NENTREPL Mean = 2.634343

The overall F test is not significant (F = 0.69, p = 0.7871), indicating that the model as a whole do not account for a significant amount of variation in the variables of Non Entrepreneurial Orientation and therefore there is no significant straight line relationship between the mentioned effects and Non Entrepreneurial Orientation.

5.5.3 Financial success

Table 5-59 ANOVA for Financial Success related to Demographics and Business Behaviour

Source	DF	Sum of Squares	Mean Square	F value	Pr > F
Model	15	5.33756081	0.35583739	0.78	0.7011
Error	138	63.20342945	0.45799587		
Corrected total	153	68.54099026			

R-square = 0.077874 Coeff Var = 7.181402

Root MSE = 0.676754 FINSUCC Mean = 9.423701

The overall F test is not significant (F = 0.78, p = 0.7011), indicating that the model as a whole do not account for a significant amount of variation in the variables of Financial Success and therefore there is no significant straight line relationship between the mentioned effects and financial success.

5.5.4 Social success

Table 5-60 Analysis of variance results for Social Success by Demographics and Business Behaviour

Source	DF	Sum of Squares	Mean Square	F value	Pr > F
Model	15	28.8388979	1.9225932	3.40	< 0.0001
Error	138	78.0622565	0.5656685		
Corrected total	153	106.9011544			

R-square = 0.269772 Coeff Var = 24.41845

Root MSE = 0.752109 SOCSUCC Mean = 3.080087

The R^2 value indicates that the model accounts for 26.97% of the variation in Social Success. The overall F test is significant (F = 3.40, p < 0.0001), indicating that the model as a whole accounts for a significant amount of the variation in Social Success. Thus, it is appropriate to proceed to test the effects.

Table 5-61 ANOVA of the effects regarding Social Success

Source		DF	Type III Sum of Squares	Mean Square	F value	Pr > F
VV32	**Age**	2	1.24509222	0.62254611	1.10	0.3356
VV34	**Education**	2	6.18829348	3.09414674	5.47	0.0052 *
VV35	**Business Area**	2	1.75348726	0.87674363	1.55	0.2159
VV37	**Work Function**	2	1.27409469	0.63704734	1.13	0.3272
VV38	**Experience**	2	1.24762994	0.62381497	1.10	0.3349
VV17	**Management Structure**	3	5.19048806	1.73016269	3.06	0.0304 *
VV18	**Reward System**	2	3.91919105	1.95959553	3.46	0.0340 *

At a significance level of 5% ($\alpha = 0.05$), there is a significant difference between qualification ($F = 5.47$, $p = 0.0052$), management structure ($F = 3.06$, $p = 0.0304$), and reward systems ($F = 3.46$, $p < 0.0340$), for social success. This suggests that there is indeed a straight line relationship between the mentioned effects and social success.

Table 5-62 Exceedence probability values for differences in Social Success between Qualifications [Pr > |t| for H_0: LSMean (i) = LSMean (j)]

Qualifications	High School/ College	Under graduate	Post Graduate	Scheffe's test α = 0.05
High School/ College	-	0.8192	0.0135 *	-
Undergraduate	0.8192	-	0.0020 *	-
Post Graduate	0.0135	0.0020	-	> Under graduate

Highly significant difference (P < 0.01) for social success exists between respondents from: Undergraduate and Post Graduate Groups

Significant difference (P < 0.05) for social success exists between respondents from: Post Graduate and High School/ College Groups

Scheffe's test indicates the direction of difference at the 95% confidence level (α = 0.05).

Table 5-63 Exceedence probability values for differences in Social Success between Management Structures (Room to move) [Pr > |t| for H_0: LSMean (i) = LSMean (j)]

Management Structure	Enough	Moderate	Little	No Room	Scheffe's test α = 0.05
Enough	-	0.2079	0.0895	0.0032 *	> Little > No Room
Moderate	0.2079	-	0.5835	0.0349 *	-
Little	0.0895	0.5835	-	0.0788	-
No Room	0.0032	0.0349	0.0788	-	-

Highly significant differences (P < 0.01) for social success exist only between respondents from Enough and No Room groups.

Significant differences (P < 0.05) for social success exist only between respondents from Moderate and No Room groups.

Scheffe's test indicates the direction of difference at the 95% confidence level (α = 0.05).

Table 5-64 Exceedence probability values for differences in Social Success between Reward Systems (Based on variability of outcomes) [Pr > |t| for H_0: LSMean (i) = LSMean (j)]

Reward System	Most	Some	Fixed	Scheffe's test α = 0.05
Most	-	0.0600	0.0113 *	> Fixed
Some	0.0600	-	0.7434	-
Fixed	0.0113	0.7434	-	-

Significant differences (P < 0.05) for social success exist only between respondents from Most and Fixed Rewards groups.

Less significant differences (P < 0.10) for social success exist only between respondents from Most and Some Rewards groups.

Scheffe's test indicates the direction of difference at the 95% confidence level (α = 0.05).

Table 5-65 Pairswise Spearman Correlation for All Factors
[N = 147, Prob > |r| under H_0: Rho = 0]

Correlation Coefficient Prob	Entrepreneurial Orientation	Non-entrepreneurial Orientation	Financial Success	Social Success
Entrepreneurial Orientation	1.00000	0.00761 0.9271	0.23103 0.0049	0.39163 <0.0001
Non-entrepreneurial Orientation	0.00761 0.9271	1.00000	0.03243 0.6966	-0.05149 0.5357
Financial Success	0.23103 0.0049	0.03243 0.6966	1.00000	0.40092 <0.0001
Social Success	0.39163 <0.0001	-0.05149 0.5357	0.40092 <0.0001	1.00000

The Spearman correlation coefficients result in the null hypothesis: Rho = 0 being rejected at the α = 0.05 level for correlation between entrepreneurial orientation and financial success (p= 0.0049), entrepreneurial orientation and social success (p< 0.0001) and financial success with social success (p< 0.0001). This implies that there is a positive linear correlation between these variable pairs at the 5% (α = 0.05) significance level.

CHAPTER 6: DISCUSSION OF FINDINGS

6.1 DESCRIPTIVE STATISTICS

The data for the study was gathered from 177 responses obtained from 450 self – reporting questionnaires and 230 e-mail invitations to managers in the Electricity supply industry. The response rate of 26% is in line with similar studies done in the past. (Morris & Jones, 1999)

From the descriptive statistics the following findings are of importance:

i. 73.45% of the respondents are within the 36-55 year age group.

ii. Only 7.4% of the respondents where from the female group. This is a very low percentage in relation to the South African population but in line with the gender distribution within the Electricity industry management.

iii. The respondents where biased towards the metro distributors. This can be explained by the fact that the Metro and City distributors supplies 38% and 24% respectively of the electricity used in South Africa. This compares well with the responses of 51% and 31% respectively.

iv. The responses of 67% and 25% respectively from Management and Supervisory respondents ensure that a "management" group was surveyed.

v. The responses where mostly (80.2%) from government owned electricity distributors.

vi. Regarding the company orientation, these were evaluated in terms of the following:

Variable	N	Mean	SD

Code	Description			
V3	High rate of new products	167	3.31138	1.108
V4	Emphasise on improvement	167	3.98802	0.999
V5	Exploring chancy growth	167	2.96407	1.129
V7	Seeking unusual solutions	167	3.03593	1.192
V8	Emphasis on proven products	167	2.73653	1.077
V9	Cautious step at a time	167	2.59880	0.982
V10	Search for big opportunities	167	3.10778	1.172
V11	Rapid growth – dominant goal	167	2.89820	1.085
V13	Compromise among conflicting demands	167	2.56886	1.061

6.2 FACTOR ANALYSIS AND ITEM ANALYSIS

With principle component analysis for the results of an analysis to be reliable, the number of responses should be equal or greater than five times the variables. (Brigant & Yarnold, 1995:100) This was achieved in securing 177 individual responses of this study.

The responses from the participants were subjected to factor analysis. Factor analysis greater or equal to 0.30 was regarded as significant and factors with eigenvalues greater than one were retained. The factor analysis were conducted as per the two scales identified in the study namely for Company Orientation and for Organisational performance.

The initial results indicated that for company orientation two variables-, bold decisions despite uncertainty and steady growth and stability as primary

concerns, did not load satisfactory on any factors and was discarded. Following this, all variables loaded satisfactory with one of the factors. This yielded the following axpected factor solutions:

6.2.1 Company orientation

Not one variable represented this scale and was used in the factor analysis. A two factor solution was accepted using the Kaiser orientation and the Scree test. The alpha value for all the variables was 0.6908 and a cumulative eigenvalue of 0.484 for the two factors which explained 53.77% of the variance. The rotated factor loadings varied between 0.534 and 0.745 for Factor 1 and 0.460 to 0.647 for factor 2 with 0.3 being the minimum acceptable value. The Factor correlation between these two factors was 0.055 indicating that these two factors appear to be positively but very weakly correlated.

6.2.2 Organisation performance

Seven variables represented this scale and were used in the factor analysis. Again a two factor solution was accepted with an Alpha of 0.8315 and a cumulated eigenvalue of 4.87 that explained 69.94% of the variance. The rotated factor loadings factor between 0.760 and 0.844 for factor 3 and -0.585 to 0.771 for factor 4. In evaluation the variables associated with each factor. The four factors were named:

F1: Entrepreneurial orientation

F2: Non – entrepreneurial orientation

F3: Financial Success

F4: Social Success

6.2.3 Correlation between new product/service introduction and product uniqueness, management structures and reward systems

From table 5-47 it can be seen that there was a clear misunderstanding and interpretation of the questionnaire as 31% of the respondents indicated that they did not produce any new product, but that despite this, the new product was

somewhat to a great extend unique. For the relationship between new product/service introduction and management structures, 31.4% of the respondents indicated that they had moderate to lots of room to move in terms of rigidity of the management structure. The majority of respondents (68.6%) indicated that they had little or no room to move.

Using the one sample Chi-square test the independency of the independent variable (new product/service introduction) of the dependent variables (management structure and reward structures) is tested. For management structure by New Product/services χ^2= 8.4766 at DF=4 and the p – value =0.0756

With **α** = 0.05 this means that the null hypothesis cannot be rejected. This implies that at the 5% significance level the level of new products and management structure are independent. However, at **α** = 0.1 H_o will be rejected.

This finding is in line with that of Morris and Jones' (1999) where they indicated that Limited managerial autonomy scored mean = 2.16 out of 5 with 1 being a "serious obstacle".

For the relationship between new product /service introduction and reward systems only 18.86% of the respondents indicated that they perceived the reward system to be focusing on the team, value creation or outcomes. The major group (82.2%) indicated that they perceived the reward systems to be hierarchical (28%) and focussed on short-term goals. (14.86%) Again using the Chi-Square test the independency of new product/service creation of reward systems were tested. The resulting χ^2 = 16.4566 and p-value= 0.0025 means that the null hypothesis must be rejected. This means that new product/service introduction is not independent from reward systems. The high χ^2 value can be interpreted as indicative of a high dependency. However, note should be taken of the warning generated by the test that the test may not be valid due to 30% of the cells have expected counts less than 5. This confirms again Morris and Jones' findings that reward systems with mean = 1.95 and sd = 1.03 is a serious obstacle to achieving entrepreneurship within public sector organisations.

These findings are also in support of Cornwell and Perlmans' (1990:127) literature on the subject.

6.3 THE RELATIONSHIP BETWEEN ENTREPRENEURIAL ORIENTATION AND BIOGRAPHIC VARIABLES

The uncertainty of the normality of the data dictates that non-parametric tests should be used. (Cooper & Schindler, 2001:554). The correlation test was therefore done by means of Spearman correlation analysis. The correlations between entrepreneurial orientation and all the sub scales were statistically highly significant. ($F=5.44$, $p<0.0001$) The R-square of 0.35 indicates a significant percentage of variation explained. Correlation between entrepreneurial orientation and individual sub scales were statistically significant at the $\alpha = 0.05$ level for business area ($F=3.43$, $p=0.0349$), experience ($F=4.32$, $p=0.0150$), and management structures ($F=12.66$, $p<0.0001$). This implies that entrepreneurial orientation is significantly and positively influenced by the business area, the manager's work experience, and the organisation's management structures.

Using the LSMeans test the probability values for differences in entrepreneurial orientation between business areas were tested. This resulted in significant differences only between respondents from the Metro and City groups with non-significant differences between Rural and City as well as Rural and Metro. This could be explained by the fact that city organisations are large enough to financially support entrepreneurial endeavours but small enough to allow entrepreneurial movement (Kau, 1999:109).

6.4 THE RELATIONSHIP BETWEEN NON-ENTREPRENEURIAL ORIENTATION AND BIOGRAPHIC VARIABLES

Using Spearman correlation analysis it was found that the correlations between non-entrepreneurial orientation and all the sub scales were statistically non-significant. ($F=0.69$, $p=0.7871$) The R-square of 0.065 indicates a non-significant percentage of variation explained.

6.5 THE RELATIONSHIP BETWEEN FINANCIAL SUCCESS AND BIOGRAPHIC VARIABLES

Using Spearman correlation analysis it was found that the correlations between financial success and all the sub scales were statistically non-significant. (F=0.78, p=0.7011) The R-square of 0.078 indicates a non-significant percentage of variation explained.

6.6 THE RELATIONSHIP BETWEEN SOCIAL SUCCESS AND BIOGRAPHIC VARIABLES

Using Spearman correlation analysis it was found that the correlations between social success and all the sub scales were statistically highly significant. (F=3.40, p<0.0001) The R-square of 0.2698 indicates a significant percentage of variation explained.

Correlation between social success and individual sub scales were statistically significant at the $\alpha = 0.05$ level for education (F=5.47, p=0.0052), management structures (F=3.06, p<0.0304), and reward systems (F=3.46, p=0.0340). This implies that social success is significantly and positively influenced by management's level of education, the organisation's management structures, and the organisation's reward systems.

Using the LSMeans test the probability values for differences in social success between:

- Qualifications were tested. This resulted in significant differences between respondents with undergraduate and post graduate qualifications (P= 0.0020) as well as post graduate and high school/college qualifications (P= 0.0135)
- Management structures were tested. This resulted in significant differences between respondents with enough room to move within the structure and no room to move (P= 0.0032) as well as between moderate room to move and

no room to move (P=0.0349)

- Reward systems were tested. This resulted in significant differences between respondents with rewards based on fixed reward structures and rewards based on outcomes (P= 0.0113)

6.7 THE RELATIONSHIP BETWEEN ENTREPRENEURIAL ORIENTATION, NON- ENTREPRENEURIAL ORIENTATION, FINANCIAL SUCCESS AND SOCIAL SUCCESS

Using the correlation procedure, the four factors determined through the factor analysis were correlated. From the resulting Spearman correlation coefficients, it is clear that the null hypothesis: Rho = 0 can be rejected at the α = 0.05 level for correlation between entrepreneurial orientation and financial success (P= 0.0049), entrepreneurial orientation and social success (P< 0.0001) and financial success with social success (P< 0.0001).

During the development of the test instrument, four propositions were set. These propositions are discussed below.

The first proposition states that South African Electricity Utility Managers do not perceive their utility's strategies to be entrepreneurial. It was found that South African Electricity Utilities are in fact perceived not to be very entrepreneurial as the mean for the factor Entrepreneurial orientation is equal to 3.27 with a standard deviation of 0.83 where 1= highly non-entrepreneurial and 5= highly entrepreneurial. Entrepreneurial orientation consists of the variables continuous improvement, new product/service introduction, exploring chancy growth opportunities, and rapid growth. In the literature these traits are associated with entrepreneurial management strategies. (Morris & Kurratko: 2002: 21, Wickham, 2001:35)

The second proposition states that South African Electricity Utility Managers do not perceive their utility's top level decision making to be entrepreneurial. Factor 2, non-entrepreneurial orientation, is associated with proven products, cautious pragmatic step-at-a-time adjustment to problems and compromising among conflicting demands. From the correlation procedure, it was found that South

African Electricity Utility managers are in fact perceived not to be very entrepreneurial decision makers as the mean for the factor non-entrepreneurial orientation is equal to 2.64 with a standard deviation of 0.75 where 1= highly entrepreneurial and 5= highly non-entrepreneurial.

The third proposition states that South African Electricity Utility Managers do not perceive their utility's to be financially successful. Factor 3, financial success, is associated with profit on revenue and assets, growth in revenue and post tax profit. From the correlation procedure, it was found that South African Electricity Utilities are in fact perceived to be financially neutral as the mean for the factor financial success is equal to 9.418 with a standard deviation of 0.67 with a minimum of 7.75, a median of 9.5 and a maximum of 10.75.

The fourth and final proposition states that South African Electricity Utility Managers do not perceive their utility's to be socially successful. Factor 4, social success, is associated with growth in employment, environmental protection and development of customer satisfaction. From the correlation procedure, it was found that South African Electricity Utilities are in fact perceived to be socially successful as the mean for the factor social success is equal to 3.05 with a standard deviation of 0.85 where 1= highly unsuccessful and 5= highly successful.

6.8 EVALUATING THE MAIN HYPOTHESIS

The main hypothesis of the study is as follows:

> **H_0: Non-entrepreneurial Electricity Utilities do not perform significantly worse than Entrepreneurial Electricity Utilities. ($\mu_{\text{non entrp}} = \mu_{\text{entrep}}$)**
>
> **H_a: Entrepreneurial Electricity Utilities perform significantly better than Non-entrepreneurial Electricity Utilities. ($\mu_{\text{non entrp}} < \mu_{\text{entrep}}$)**

In Table 5-65, the Spearman correlation coefficient with a H_0: Rho = 0 for the correlation between entrepreneurial orientation and financial success, a P value of 0.0049 was obtained. The inference from this is that the H_0 can be rejected at the α = 0.05 significance level, and therefore **H_a: Entrepreneurial Electricity Utilities do perform significantly better than Non - Entrepreneurial Electricity**

Utilities is accepted. The Spearman correlation coefficient of 0.23 indicates a weak but positive linear relationship between entrepreneurial orientation and financial success for the South African Electricity Distribution Utilities.

6.9 LIMITATIONS OF THE CURRENT STUDY

The following points are identified as limitations in the current study:

- The low level of female participation/availability amongst respondents is of concern.
- The 8.14% participation by non-distribution respondents might have influenced the results of the study.
- The definitions of profit and utility might have been misinterpreted / misunderstood by respondents.
- The respondents indicating no new product/service introduction but indicating 11.4% uniqueness of these no-existent products might have skewed the results.

6.10 DIRECTIONS FOR FUTURE RESEARCH

Future studies should investigate on a longitudinal basis the effects of entrepreneurial management strategies within the Electricity Distribution Utilities.

Future research should further explore the causal relationship between corporate entrepreneurship and job satisfaction, innovativeness, motivation and creativity.

CHAPTER 7: CONCLUSIONS AND RECOMENDATIONS

This study originated from the South African Electricity Distribution Utilities need to improve its performance, both in the financial and social arena. It was suggested that entrepreneurship might pose a solution to this management challenge and a proposal to this affect was mooted. This led to the execution of this study.

7.1 CLASSICAL ENTREPRENEURSHIP THEORY

The literature study of the classical entrepreneurship theory indicates the importance of the development and support of the entrepreneur, both in new venture creation and the corporate environment. It is clear that the entrepreneur is not born, but developed.

7.2 APPLIED ENTREPRENEURSHIP THEORY

The literature converges on five organizational factors that may foster middle management activities in entrepreneurial organisations. They are:

- The appropriate use of rewards

  The literature stresses that an effective reward system that spurs entrepreneurial activity must consider goals, feedback, emphasis on individual responsibility and results based incentives.
- Gaining of top management support.

  The willingness of senior management to facilitate and promote entrepreneurial activity in the organization, including innovative ideas as well as providing necessary resources, expertise and protection is displayed.
- Resource availability.

  Middle management must perceive the availability of resources for innovative activities to encourage experimentation and risk taking.
- Supportive organizational structure.

  The structure must foster the administrative mechanisms by which ideas are evaluated, chosen, and implemented.

- Risk taking and tolerance for failure.

  Middle managers must perceive an environment that encourages calculated risk taking while maintaining reasonable tolerance for failure.

From this it is clear that middle management should, like the entrepreneur also experience a sense of belonging and importance in order to promote growth in the organization.

7.3 EMPIRICAL RESEARCH

The descriptive statistics confirms that four factors were tested namely:

- Entrepreneurial orientation
- Non- entrepreneurial orientation
- Financial success
- Social success

The null hypothesis states:

H_0: Non-entrepreneurial Electricity Utilities do not perform significantly worse than Entrepreneurial Electricity Utilities ($\mu_{\text{non entrp}} = \mu_{\text{entrep}}$)

This hypothesis is not supported by the literature on corporate enterprises. However, the literature on public enterprises indicate that this hypothesis may very often not be rejected as bureaucratic state institutions are very seldom entrepreneurial, efficient or financially successful.

The results of this study actually led to the decision that the H_0 can not be rejected at the $\alpha = 0.05$ significance level, and therefore that non-entrepreneurial Electricity Utilities do not perform significantly worse than Entrepreneurial Electricity Utilities. This can be ascribed to the fact that the study found South Africa Electricity Distribution Utilities not to be entrepreneurial or financially successful.

It was further found that the major group of respondents (82.2%) indicated that they perceived the reward systems to be non-supportive of an entrepreneurial environment. This confirms Morris and Jones' (1999) findings that reward systems are a serious obstacle to achieving entrepreneurship within public sector organisations. These findings are also in support of Cornwell and Perlmans' (1990:127) literature on the subject.

7.4 SUMMARY

The significance to managers of these observations is potentially great. The linkage between corporate entrepreneurship and firm performance has been empirically documented in methodologically rigorous research. Covin and Miles (1999:60) argue that corporate entrepreneurship produces superior firm performance for identifiable, defensible, and strategically valid reasons, and should therefore be viewed as more than simply one of the more recent panaceas in a long string of managerial quick fixes. The principle challenge to management is therefore to identify the entrepreneurial process that will lead to various forms of entrepreneurship and then to make it happen.

Roberts (1998:81), in reporting on his findings of a study of multi-utilities states that a competitive marketplace demands economic value. This means:

- Getting costs down, by economies of scale and concentrating on core competencies.
- Matching capabilities to customers' needs, specialising where necessary, continuously adapting to changing market conditions.
- Continuous improvement, keeping pace with the 'best in class', holding onto your market position, staying 'one step ahead'.
- Unbundling services, segmenting markets and giving customers choice, informing them through strong brands.

From this it can be seen that the REDs will benefit in promoting the entrepreneurial middle manager and this can be done by enabling the revitalisation mentioned above as proposed in paragraph 3.2.3 by Shaker, Zahra and Hansen (2000:90) The

revitalisation should take the form of:

- New missions
- New management systems
- New standard operating procedures
- Access to new technologies
- Opportunities for collaboration
- Changes in organizational structures
- Changes in organizational cultures
- Alignment of incentives for management and employees
- Reskilling the labour force

7.5 RECOMMENDATION

A major opportunity for the improvement in the performance of the South African Electricity Distribution Utility was identified through the empirical research in this study.

From the literature study on corporate entrepreneurship it is clear that corporate entrepreneurship will be promoted by:

- The appropriate use of reward systems.
- Gaining of top management support.
- Availability of resource.
- Supportive organizational structures.
- Risk taking and tolerance for failure.
- Revitalising the organization

It must be acknowledged that the entrepreneurial orientation of both the organisation and the employee is of critical importance. It is therefore recommended that these factors be promoted in order to develop the entrepreneurial orientation of the utilities.

The Central Government has already decided to commercialise the South African Electricity Distribution Industry into Regional Electricity Distributors despite the fact that some of these distributors might find it difficult to become viable. The

motivation for this decision by government is the result of the Blueprint report by the department of Minerals and Energy (that empirically supports internationally proven business advantages in creating competition and exploiting economies of scale). Additional predicted spin-offs are the increased rollout of universally available electricity and the slow-down in electricity price increases. This study however cautions the government and its agents to ensure that strong entrepreneurial strategies be developed in order to ensure financial and social success of the utilities. Ignoring this internationally proven business principle in the modern competitive environment will be to the detriment of the industry and the community being served by that utility.

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