

Restructuring of the Electricity Supply Industry in South Africa

By

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CONFIDENTIALITY CLAUSE

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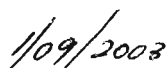
Sincerely

S. I Laban

DECLARATION

This research has not been previously accepted for any degree and is not being currently submitted in candidature for any degree.

Signed 

Date 

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' dedicated to my soul mate'

ABSTRACT

The monopolistic South African electricity supply industry is undergoing a transformation that would change its ownership and market structure. The objective of this study was to determine whether the strategic choice to transform the industry is indeed appropriate.

A qualitative, case based study of the existing and proposed South African electricity supply industry was performed. Various strategic tools and techniques, related to both strategic theory and electricity supply industry models, formed the basis of the evaluation.

It was found that to overcome the critical weaknesses in the industry and to take advantage of the opportunities present in the dynamic and complex electricity supply industry the restructuring is appropriate. The restructuring would allow the South African Government to meet its objectives of having an efficient electricity supply industry and meet the huge suppressed demand for low cost electrification. South Africa intends adopting the wholesale competition model, however this study recommends that it should implement the single-buyer model.

Should the restructuring be successfully implemented, customers in the South African electricity supply industry can expect high quality electricity at a competitive price.

TABLE OF CONTENTS

1. CHAPTER ONE: INTRODUCTION

1.1.	Introduction	1
1.2.	Background	1
1.3.	Research Objectives	4
1.4.	Structure of Study	4
1.5.	Methodology	5
	1.5.1. Design Type	5
	1.5.2. Data Collection and Sources	6
	1.5.3. Reliability	7
	1.5.4. Validity	7
	1.5.5. Transferability	7
	1.5.6. Credibility	7
1.6.	Triangulation	8
1.7.	Evaluation of Study	9
1.8.	Limitations	10
1.9.	Conclusion	10

2. CHAPTER TWO: STRATEGIC THEORY

2.1.	Introduction	11
2.2.	What is Strategy?	11
2.3.	Strategic Management Process	15
	2.3.1. Mission, Vision and Objectives	16
	2.3.2. Strategic Planning	18
2.4.	Environmental Analysis	20
	2.4.1. Nature of the Environment	20
	2.4.2. Auditing Environmental Influences	21
	2.4.3. Analysing the Competitive Environment	22
	2.4.4. Identifying Competitive Position	29
	2.4.5. Competitor Analysis	30
	2.4.6. Force Field Analysis	31
2.5.	Internal Analysis	32
	2.5.1. Resource Audit	33
	2.5.2. Value Chain Analysis	33
	2.5.3. Assessing Competencies	34
2.6.	Identification of Key Issues	37
	2.6.1. SWOT Analysis	37
	2.6.2. Critical Success Factors	38
2.7.	Strategic Choice	38

2.7.1.	SWOT Matrix	38
2.7.2.	Generic Strategies	39
2.7.3.	Grand Strategies	42
2.7.4.	Model of Grand Strategy Clusters	47
2.7.5.	Bowman's Clock	48
2.7.6.	Ansoff's Matrix	50
2.7.7.	McKinsey Model	52
2.8.	Strategic Evaluation	54
2.8.1.	Suitability	55
2.8.2.	Acceptability	55
2.8.3.	Feasibility	56
2.9.	Conclusion	56
3.	CHAPTER THREE: ELECTRICITY SUPPLY INDUSTRY RESTRUCTURING	
3.1.	Introduction	57
3.2.	International Trends in Electricity Market Reform	58
3.2.1.	Commercialisation, Corporatisation and Privatisation	58
3.2.2.	Restructuring for Competition	59
3.2.3.	Electricity Trading Market	62
3.3.	Conclusion	64
4.	CHAPTER FOUR: THE SOUTH AFRICAN ELECTRICITY SUPPLY INDUSTRY	
4.1.	Introduction	65
4.2.	Background	65
4.3.	Reasons for Electricity Supply Industry Restructuring	67
4.3.1.	Financial Viability	67
4.3.2.	Inequitable Treatment of Consumers	68
4.3.3.	Inefficiencies	69
4.3.4.	Summary	69
4.4.	Proposed Structure	70
4.5.	Objectives for the South African Energy Sector	72
4.6.	Conclusion	72
5.	CHAPTER FIVE: ANALYSIS OF THE SOUTH AFRICAN ELECTRICITY SUPPLY INDUSTRY	
5.1.	Introduction	74
5.2.	Vision and Objectives for the South African ESI	74
5.2.1.	Vision	74

5.2.2. Objectives	75
5.3. Environmental Analysis	77
5.3.1. Nature of the Environment	77
5.3.2. Political, Economic, Social and Technological Analysis	77
5.3.3. Porter's Diamond	80
5.4. Competitive Environment	81
5.5. Identifying Competitive Position	83
5.5.1. Market Segmentation	83
5.5.2. Perceived Value	84
5.6. Competitor Analysis	84
5.7. Analysing Core Competencies	87
5.8. SWOT Analysis	87
5.9. Evaluation of Strategic Choice	94
5.9.1. SWOT Matrix	94
5.9.2. Industry Lifecycle	94
5.9.3. Generic Strategies	95
5.9.4. Grand Strategies	95
5.9.5. Model of Grand Strategy Clusters	96
5.10. Strategic Evaluation	96
5.11. Conclusion	96
6. CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS	
6.1. Introduction	98
6.2. Conclusion	98
6.3. Recommendations	102
7. REFERENCES	107

ABBREVIATIONS

DME	Department of Minerals and Energy
DSM	Demand Side Management
EDF	Electricité de France
EFA	Electricity For All
ERIC	Electricity Restructuring Interdepartmental Committee
ESI	Electricity Supply Industry
FDI	Foreign Direct Investment
GEAR	Growth, Employment, and Redistribution
IPP	Independent Power Producer
MMM	Multi-Market Model
NELF	National Electricity Forum
NEPAD	New Partnerships for African Development
NER	National Electricity Regulator
NGC	National Grid Company
PPAs	Purchasing Power Agreements
R&D	Research and Development
RDP	Reconstruction and Development Programme
REDs	Regional Electricity Distributors
SA	South Africa
SAPP	Southern African Power Pool
SARB	South African Reserve Bank

LIST OF FIGURES

2.1	Andrew's Strategy Model	12
2.2	A summary model of the elements of strategic management	14
2.3	Components of the Strategic Management Process	15
2.4	Gas Analysis	19
2.5	Porter's Diamond	22
2.6	Porter's Five Forces Model	24
2.7	Industry Lifecycle Model	27
2.8	BCG Model	29
2.9	Force Field Analysis	31
2.10	SWOT Analysis Diagram	38
2.11	Generic Strategy Matrix	40
2.12	Grand Strategy Selection Matrix	42
2.13	Model of Grand Strategy Clusters	47
2.14	Bowman's Clock	49
2.15	Ansoff's Matrix	51
2.16	Mc Kinsey Model	53
3.1	Changes in Ownership / Management Dimension	59
3.2	Models of Electricity Supply Industries	60
3.3	Multi-Market Model	64
4.1	Existing Structure of the ESI	66
4.2	Proposed Structure of the new SA ESI	71

LIST OF TABLES

2.1	Pest Analysis	21
2.2	Lifecycle Model	28
2.3	Functional Competencies in the Industry Lifecycle	35
5.1	Electricity Generation and Consumption in SA	83

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

This chapter will provide a background to the restructuring of the South African Electricity Supply Industry (ESI). It will also discuss the research objectives of the study. The methodology, reliability, validity, triangulation and evaluating of qualitative research as well as the limitations of the study will be described.

1.2 BACKGROUND

Since the early 1990s, there has been much discussion about the restructuring of the ESI in South Africa, which has been driven by the need to address the substantial fragmentation of the industry. The dynamics of global events and the severity of a country's economic problems call for profound changes. Many countries have undergone restructuring in their electricity utilities and have established competitive electricity markets for the ESI. This paper examines the restructuring of the South African ESI. Specifically, it investigates the appropriateness of the strategic choice to restructure the monopolistic South African ESI to one with increased competition.

The South African electricity supply industry is characterised by an oligopoly in the generation/production sector, a monopoly in transmission and a distribution sector, which is highly fragmented. This situation is the cause of inefficiencies and is one of the reasons the government initiated power sector reforms. "While Eskom has performed reasonably well in the in the 1990's, in practically all important respects its monopoly position, organisational, financially framework, and structure of corporate governance have remained unchanged since the apartheid years" (Deputy Minister: DME: 2000).

South Africa's power sector is in the public hands and electricity prices are amongst the lowest in the world. Quality and supply are very reliable and the industry has performed very well in its national electrification programme.

There is also the impression that, it is highly efficient and that there is no need for reform. Contrary to this it is clearly stated by Government that low cost electricity and the ability to fund the electricity programme have emanated from historically very low coal prices, financial subsidies and Eskom's tax and dividend exempt status.

It is in the above context that the Government has insisted that restructuring of the power sector should continue. The Department of Minerals and Energy (1998:49) states a minimum of five main government energy policy objectives:

- increasing access to affordable energy service;
- improving energy governance;
- stimulating economic development
- managing energy-related environmental and health impact and
- achieving security of supply by ensuring diversity of sources.

A variety of options that will be considered as part of the ESI reform process include:

- giving customers the right to choose their electricity supplier;
- introducing competition into the ESI, especially the generation sector;
- permitting open, non-discriminatory access to the transmission system and
- encouraging private sector participation.

The Government's ESI restructuring vision is the introduction of a competitive market system and there is a firm belief that competition and privatisation may benefit consumers, both industrial and residential, through managed liberalisation. Therefore, two reform paths can be identified, the structural reform path which includes vertical and horizontal unbundling to stimulate competition, and the ownership reform path with the introduction of private participants.

Within this policy context the Government again identified four primary objectives for reforming the institutional structure of the ESI. It is important that the successes of the reforms are universally gauged by their ability to result in economically efficient behaviour and the extent to which the distribution of benefits is fair and equitable. These primary objectives as stated by the Department of Minerals and Energy (2000:4) include the need to:

- increase economic efficiency in investment decisions and operations;
- optimise financial and economic reforms to the state;
- promote economic empowerment and
- protect public benefits.

The substantial fragmentation of the industry has produced a number of problems:

- the present structure of the distribution industry has led to a wide disparity in cost, tariff, access and service levels;
- quality of supply is poor in many cases;
- economies of scale, skill and specialisation are not being captured by many of the small distributors;
- current funding mechanisms, whereby electrification and a major contribution to other municipal services are funded out of current electricity tariffs, has led to an industry that is unable to meet its total financial obligations in the long term and
- it has been estimated that if the industry is not restructured, electricity tariffs will rise by up to 40% in real terms over the next ten years.

The Department of Minerals and Energy (DME) submitted a memorandum to Cabinet in 1997 that recommended the following:

- The electricity distribution industry should be consolidated into the maximum number of financially viable and independent regional electricity distributors (REDs).

- Cost-reflective tariffs, an electrification levy, and a capped tax for part funding of municipal services should be introduced.

The rationale behind the proposals is that the optimal area for the effective performance and sustainability of electricity reticulation is much greater than the area of any single municipality. By restructuring the industry, it is intended that the following will be achieved:

- electrification targets will be met;
- low-cost electricity will be provided;
- better price equality will be facilitated;
- the financial health of the industry will be improved;
- quality of service and supply will be improved;
- proper co-ordination of operations and investment capital will be fostered and
- competent employees will be attracted and retained.

1.3 RESEARCH OBJECTIVES

The aim of this study is to determine whether it is appropriate to change the South African ESI from its present monopolistic structure to one with increased competition. It will also describe models used in ESI restructuring internationally and will determine which model can be used to gain sustainable competitive advantage in South Africa.

1.4 STRUCTURE OF STUDY

This study is broken down as follows:

- Chapter Two describes the strategic tools and techniques that will be used in the study. It also explains the analytic tools adopted to evaluate the strategic choice.
- Chapter Three describes the international trends being adopted in electricity market reforms. It explains the processes involved in changing ownership and market structures.

- Chapter Four presents the case study. It describes the South African ESI and the reasons for the transformation of this sector. It also describes the proposed changes.
- Chapter Five analyses the South African ESI using the strategic tools and techniques discussed in Chapter Two and the information presented in Chapter Four. It also evaluates the strategic choice to restructure the South African ESI.
- Chapter Six presents conclusions and recommendations.

1.5 METHODOLOGY

The following section describes the methodology that will be adopted in this qualitative, case based study.

1.5.1 Design Type

According to Cooper and Schindler (2001:13), an explanatory study goes beyond description and attempts to explain the reasons for a phenomenon. The researcher uses theories to account for the forces that caused the phenomenon to occur. This study is explanatory, as the objective is to understand the reasons for ESI restructuring and the reasons for the selection of the strategies. Various strategic theories will be used to explain the forces that caused the restructuring. Generalisation and induction will also be implemented to draw conclusions (Babbie,1998:66).

Research problems focusing on uncovering and understanding a phenomenon about which little is known requires qualitative research. The qualitative method will be suitable to provide intricate detail and understanding (Ghauri, Gronhaug and Kristianslung, 1995:85). Since the objective of this study is to understand the restructuring of the ESI from a strategic perspective, a qualitative method will be suitable.

According to Yin (1999), the main feature of a case study is its focus on a single phenomenon within its real life context. The case study method is also supported by Leedy and Ormrod (2001:157), who state that a case study methodology may be adopted if the objective is to learn in greater depth about a poorly understood situation. The restructuring of the ESI is complex and context bound. Hence the holistic case study method with triangulation of evidence is appropriate (Ragin, 1999).

1.5.2 Data Collection and Sources

Leedy and Ormrod (2001:157) recommend that the sources of data collection for a case study methodology should include interviews, textbooks, and conference proceedings, journal articles and Internet web sites. According to Patton (1999), the use of varied methods and sources of data collection would increase the reliability and validity of the study.

The data collection for this study will include interviews with Howard Whitehead (Executive Director of the Electricity Department at the eThekweni Municipality) and Dr Elsa du Toit (Director of the Department of Minerals and Energy: South Africa) and informal discussions with Sandile Maphumulu (Director: Southern Region in the Electricity Department at the eThekweni Municipality). Archival analysis of textbooks, brochures, journals, Internet articles and conference proceedings will also be used. The study will be analytically rigorous, mentally replicable and explicitly systematic. The use of various methods of data collection will remove the errors associated with any one type of data collection and will allow for cross-data validity checks (Patton, 1999).

1.5.3 Reliability

According to Babbie (1998:129), reliability is determined by the consistency of results. Reliability of findings may be increased by the use of triangulation (Patton, 1999).

1.5.4 Validity

Triangulation of multiple data sources in search of a common theme may be used to increase and support the validity of findings (Leedy and Ormrod, 2001:106).

1.5.5 Transferability

The transferability of findings depends upon the similarity of contexts (Devers, 1999). In this study, the key aspects of the contexts from which the findings emerge will be identified so as to allow for transferability to other studies.

1.5.6 Credibility

According to Patton (1999), credibility is determined by three elements. These include:

- rigorous techniques and methods for gathering high quality data that should be carefully analyzed, with attention to issues of validity, reliability and triangulation;
- credibility of the researcher, which is dependent upon experience and status and
- the impartiality and responsiveness of the researcher to the data. In this study, corroborating evidence from the research context will be provided so as to decrease the researcher's bias.

1.6 TRIANGULATION

Triangulation is a method that may be used to enhance the qualitative research. It is based upon the principle that no single method adequately solves the problem of rival explanations. "Multiple methods of data collection and analysis will provide more grist for the research mill" (Patton, 1999). The objective of triangulation will be to check for consistency of results. According to Patton (1999), there are four types of triangulation that can increase the validity of qualitative research. These include:

- Methods triangulation, which checks the consistency of findings generated by the different data collection methods.
- Source triangulation, which examines the consistency of different data sources within the same method. It involves comparing and cross-checking the consistency of information derived at different times and by different means within qualitative methods. This may include comparing observational data with interview data, comparing what people say in public with what they say in private, checking for consistency of what people say about the same thing over time and comparing the different perspectives of people from different points of view. Source triangulation is useful to understand where and why there are differences in findings. It also helps to increase credibility when there is consistency in findings and reasonable explanations for differences.
- Analyst triangulation, which uses multiple analysts to review findings. This reduces the bias associated with a single observer. When two or more researchers independently analyse the same qualitative data set and then compare their findings it reduces selective perception and blind interpretative bias.
- Theory/perspective triangulation uses multiple theories or perspectives to interpret the same data. The objective is to determine how the findings are affected by different assumptions.

Since this study, uses interviews, informal discussions, archival analysis of textbooks, brochures, journals, Internet articles and conference proceedings, source triangulation will be used to check for consistency of results.

Theory/perspective triangulation will also be used to determine how the findings are affected by different assumptions. The qualitative data set derived from the PEST analysis, Porter's Diamond, Porter's Five Force analysis, Industry Lifecycle analysis and Competitor analysis will be applied to multiple theories like the SWOT Matrix, Grand Strategy Matrix, Model of Grand Strategy Clusters, Lifecycle Model and Generic Strategies.

1.7 EVALUATION OF STUDY

Criteria used to evaluate qualitative research include internal validity, external validity, reliability and objectivity. Internal validity is the degree to which findings correctly map the phenomenon and external validity is the degree to which the findings can be generalised (transferred) to similar studies. Reliability is the degree to which the findings can be replicated. Objectivity is the degree to which the findings are free from bias (Devers, 1999).

- The purpose of triangulation is to use multiple data sources, investigators and methods or theory to provide corroborating evidence to increase credibility and internal validity.
- To increase credibility and internal validity of interpretations and findings, the researcher solicits subject review.
- To ensure transferability and external validity detailed description of the context is necessary. There should be a clear description of the study context and investigators role.
- Increased dependability and reliability requires that the researcher ensures completeness and accuracy of documents (interviews, observations etc). The data analysis process should also be clear (Devers,1999). Sceptical peer review could be used to increase dependability and reliability. Difficult questions about the methods,

meanings and interpretations of the data could be asked to provide an external check on the research.

- Triangulation and sceptical peer review is used to increase confirmability and objectivity (Devers, 1999).

In this study, source and theory triangulation will be used to increase credibility and internal validity. To ensure transferability and validity, the study context will be clearly described in detail. The researcher will also adopt a clear data analysis process and will use sceptical peer review to increase dependability and reliability. The use of triangulation and sceptical peer review in the study will also increase its confirmability and objectivity

1.8 LIMITATIONS

Limitations arise as a result of:

- the dynamic nature of the restructuring of ESI's. This makes it impossible to analyse all situations;
- the short time period of sampling as relevant information about the evolving ESI restructuring may have been ignored; and
- selectivity in the people who are sampled for interviews and selectivity in document sampling. Hence, researcher bias and contamination can be introduced in the analysis due to selective sampling.

1.9 CONCLUSION

Chapter One provided an overview to the restructuring of the South African ESI. It stated the research objectives and described the research methodology. Chapter Two discusses strategic theory.

CHAPTER TWO: STRATEGIC THEORY

2.1 INTRODUCTION

Strategic management is the way in which a firm identifies its strategic direction and aligns its operational processes to its strategy (Mintzberg et al.1998:18; Rumelt et al. 1994:15).

This chapter will outline the strategic theory that will be used to undertake the study. It will discuss the meaning of strategy and will also explain the strategic management and planning process. Details of the environmental analysis will be explored and the identification of key issues will be discussed. Strategic choice and evaluation will also be explained.

2.2 WHAT IS STRATEGY?

Strategy has been defined as a plan of action or the match an organisation makes between its internal resources and skills (Grant, 1991). These internal resources are tools that form the internal strategy of the organisation. It is the internal strategy of an organisation that must be ready to jump at opportunities created by the external environment and at the same time repel any threats (Grant, 1991). In short, there must be a strategy in place to at least provide equilibrium between the internal and external environments. Tipping the scales either way could mean the difference between a sustained competitive advantage or struggling to survive (Internet 1).

Mintzberg and Quinn (1996:3) define strategy as the pattern or plan that integrates an organisation's major goals, policies, and action sequences into a cohesive whole. A well formulated strategy helps to marshal and allocate an organisation's resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment and contingent moves by intelligent opponents.

Johnson and Scholes (1999:10) define strategy as the direction and scope of an organisation over the long term: which achieves advantage for the organisation through its configuration of resources within a changing environment, to meet the needs of markets and to fulfil stakeholder expectations.

Chandler (1962) defined strategy as the determination of the long-term goals and objectives of an organisation, and the adoption of courses of action and alignment of resources necessary for achieving these goals.

Thompson and Strickland (1993:6) define strategy as the pattern of organisational moves and managerial approaches used to achieve organisational objectives and to pursue the organisation’s mission.

Abell (1999) highlighted a principle to maintain excellence; organisations need dual strategies, a strategy for the present and one for the future.

Andrews defined strategy as the match between what a company can do (organisational strengths and weaknesses) within the universe of what it might do (environmental opportunities and threats) (Internet 2). Andrew’s model is illustrated in Figure 2.1 below.

Figure 2.1: Andrew’s Strategy Model



Paul Lemberg defines strategy as the guiding principle to a series of interlined decisions regarding the selection and deployment of resources and tactics, whose purpose is realising a vision and achieving decisive objectives in a competitive and changing environment (Internet 3).

The word "strategy" has been used implicitly in different ways even if it has traditionally been defined in only one. Explicit recognition of multiple definitions can help one to manoeuvre through this difficult field. Mintzberg(1992) provides five definitions of strategy:

- Plan
- Ploy
- Pattern
- Position
- Perspective.

Plan

Strategy is a plan - some sort of consciously intended course of action, a guideline (or set of guidelines) to deal with a situation. By this definition strategies have two essential characteristics: they are made in advance of the actions to which they apply, and they are developed consciously and purposefully.

Ploy

As plan, a strategy can be a ploy too. It is really just a specific manoeuvre intended to outwit an opponent or competitor (Internet 4).

Pattern

If strategies can be intended (whether as general plans or specific ploys), they can also be realised. In other words, defining strategy as plan is not sufficient. Also needed is a definition that encompasses the resulting behaviour: Strategy is a pattern - specifically, a pattern in a stream of actions. Strategy is consistency in behaviour, whether or not intended. The definitions of strategy as plan and pattern can be quite independent of one another: plans may go unrealised, while patterns may appear without preconception (Internet 4).

Plans are intended strategy whereas patterns are realised strategy; from this we can distinguish deliberate strategies, where intentions that existed previously were realised, and emergent strategies where patterns developed in the absence of intentions, or despite them.

Position

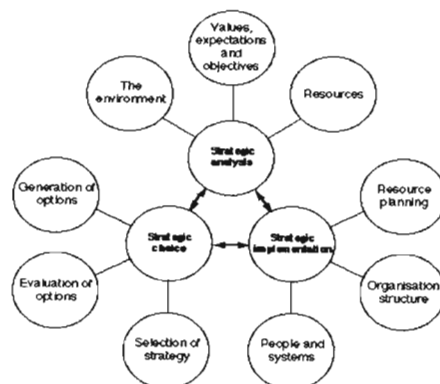
Strategy is a position - specifically a means of locating an organisation in an "environment". By this definition strategy becomes the mediating force, or "match", between organisation and environment, that is, between the internal and the external context (Internet 4).

Perspective

Strategy is a perspective - its content consisting not just of a chosen position, but of an ingrained way of perceiving the world. Strategy in this respect is to the organisation what personality is to the individual. What is of key importance is that strategy is a perspective shared by members of an organisation, through their intentions and / or by their actions. In effect, strategy in this context, enters the realm of the collective mind - individuals united by common thinking and / or behaviour (Internet 4).

Corporate strategy according to Johnson and Scholes (1999:11) is concerned with the overall purpose and scope of the organisation to meet the expectations of major shareholders and add value to the different parts of the enterprise.

Figure 2.2: A summary model of the elements of strategic management



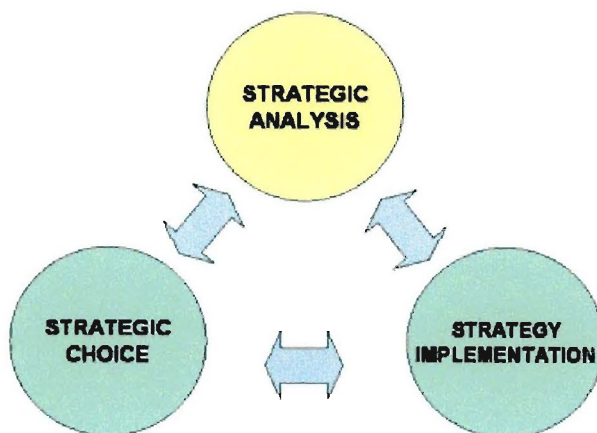
Source: Johnson, G and Scholes, K. 1984.

2.3 STRATEGIC MANAGEMENT PROCESS

According to Peter Drucker, strategic management is not a box of tricks or a bundle of techniques. It is analytical thinking and commitment of resources to action. Strategic management is the managerial process of forming a strategic vision, setting objectives, crafting a strategy, implementing and executing the strategy and then over time initiating whatever corrective adjustments in the vision, objective, strategy, and execution are deemed appropriate (Thomson and Strickland, 2001).

A thorough strategic management process has three main components, as shown in the figure below:

Figure 2.3: Components of the Strategic Management Process



Source: Internet 5

Business strategy is concerned principally with

- Forming responses to changes under way in the industry, the economy at large, the regulatory band, political arena, and other relevant areas
- Crafting competitive moves and market approaches that can lead to sustainable competitive advantage
- Building competitively valuable competencies and capabilities
- Uniting the strategic initiatives of functional departments and
- Addressing specific strategic issues facing the company's business.

(Thomson and Strickland, 2001).

Business strategy involves initiating whatever actions and responses managers deem prudent in the light of competitive forces, economic trends, technological developments, buyer needs and demographics, new legislation and regulatory requirements, and other such broad external factors. A good strategy is well-matched to a company's external and internal situation (Thomson and Strickland, 2001).

2.3.1 Mission, Vision and Objectives

Mission

According to Costas Markides of the London Business School "Strategy is a very simple thing - at its simplest it is five or six creative ideas that tell us how our company is to fight its battle in its industry". These creative ideas assist in formulating the mission statement. A purpose statement takes into account social responsibility, depending on the importance attached to key stakeholders and the influence of that stakeholder group. Purpose is defined as any specific desire to grow the organisation and as an exploration of the demands of the environment within which the industry exists (Lynch, 2000:442). The mission needs to match strategy, purpose, values and behaviour standards to really have a good effect.

A mission is a general expression of the overriding purpose of the organisation, which is in the line with the values and expectations of major stakeholders and concerned with the scope and boundaries of the organisation (Johnson and Scholes, 1999:14). The mission of an organisation outlines the broad directions that it should, and will follow, and briefly summarises the reasoning and values that lie behind it (Lynch, 2000:529).

The Adapted Ashridge Mission Model proposes that the four elements of a strong mission are purpose, values, behaviour standards and competitive capability. The model requires managers to link the firm's commercial rationale to its

corporate culture (the shared ways of doing things in the organisation), and both should be based on a strong, clearly defined value system (Internet 4).

Vision

To succeed in the long term, businesses need a vision of how they will change and improve in the future. The vision of the business gives it energy. It helps motivate employees and set the direction of corporate and marketing strategy.

According to Davidson (1993), six requirements for an effective successful vision:

- Includes the provision of future direction
- Expresses a consumer benefit
- Is realistic
- Is motivating
- Must be fully communicated
- Is consistently followed and measured (Internet 5).

A vision or strategic intent is the desired future state of the organisation around which resources are directed (Johnson and Scholes, 1999:14). Vision is defined as a mental image of a possible and desirable future state of the industry (Lynch, 2000:443). According to Lynch, the vision is the backdrop for the development of the purpose and strategy of the industry.

According to Balogun and Hailey (1999:35), a vision is a qualitative expression of the desired future state. It encapsulates what the organisation is trying to achieve; a rationale for the changes to be undertaken; and a picture of what the future organisation will look like.

Hamel and Prahalad (in Lynch, 2000:443) have suggested five criteria for judging the relevance and appropriateness of a vision statement. These are foresight, breadth, uniqueness, consensus and actionability.

Objectives

The objectives are the precise statements of the purpose of the organisation (Johnson and Scholes,1999:12). Objectives take the generalities of the mission statement and turn them into more specific commitments. Objectives focus on specific outcomes and provide a means of assessing whether the outcome has been achieved after the event (Lynch, 2000:534). It also often requires a compromise between the short and long-term interests of the industry. Strategic objectives are related to the firm's business position, and may include measures such as market share and reputation.

The roles and power of owners, shareholders, financing banks and worker-owners will differ globally as a result of differing ownership structures and national government policies. The stakeholders have a significant and often conflicting influence on the objectives (Lynch, 2000:456). According to Peter Drucker (in Lynch, 2000:549), management has to balance these objectives.

Prescriptive approaches to strategy emphasise the need to set out a mission and objectives. These should be linked to the purpose of the organisation. Some emergent approaches to strategy doubt the value of a mission and objectives because the future is so uncertain. Other emergent approaches accept the need for a mission and objectives but prescribe participation of management and employees in the development of the mission and objectives (Lynch, 2000:550).

2.3.2 Strategic Planning

Strategic planning is used as a formal planning system for the development and implementation of the strategies related to the mission and objectives of the organisation (Lynch, 2000:780).

According to Mintzberg (Lynch, 2000:783), the role of strategic planning includes:

- assisting the communication process throughout the organisation by indicating the review and planning thinking.
- finding new strategic insights by encouraging creative thinking and innovation.

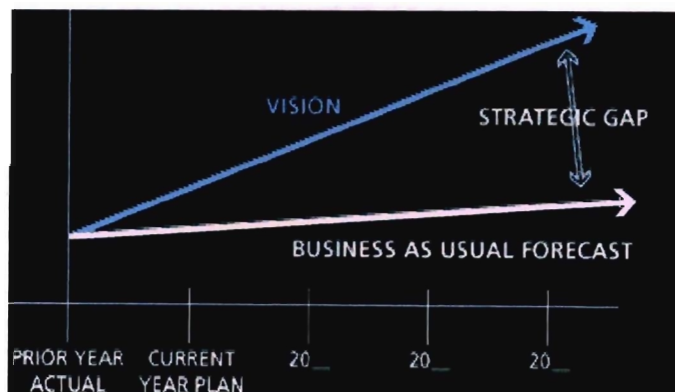
For the planning to be effective, new ideas need to be considered and revisions to the plans have to be implemented. Strategic planning may fail if it becomes too bureaucratic and rigid, there is poor direction from top management, there are political difficulties and short-termism is dominant (Lynch, 2000:782).

A strategic plan has to be based on a clear, succinct vision or direction, have measurable results and be entrenched in a process that becomes part of the management culture (Internet 5).

The strategic planning process helps with improving organisational performance and delivering results as follows:

- It helps leaders articulate a clear and meaningful vision for the organisation.
- It helps leaders create management teams that take ownership, achieve consensus and commit to implementation.
- Leadership teams look into the future and develop action plans specific to delivering the vision.
- It designs and facilitates a disciplined process to help make vision a significant part of every working day (Internet 5).

Figure 2.4 Gap Analysis



Source: Internet 5

Setting strategic direction requires that leaders identify where business as usual is going versus where they'd rather be. There is a gap between the two. Analysing this gap, and developing measurable, time-bounded plans to fill it form the basis of the strategic plan (Internet 5).

The strategic management process focuses the organisation on 'filling' the gap between 'business as usual' and the 'corporate vision'. It helps leadership teams define strategic alternatives and forms the basis for implementation plans.

The strategic planning process has to be based on a continuous model. It should enable course corrections that are proactive to changes in the operating environment without losing focus on the long-term vision.

2.4 ENVIRONMENTAL ANALYSIS

Environmental analysis is important because it helps in developing sustainable competitive advantage, identifies opportunities and threats and may provide opportunities for productive co-operation with other organisations. Such opportunities and threats may come from government decisions, changes in technology and social developments. An environmental analysis is also used to provide a proactive strategy outcome or a reactive strategic situation that will need to be monitored (Lynch, 2000:107). According to Johnson and Scholes (1999: 99) the steps in an environmental analysis include: assessing the nature of the environment, auditing environmental influences (PEST analysis and Porter's Diamond), identifying key competitive forces (Porter's Five Force Analysis), identifying key competitive position (market segmentation and competitor analysis) and identifying key opportunities and threats.

2.4.1 Nature of the environment

Clarifying the nature of the environment provides the organisation with an initial view on appropriate ways of understanding the influences of the environment it operates in. In static conditions, historical analysis and forecasting are sufficient. In more dynamic conditions, scenario planning is important.

The design of organisational structure and development of a learning culture is essential in a more complex environment (Johnson and Scholes, 1999:141).

2.4.2 Auditing Environmental Influences

Environmental forces vary over time and strategic managers need to be aware of their changing impact. The following section discusses two common tools, namely the PEST analysis and Porter’s Diamond, used for auditing the environmental influences.

2.4.2.1 Political, Economic, Social, Technological (PEST) Analysis

Many macro-environmental factors are country-specific and a PEST analysis will need to be performed for all countries of interest. The following table illustrates some of the factors that might be considered in a PEST analysis.

TABLE 2.1: PEST ANALYSIS

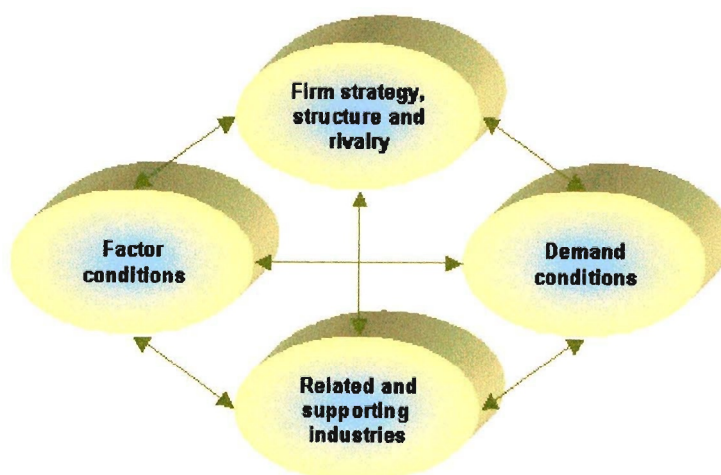
<p style="text-align: center;">POLITICAL</p> <ul style="list-style-type: none"> ➤ Political stability ➤ Risk of military invasion ➤ Legal framework for contract enforcement ➤ Intellectual property protection ➤ Trade regulations & tariffs ➤ Favoured trading partners ➤ Anti-trust laws ➤ Pricing regulations ➤ Taxation - tax rates and incentives ➤ Wage legislation – minimum wage and overtime ➤ Work week ➤ Mandatory employee benefits ➤ Industrial safety regulations ➤ Product labelling requirements 	<p style="text-align: center;">ECONOMIC</p> <ul style="list-style-type: none"> ➤ Type of economic system in countries of operation ➤ Government intervention in the free market ➤ Comparative advantages of host country ➤ Exchange rates & stability of host country currency ➤ Efficiency of financial markets ➤ Infrastructure quality ➤ Skill level of workforce ➤ Labour costs ➤ Business cycle stage (e.g. prosperity, recession, recovery) ➤ Economic growth rate ➤ Discretionary income ➤ Unemployment rate ➤ Inflation rate ➤ Interest rates
<p style="text-align: center;">SOCIAL</p> <ul style="list-style-type: none"> ➤ Demographics ➤ Class structure ➤ Education ➤ Culture (gender roles, etc.) ➤ Entrepreneurial spirit ➤ Attitudes (health, environment and consciousness) ➤ Leisure interests 	<p style="text-align: center;">TECHNOLOGICAL</p> <ul style="list-style-type: none"> ➤ Recent technological developments ➤ Technology's impact on product offering ➤ Impact on cost structure ➤ Impact on value chain structure ➤ Rate of technological diffusion <p style="text-align: right; margin-top: 10px;">Source: Internet 6</p>

The number of macro-environmental factors is virtually unlimited. In practice, the firm must prioritise and monitor those factors that influence its industry. Even so, it may be difficult to forecast future trends with an acceptable level of accuracy. In this regard, the firm may turn to scenario planning techniques to deal with high levels of uncertainty in important macro-environmental variables.

2.4.2.2 PORTER'S DIAMOND

Porter's Diamond is a model that allows analysing why some nations are more competitive than others, and why some industries within nations are more competitive than others. This model that determines factors of national advantage suggests that the national home base of an organisation play an important role in shaping the extent to which it is likely to achieve advantage on a global scale. This home base provides basic factors that support or hinder organisations from building advantages in global competition. The four determinants include Factor Conditions, Home Demand Conditions, Related and Supporting Industries and Firm Strategy Structure and Rivalry (Internet 6). These are illustrated in the Figure below:

Figure 2.5: Porter's Diamond



(Source: Internet 6)

Factor Conditions

Factor conditions refer to the production factors; like skilled labour, infrastructure, etc., which are relevant for competition in particular industries. These national factors often provide initial advantages, which are subsequently built upon (Internet 6).

Home Demand Conditions

Home Demand Conditions describes the state of local demand for products and services produced in a country. They influence the shaping of particular factor conditions and impact on the pace and direction of innovation and product development (Internet 6).

Related and Supporting Industries

One internationally successful industry may lead to advantages in other related or supporting industries. Competitive supplying and related industries will reinforce innovation in industries at later stages in the value system (Internet 6).

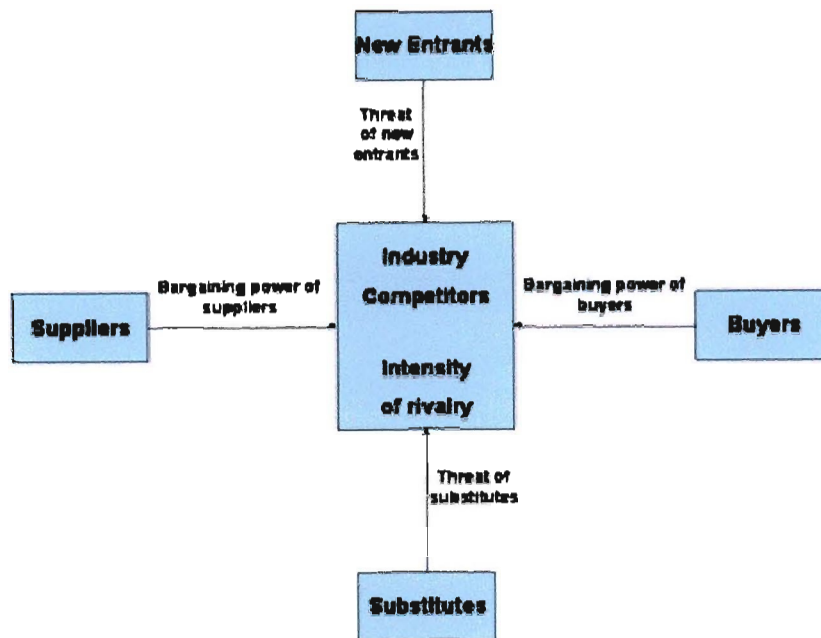
Firm Strategy, Structure, and Rivalry

Domestic competition is characterised by how companies are established, organised and managed. According to Porter the domestic rivalry and the search for competitive advantage within a nation can help provide organisations with bases for achieving such advantage on a more global scale (Internet 6).

2.4.3 Analysing the Competitive Environment – Five Force Analysis

An industry analysis can be performed using a framework developed by Michael Porter known as Porter's five forces model (see Figure 2.6). It is an influential analytical model for assessing the nature of competition in an industry.

Figure 2.6: Porter's Five Forces Model



(Source: Internet 6)

Porter explains that there are five forces that determine industry attractiveness and long-run industry profitability. These five "competitive forces" are

- The threat of entry of new competitors (new entrants)
- The threat of substitutes
- The bargaining power of buyers
- The bargaining power of suppliers
- The degree of rivalry between existing competitor.

Threat of New Entrants

New entrants to an industry can raise the level of competition, thereby reducing its attractiveness. The threat of new entrants largely depends on the barriers to entry. High entry barriers exist in some industries whereas other industries are very easy to enter. Key barriers to entry include:

- Economies of scale
- Capital / investment requirements
- Customer switching costs
- Access to industry distribution channels
- The likelihood of retaliation from existing industry players.

Threat of Substitutes

The presence of substitute products can lower industry attractiveness and profitability because they limit price levels. The threat of substitute products depends on:

- Buyers' willingness to substitute
- The relative price and performance of substitutes
- The costs of switching to substitute (Internet 6).

Bargaining Power of Suppliers

The cost of items bought from suppliers (e.g. raw materials, components) can have a significant impact on a company's profitability. If suppliers have high bargaining power over a company, then in theory the company's industry is less attractive. The bargaining power of suppliers will be high when:

- There are many buyers and few dominant suppliers
- There are undifferentiated, highly valued products
- Suppliers threaten to integrate forward into the industry (e.g. brand manufacturers threatening to set up their own retail outlets)
- Buyers do not threaten to integrate backwards into supply
- The industry is not a key customer group to the suppliers (Internet 6).

Bargaining Power of Buyers

Buyers are the people / organisations who create demand in an industry.

The bargaining power of buyers is greater when:

- There are few dominant buyers and many sellers in the industry
- Products are standardised

- Buyers threaten to integrate backward into the industry
- Suppliers do not threaten to integrate forward into the buyer's industry
- The industry is not a key supplying group for buyers (Internet 6).

Intensity of Rivalry

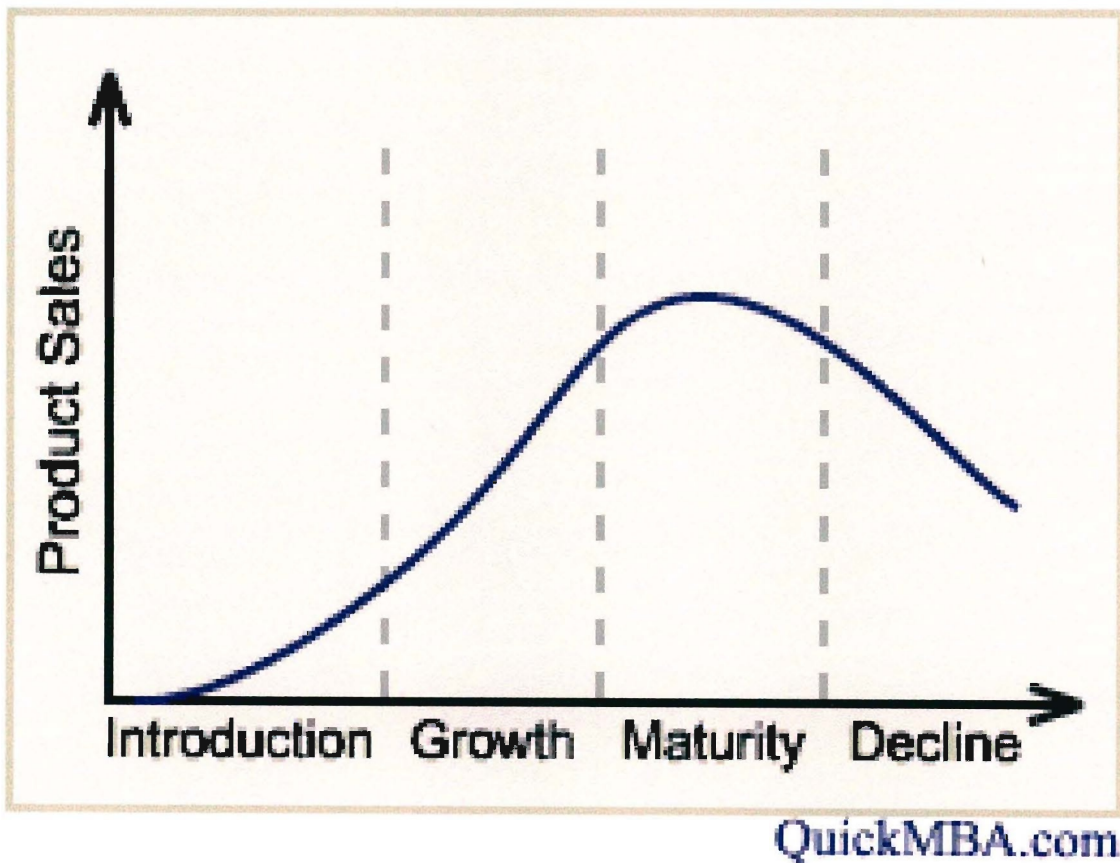
The intensity of rivalry between competitors in an industry will depend on:

- The structure of competition - for example, rivalry is more intense where there are many small or equally sized competitors; rivalry is less when an industry has a clear market leader
- The structure of industry costs - for example, industries with high fixed costs encourage competitors to fill unused capacity by price cutting
- Degree of differentiation - industries where products are commodities (e.g. steel, coal) have greater rivalry; industries where competitors can differentiate their products have less rivalry
- Switching costs - rivalry is reduced where buyers have high switching costs - i.e. there is a significant cost associated with the decision to buy a product from an alternative supplier
- Strategic objectives - when competitors are pursuing aggressive growth strategies, rivalry is more intense. Where competitors are "milking" profits in a mature industry, the degree of rivalry is less
- Exit barriers - when barriers to leaving an industry are high (e.g. the cost of closing down factories) - then competitors tend to exhibit greater rivalry (Internet 6).

Porter's five forces model can be seen as a static tool, whilst competition is dynamic which results in frequent industry structure changes.

According to Porter (Lynch, 2000:112), there are four evolutionary phases of industry growth. These include introduction, growth, maturity and decline. Shakeout is an intermediary phase between growth and maturity. The Industry Lifecycle Model is illustrated in Figure 2.7 below.

Figure 2.7: Industry Lifecycle Model



Source: Internet 8

The market conditions will vary during each phase and will determine competitive behaviour (Johnson and Scholes, 1999:121). The table below briefly describes the buyer behaviour and competitive conditions for the various lifecycle stages.

Table 2.2: Lifecycle Model

	Introduction	Growth	Shakeout	Maturity	Decline
Users/Buyers	Few: trial of early adopters	Growing Adopters: trial of product or service	Growing selectivity of purchase	Saturation of users Repeat purchase reliance	Drop-off in usage
Competitive Conditions		Entry of competitors Attempt to achieve trial Fight for share Undifferentiated product/service	May be many competitors Likely price cutting for volume Shakeout of weakest competitors	Fight to maintain share Difficulties in taking or gaining share Emphasis on efficiency/low cost	Exit of some competitors Selective Distribution

Source: Johnson and Scholes, 1999

2.4.4 Identifying Competitive Position

The BCG growth matrix, market segmentation and perceived value may assist in identifying competitive position.

2.4.4.1 BCG Growth Share Matrix

This framework is a portfolio approach to strategic analysis based on two key variables: market share and market growth. The entities within the portfolio (traditionally business units within a conglomerate organisation, but equally individual products or market segments) can be positioned within the matrix, and strategies developed based on their relative position. The four quadrants of the matrix, derived by categorising the two variables into "high" and "low", allow the businesses to be categorised into:

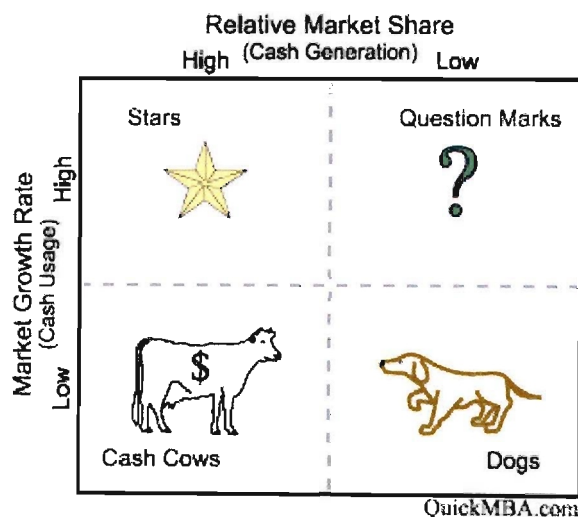
Stars - Represent the best long-term prospects in the firm's portfolio. Companies should invest and nurture these businesses for long-term benefit.

Question Marks - A company should invest in Question Marks to turn them into Stars, or divest them (i.e. an "up or out" strategy).

Cash Cows - The stable environment these businesses enjoy should be exploited. These businesses should be "milked" for resources for redeployment to Stars or Dogs.

Dogs - Represent a long-term liability for the company and should be divested.

Figure 2.8 BCG Model



Source: Internet 8

2.4.4.2 Market Segmentation

Customers have differing needs and characteristics. Therefore, in market segmentation analysis, similarities and differences between groups of customers are identified (Johnson and Scholes, 1999:129). According to Johnson and Scholes (1999:129) in carrying out a market segmentation analysis the following should be considered:

- Buyer behaviour or purchase value
- The attractiveness of each market segment
- Relative market share in relation to competitors within market segments
- Market segments should suit competencies

2.4.4.3 Perceived Value

Successful competitive strategy should be based on those dimensions of strategy valued most by customers (Johnson and Scholes, 1999:133). According to Johnson and Scholes (1999:133) the steps to analysing perceived value are:

- Identifying relevant market segments within which customers and competitors can be grouped
- What is the characteristic most valued by the customers?
- How important are these dimensions to the customers?

These may be used to profile competitors and question the companies' competitive strategy.

2.4.5 Competitor Analysis

Competitor analysis has three objectives: to identify current and potential competitors, to identify potential moves by competitors and to assist in devising competitive strategies (Pearce and Robinson, 1997:86).

According to Pearce and Robinson (1997:87) competitors are those firms that:

- have similar definitions of the scope of their market
- provide similar benefits to customers and their products have a high level of substitutability
- have similar levels of commitment in the industry.

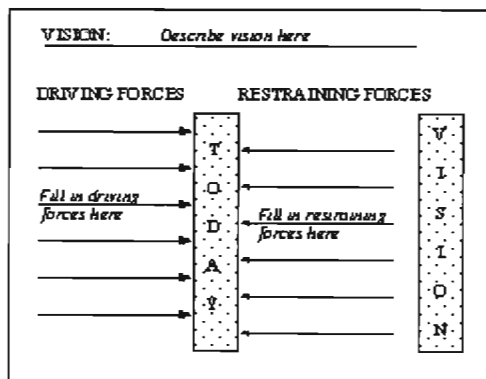
Pearce and Robinson (1997:87) also suggest that when identifying competitors the following errors should be avoided:

- over-emphasizing current and known competitors whilst giving inadequate attention to potential entrants
- over-emphasizing large competitors whilst ignoring smaller competitors
- assuming that competitors will behave as they have in the past
- misreading the signals of competitors actions
- over-emphasizing competitors' financial resources, market position and strategies while ignoring intangible assets
- assuming that all firms are subject to same constraints and opportunities
- believe that the purpose is to outsmart the competition rather than to satisfy customer needs

2.4.6 Force Field Analysis

Force field analysis (Lewin, 1951) is widely used in change management and can be used to help understand most change processes in organisations.

Figure 2.9: Force Field Analysis



Source: Internet 9

In force field analysis, change is characterised as a state of imbalance between driving forces (e.g. new personnel, changing markets, new technology) and restraining forces (e.g. individuals' fear of failure, organisational inertia).

To achieve change towards a goal or vision three steps are required:

- First, an organisation has to unfreeze the driving and restraining forces that hold it in a state of quasi-equilibrium.
- Second, an imbalance is introduced to the forces to enable the change to take place. This can be achieved by increasing the drivers, reducing the restraints or both.
- Third, once the change is complete the forces are brought back into quasi-equilibrium and re-frozen.

Thomas (1985) explained that although force field analysis has been used in various contexts it was rarely applied to strategy. He also suggested that force field analysis could provide new insights into the evaluation and implementation of corporate strategies. More specifically Maslen and Platts (1994) applied force field analysis to manufacturing strategy. Force field analysis is potentially a powerful technique to help an organisation realise a vision (Internet 9).

2.5 INTERNAL ANALYSIS

According to Johnson and Scholes (1999:149), successful strategies are dependent on the strategic capability to perform at a level required for success. Strategic capability is linked to three main factors. These include the resources available to the organisation, competence with which activities are undertaken and the balance of resources and activities. The resources and competencies must fit the environment in which the organisation operates and the opportunities and threats, which exist.

2.5.1 Resource Audit

The resource audit identifies the resources available to an organisation both within and outside to support its strategies. It should assess the quality, nature and extent of resources to support the strategies (Johnson and Scholes, 1999:153).

2.5.2 Value Chain Analysis

From a strategic standpoint, the value chain is a systematic way of examining all activities a firm performs and how they interact for analysing the sources of competitive advantage. The value chain is all of the information and physical activities that flow within and between an industry and its suppliers, distributors and customers. The industries value chain is also described as a system of interdependent activities, which are linked together.

Primary activities are those that are directly concerned with creating and delivering a product or service. It can be grouped into five main areas: inbound logistics, operations, outbound logistics, marketing and sales and service (Johnson and Scholes, 1999: 157).

Support activities, are those activities that are not directly involved in production but affect effectiveness or efficiency. It may be grouped into four areas: procurement, technology development, human resource management and infrastructure (Johnson and Scholes, 1999:158). Value Chain Analysis is one way of identifying which activities are best undertaken by a business and which are best provided by others.

Linking Value Chain Analysis to Competitive Advantage

The activities that a business undertakes are directly linked to achieving competitive advantage. A business that wishes to outperform its competitors by differentiating itself through higher quality will have to perform its value chain activities better than the opposition. By contrast, a strategy based on seeking cost leadership will require a reduction in the costs associated with the value chain activities, or a reduction in the total amount of resources used (Johnson and Scholes, 1999:159).

2.5.3 Assessing Competencies

Core competencies are those capabilities that are critical to a business achieving competitive advantage (Johnson and Scholes, 1999:160). Competition between businesses is as much a race for competence mastery as it is for market position and market power. Senior management cannot focus on all activities of a business and the competencies required undertaking them. The goal is for management to focus attention on competencies that really affect competitive advantage.

According to Prahalad and Hamel (1990) over time companies may develop key areas of expertise, which are distinctive to that company and critical to the company's long- term growth. These areas of expertise may be in any area but are most likely to develop in the critical, central areas of the company where the most value is added to its products. Core Competencies are not seen as being fixed and should change in response to changes in the company's environment. They are flexible and evolve over time. As a business evolves and adapts to new circumstances and opportunities, so its core competencies will have to adapt and change.

The requirements for success in the industry change over time. The following table illustrates the changes in functional capabilities that are associated with each of the four basic phases. Shakeout is the phase between growth and maturity and will require a mixture of the functional capabilities.

Table 2.3: Functional Competencies in the Industry Lifecycle

Functional Area	Introduction	Growth	Maturity	Decline
Marketing	Resource and skill to create awareness and find acceptance from customers	Ability to establish brand recognition, find niche, reduce price, strong distribution relations and develop new channels	Skills in aggressively promoting products to new markets and holding existing markets; pricing flexibility; skills in differentiating products and holding customer loyalty	Cost effective means of efficient access to selected channels and markets; strong customer loyalty or dependence; strong company image
Production/Operations	Ability to expand capacity, limit the number of designs and develop standards	Ability to add product variants; centralize production or lower costs; ability to improve product quality	Ability to improve product and reduce costs; ability to share or reduce capacity; advantageous supplier relationships	Ability to prune product line; cost advantage in production; location or distribution
Finance	Resources to support higher net cash overflow and initial	Ability to finance rapid expansion; to have net cash	Ability to generate and redistribute increasing net cash inflows;	Ability to reuse or liquidate unneeded equipment;

	losses; ability to use leverage effectively	outflows but increasing profits; resources to support product development	effective cost control systems	advantage in cost of facilities; streamlined management control
Personnel	Flexibility in staffing and training new management; existence of staff with key skills in new products or markets.	Ability to add skilled personnel; motivated and loyal work force	Ability to cost effectively; reduce work force and increase efficiency	Capacity to reduce and reallocate workforce; cost advantage
Engineering	Ability to make engineering changes, have technical bugs in product and process resolved	Skill in quality and new feature development; ability to start developing successor products	Ability to reduce costs, develop variants and differentiate products	Ability to support other grown areas or to apply product to unique customer needs
Key functional area and strategy focus	Engineering and market penetration	Sales; consumer loyalty and market share	Production efficiency and successor products	Finance; maximum investment recovery.

Source: Pearce and Robinson, 1997

Prahalad and Hamel (1990) suggest three factors to help identify core competencies in any business:

- Provides potential access to a wide variety of markets
- Makes a significant contribution to the perceived customer benefits of the end product
- Difficult for competitors to imitate.

Core competencies are the skills that enable a business to deliver a fundamental customer benefit.

2.6 IDENTIFICATION OF KEY ISSUES

An overall assessment of strategic capability may be obtained from an analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT) or by assessing the extent to which the resources and competencies relate to the critical success factors (Johnson and Scholes, 1999:193).

2.6.1 SWOT Analysis

The internal analysis can identify the firm's strengths and weaknesses and the external analysis reveals opportunities and threats. The SWOT analysis is an important tool for auditing the overall strategic position of a business and its environment. Once key strategic issues have been identified, they feed into business objectives. This SWOT analysis can be used in conjunction with other tools for audit and analysis, such as PEST analysis and Porter's Five-Forces analysis.

In general, an effective strategy is one that takes advantage of the organisation's opportunities by employing its strengths and wards off threats by avoiding them, or by correcting or compensating for weaknesses.

2.6.2 Critical Success Factors

According to Johnson and Scholes (1999:192), critical success factors are those components of strategy in which an organisation must excel to gain competitive advantage. They need to be underpinned by core competencies in specific activities or managing linkages between activities.

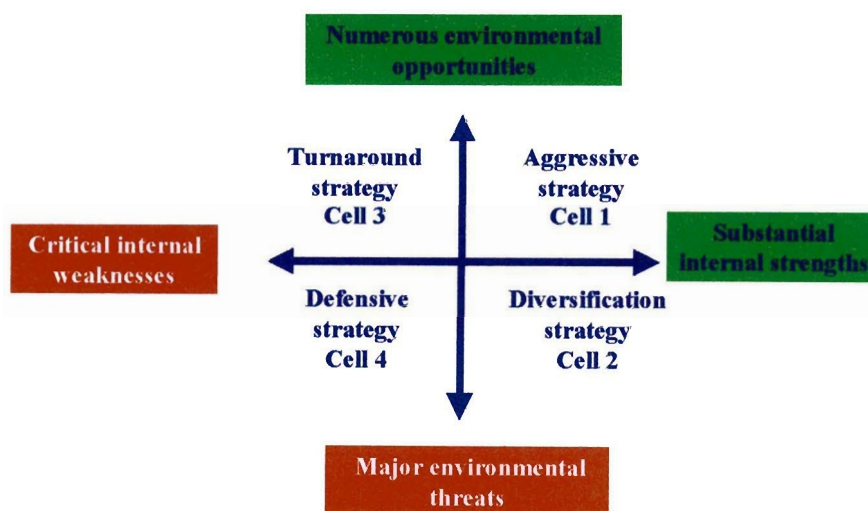
2.7 STRATEGIC CHOICE

Strategic choice involves comparing strategic options both logically and politically. Strategic options have to be aligned, acceptable, and feasible. If there is more than one strategic option that meet these tests, they will need to be compared. It is simplistic to treat strategic choice just as the logical comparison of strategic options. The process of decision is also political. It is important that those who will be crucial to implementing the strategy support the choice made.

2.7.1 SWOT Matrix

In the SWOT Matrix key external opportunities and threats are systematically compared with internal strengths and weaknesses (Pearce and Robinson, 1997:170).

Figure 2.10: SWOT Analysis Diagram.



According to Pearce and Robinson (1997:172):

Cell 1 is the most favourable situation. There are many environmental opportunities and strengths that encourage the pursuit of the opportunities. This situation favours growth oriented strategies to exploit the favourable match.

Cell 2 illustrates a situation where there are major environmental threats and substantial internal strengths. In this situation strategies should encourage the use of current strengths to build long-term opportunities in a more favourable environment.

In Cell 3 there are numerous market opportunities but firms are constrained by their internal weaknesses. Firms should therefore eliminate internal weaknesses so as to effectively pursue market opportunities.

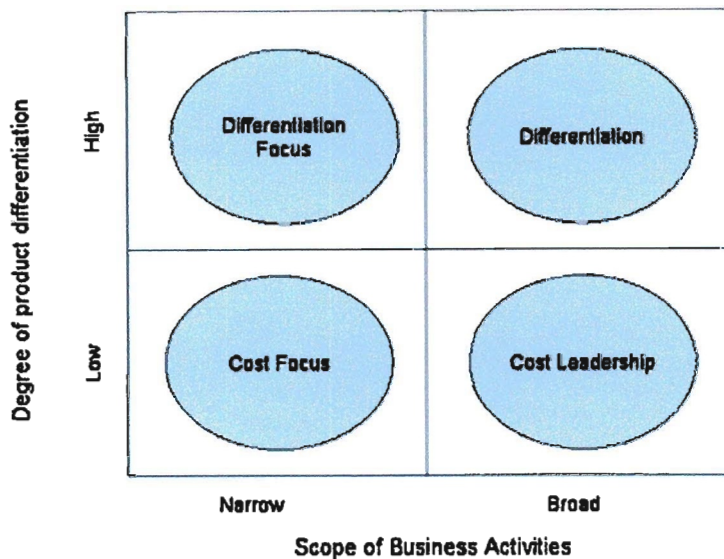
Cell 4 is the least favourable situation. There are major environmental threats and critical internal weaknesses. The strategies recommended for this situation are those that reduce or redirect involvement in the products or markets examined by the SWOT analysis.

2.7.2 Generic Strategies

Following on from his work analysing the competitive forces in an industry, Michael Porter suggested four "generic" business strategies that could be adopted in order to gain competitive advantage. The four strategies relate to the extent to which the scope of a businesses' activities are narrow versus broad and the extent to which a business seeks to differentiate its products.

The four strategies are summarised in the figure below:

Figure .2.11: Generic Strategy Matrix



Source: Internet 5

The differentiation and cost leadership strategies seek competitive advantage in a broad range of market or industry segments. By contrast, the differentiation focus and cost focus strategies are adopted in a narrow market or industry.

Differentiation Strategy

This strategy involves selecting one or more criteria used by buyers in a market - and then positioning the business uniquely to meet those criteria. This strategy is usually associated with charging a premium price for the product - often to reflect the higher production costs and extra value-added features provided for the consumer. Differentiation is about charging a premium price that more than covers the additional production costs, and about giving customers clear reasons to prefer the product to other, less differentiated products (Internet 5).

Cost Leadership Strategy

With this strategy, the objective is to become the lowest-cost producer in the industry. Many (perhaps all) market segments in the industry are supplied with the emphasis placed in minimising costs. If the achieved selling price can at least equal (or near) the average for the market, then the lowest-cost producer will (in theory) enjoy the best profits. This strategy is usually associated with large-scale businesses offering "standard" products with relatively little differentiation that are perfectly acceptable to the majority of customers. Occasionally, a low-cost leader will also discount its product to maximise sales, particularly if it has a significant cost advantage over the competition and, in doing so, it can further increase its market share (Internet 5).

Differentiation Focus Strategy

In the differentiation focus strategy, a business aims to differentiate within just one or a small number of target market segments. The special customer needs of the segment mean that there are opportunities to provide products that are clearly different from competitors who may be targeting a broader group of customers. The important issue for any business adopting this strategy is to ensure that customers really do have different needs and wants - in other words that there is a valid basis for differentiation - and that existing competitor products are not meeting those needs and wants (Internet 5).

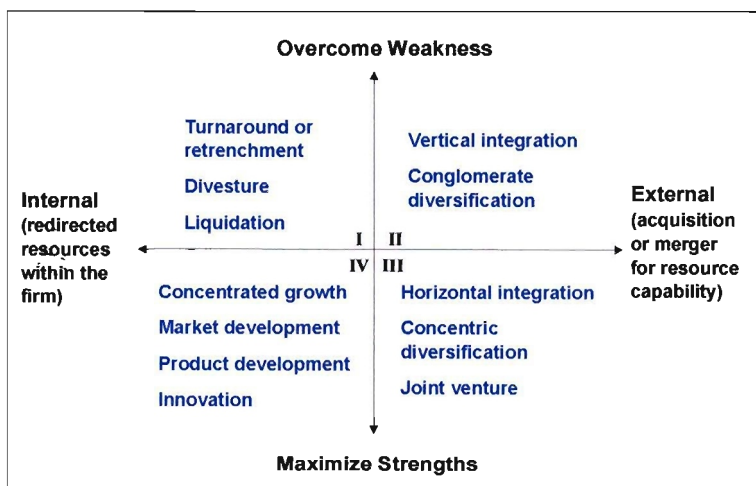
Cost Focus Strategy

Here a business seeks a lower-cost advantage in just one or a small number of market segments. The product will be basic - perhaps a similar product to the higher-priced and featured market leader, but acceptable to sufficient consumers (Internet 5).

2.7.3 Grand Strategies

According to Pearce and Robinson (1997:218), the grand strategies (or master/business strategies) provide basic directions for strategic actions. They are the basis of efforts directed at achieving long-term business objectives. The fourteen principal grand strategies are: concentrated growth, market development, product development, innovation, horizontal integration, vertical integration, concentric diversification, conglomerate diversification, turnaround, divestiture, liquidation, joint ventures, strategic alliances and consortia. In the grand strategy selection matrix, the principle purpose of the grand strategy (overcome weaknesses or maximise strengths) is compared to the choice of an internal or external emphasis for growth and profitability (Pearce and Robinson, 1997:265).

Figure 2.12: Grand Strategy Selection Matrix



Source: Pearce and Robinson, 1997

Market development

Organisations need to be selective about market coverage in order to position its products in the market. If existing markets cannot satisfy an organisation's aspirations, the organisation may look for opportunities to exploit the current product in other markets.

Three ways of achieving this involve: extension into other market segments which are not currently served perhaps this may involve the marketing of existing products with minor modifications to customers in related markets; developing new uses for existing products and geographic expansion (Johnson and Scholes, 1997:292).

Product Development

Product development involves the marketing of new and modified products to existing customers via the existing distribution channels, developing new product features, quality variations and additional models and sizes (Pearce and Robinson, 1997:225). One objective is to prolong the lifecycle of existing products or to take advantage of the brand name. The other objectives for product development vary between the various types of organisations. For example the public service would need to change the pattern of services, as needs change. The success of this strategy would depend on the ability to analyse and understand the changing needs of customers. Strategic development should be built around such a core competence. In the long-term, however, product development may not be sustainable without the development and acquisition of new competencies (Johnson and Scholes, 1997:290).

Concentric Diversification

Concentric diversification involves the acquisition of businesses that are related to the acquiring firm in terms of markets, products or technologies. The ideal concentric diversification occurs when there are synergistic possibilities counterbalancing the strengths and weaknesses of the two businesses. The profit potential is high, exposure to risk is reduced and resource demands are minimal (Pearce and Robinson, 1997:229).

Conglomerate Diversification

Conglomerate diversification refers to a situation when a large business acquires a business because it represents a promising investment opportunity.

There is little concern for product synergy and the sole reason for the acquisition is profit considerations (Pearce and Robinson, 1997:230).

Horizontal Integration

Horizontal integration is a form of related diversification and refers to the development into activities that are competitive with, or directly complementary to a company's present activities (Johnson and Scholes, 1997:294). The intention is to eliminate competitors and to gain access to new markets (Pearce and Robinson, 1997:227). Horizontal integration involves the exploitation of core competencies and the acquisition of similar firms at the same stage of the production-marketing chain.

Vertical Integration

Vertical integration is a form of related diversification. It involves the development into activities, which are concerned with inputs into current business (backward integration) and outputs (forward integration) of the current business. This allows organisations to grow their market share, improve economies of scale and increase efficiency of capital use (Johnson and Scholes, 1997:294).

Joint Ventures

Joint ventures are arrangements where organisations remain independent, but set up a newly created organisation jointly owned by the parents (Johnson and Scholes, 1997:294). They occur between two or more firms lacking a component for success in a particular competitive environment. The advantages of joint ventures are that it extends the supplier-consumer relationship, minimises the threat of foreign domination, presents opportunities with shared risk and facilitate knowledge transfer. The disadvantage of joint ventures is that it limits discretion, control and profit potential of the partners (Pearce and Robinson, 1997:237).

Consortia

Consortia may involve two or more organisations in a joint venture arrangement but will be focused on a particular venture or project (Johnson and Scholes, 1997: 318). Interlocking relationships between businesses in an industry are formed so as to increase competitiveness and reduce the risk of competition by sharing costs (Pearce and Robinson, 1997:239).

Concentrated Growth

Organisations employing a concentrated strategy develop and exploit expertise in a delimited area. They focus on a single product and market combination. There is emphasis on increasing sales, attracting competitors' customers as well as new customers (Pearce and Robinson, 1997:218). Increasing the size of purchases, advertising other uses and giving price incentives for increased use may increase sales. Initiating price cuts, increasing promotional effort and establishing sharper brand differentiation may attract new customers away from competitors. Advertising new uses and pricing up or down may attract non-users (Pearce and Robinson, 1997:223).

Innovation

In many industries it has become risky not to innovate as customers expect periodic changes and improvements in products and services. The rationale for this grand strategy is to create a new product lifecycle and make similar existing products obsolete (Pearce and Robinson, 1997:226). Innovation involves high research and development and high advertising costs. With innovation, high returns are also possible if customers readily accept the new product (Pearce and Robinson, 1997:226).

Turnaround

Economic recessions, production inefficiencies and innovative breakthroughs by competitors result in some firms facing economic decline. By employing a turnaround strategy, firms may survive and recover by concentrating on

distinctive competencies (Pearce and Robinson, 1997:231). Turnaround begins by retrenchment in the form of cost reduction and asset reduction to stabilise the financial condition. The second phase of the turnaround strategy is the recovery and it involves the creation of new strategies. A successful recovery is achieved when the firm regains its previous successful performance levels (Pearce and Robinson, 1997:234).

Divestiture

Involves the sale of a firm or a major component of a firm. If the retrenchment phase of the turnaround strategy fails to accomplish the desired turnaround, strategic managers sell off the firm. The intent is to find a buyer willing to pay above premium rates for the firm. Some of the reasons for divestiture include: partial mismatches between an acquired firm and the parent company, corporate financial needs and government anti-trust action (Pearce and Robinson, 1997:235).

Liquidation

When liquidation is the grand strategy, a firm is sold in parts for its tangible asset value. Liquidation is the least favourable grand strategy as the owners and strategic managers admit failure. In the long-term however, it minimises the loss for all stockholders. The objective is to obtain the greatest possible return and cash conversion as the firm relinquishes its market share (Pearce and Robinson, 1997:235).

Strategic Alliances

In a strategic alliance the companies do not take an equity position in one another (Pearce and Robinson, 1997:237). Examples of strategic alliances include:

- Licensing which involves the transfer of property rights. Patents, trademarks or technical know-how is granted to the licensee for a specified time in return for a royalty and for avoiding tariffs or import

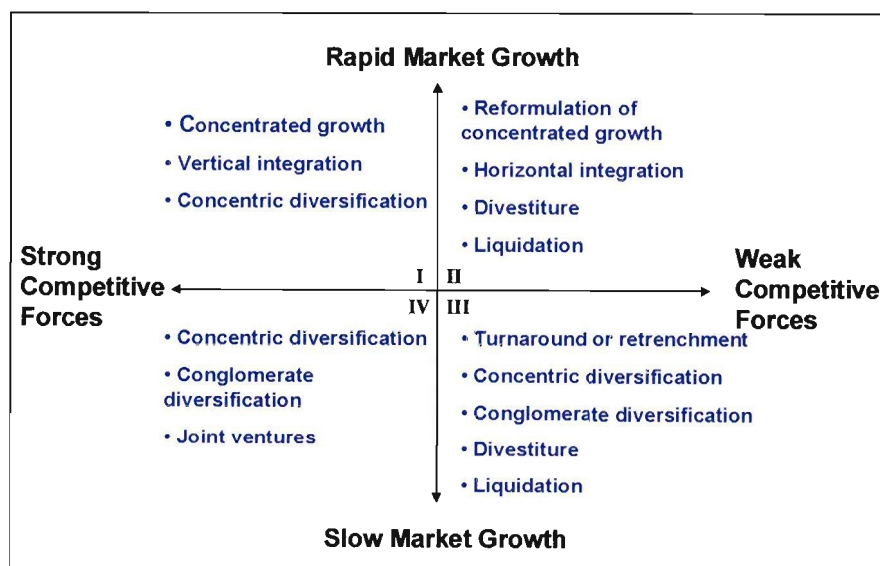
quotas. Another option of licensing is to contract the manufacturing to a foreign company so as to benefit from local comparative advantage in technology, material or labour.

- Outsourcing which enables a firm to improve its business focus, gain access to world class capabilities, accelerate re-engineering benefits, share risks and free resources for other purposes (Pearce and Robinson, 1997:239).

2.7.4 Model of Grand Strategy Clusters

The model of grand strategy clusters is used as a guide in the selection of a grand strategy. It is defined in terms of market growth rate and competitive position.

Figure 2.13: Model of Grand Strategy Clusters



Source: Pearce and Robinson. 1997

When market growth rate and competitive position are considered simultaneously a business can be categorised in one of the four quadrants.

According to Pearce and Robinson (1997:267):

Quadrant I depicts a strong competitive position in a rapidly growing market. Firms in this quadrant are in an excellent strategic position. Strategy options include continued concentration on their current business. If it has excess resources it should also consider vertical integration to protect profit margins and market share. Also, to reduce the risk associated with a narrow product or service line, concentric diversification may also be considered.

Quadrant II depicts a weak competitive position in a rapidly growing market. Firms in this quadrant should evaluate their approach to the market place. It should determine why its strategy is ineffective and whether it is capable of competing effectively. The analysis options available include: formulation or reformulation of a concentrated growth strategy, horizontal integration divestiture or liquidation.

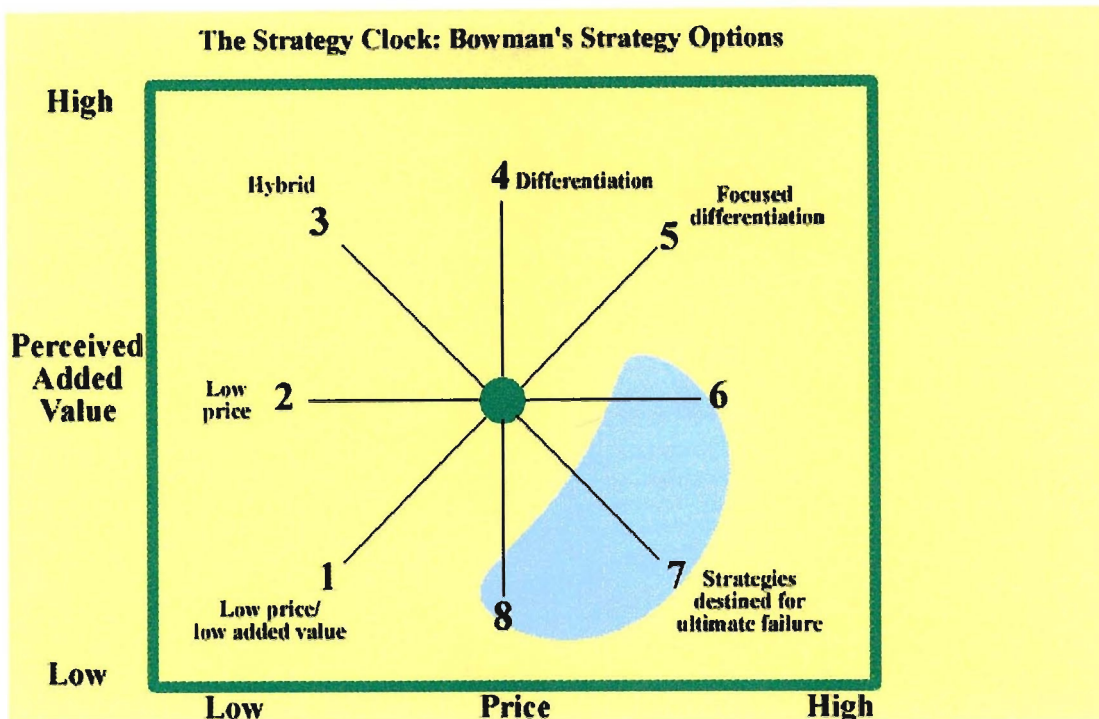
Quadrant III depicts a weak competitive position in a slow-growth market. Strategic managers, who expect a continuation of this situation, will attempt to decrease their resources committed to that business. Withdrawal may be accomplished through retrenchment. This would make the resources available for other investments and motivate employees to increase efficiencies. Resources may also be diverted for expansion into other businesses by either concentric or conglomerate diversification. Other options available include divestiture or liquidation.

Quadrant IV depicts a strong competitive position in a slow growth market. Firms in this quadrant have strengths from which they may diversify into more promising growth areas. They have high cash flow levels and limited internal growth needs. Options available to them include concentric diversification, conglomerate diversification and joint ventures.

2.7.5 Bowman's Clock

As with Porter's Generic Strategies, Bowman considers competitive advantage in relation to cost advantage or differentiation advantage. The strategy clock is a market-based model of generic strategy options.

Figure 2.14: Bowman's Clock



Source: C. Bowman and D. Faulkner 1996

There are six core strategic options. These are discussed below:

Price-based strategies (Routes 1 and 2)

Route 1 is low price/low value added and may seem unattractive. It is focused at a price sensitive market segment and involves reducing price and perceived value. Route 2 is the low price option and entails reducing price whilst trying to maintain the quality of the product or service. The risk of this strategy is that it is easily imitated by competitors and may result in decreased margins for the industry as a whole (Johnson and Scholes, 1997:253).

Hybrid Strategy (Route 3)

According to Johnson and Scholes (1997:259), the success of this strategy depends upon the ability to simultaneously deliver enhanced value in terms of customer needs, whilst also having a cost base that permits low prices and is sufficient for reinvestment to maintain and develop bases of differentiation.

Differentiation Strategies or added Value (Route 4)

Route 4 involves a broad differentiation strategy that seeks to be unique in terms of the dimensions widely valued by buyers and which is different from competitors. The objective is to achieve higher market share than competitors by offering better products or services at the same price or enhanced margins by pricing slightly higher (Johnson and Scholes, 1997:255).

Focused Differentiation (Route 5)

The objective is to offer higher value to the customers at a premium price (Johnson and Scholes, 1997:261). The strategy depends upon clarity of the needs of the market being targeted and continuous monitoring of the market as needs vary.

Failure Strategies (Routes 6, 7 and 8)

Route 6 suggests increasing price without increasing value to the customer. Unless legislation or high economic barriers to entry protect the organisation, competition is likely to erode market share (Johnson and Scholes, 1997:263). Route 7 involves reduction in value of a product or service while increasing price. Route 8 involves a reduction in value while maintaining price. Competitors may increase their market share (Johnson and Scholes, 1997:263).

Porter (in Johnson and Scholes, 1997:263) also suggests that firms stuck in the middle with no clear Generic Strategy also face failure.

2.7.6 Ansoff Matrix

To portray alternative corporate growth strategies, Igor Ansoff presented a matrix that focused on the firm's present and potential products and markets (customers). By considering ways to grow via existing products and new products, and in existing markets and new markets, there are four possible product-market combinations.

Ansoff's matrix is shown below:

Figure 2.15: Ansoff Matrix

	Existing Products	New Products
Existing Markets	Market Penetration	Product Development
New Markets	Market Development	Diversification

Source: Internet 5

Ansoff's matrix provides four different growth strategies:

- **Market Penetration** - the firm seeks to achieve growth with existing products in their current market segments, aiming to increase its market share.
- **Market Development** - the firm seeks growth by targeting its existing products to new market segments.
- **Product Development** - the firms develops new products targeted to its existing market segments.
- **Diversification** - the firm grows by diversifying into new businesses by developing new products for new markets.

Selecting a Product-Market Growth Strategy

The market penetration strategy is the least risky since it leverages many of the firm's existing resources and capabilities. In a growing market, simply maintaining market share will result in growth, and there may exist opportunities to increase market share if competitors reach capacity limits. However, market penetration has limits, and once the market approaches saturation another strategy must be pursued if the firm is to continue to grow (Internet 8).

Market development options include the pursuit of additional market segments or geographical regions. The development of new markets for the product may be a good strategy if the firm's core competencies are related more to the specific product than to its experience with a specific market segment. If the firm is expanding into a new market, a market development strategy typically has more risk than a market penetration strategy (Internet 8).

A product development strategy may be appropriate if the firm's strengths are related to its specific customers rather than to the specific product itself. In this situation, it can leverage its strengths by developing a new product targeted to its existing customers. Similar to the case of new market development, new product development carries more risk than simply attempting to increase market share (Internet 8).

Diversification is the most risky of the four growth strategies since it requires both product and markets development and may be outside the core competencies of the firm. In fact, this quadrant of the matrix has been referred to by some as the "suicide cell". However, diversification may be a reasonable choice if the high risk is compensated by the chance of a high rate of return. Other advantages of diversification include the potential to gain a foothold in an attractive industry and the reduction of overall business portfolio risk (Internet 8).

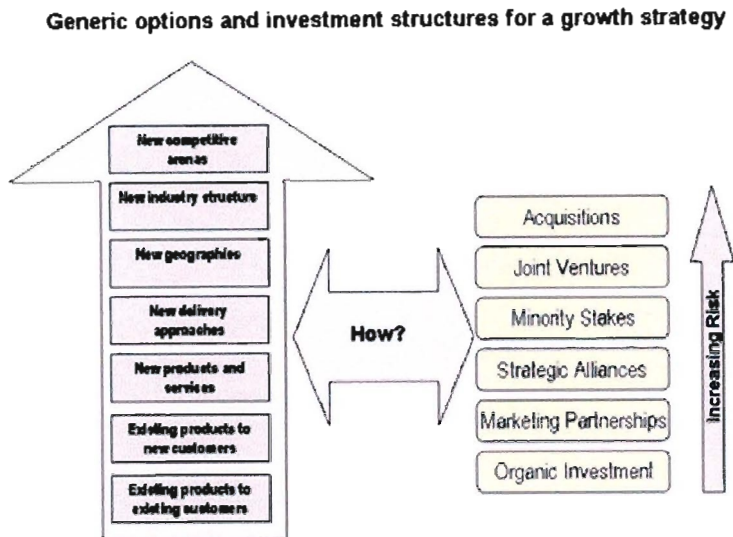
2.7.7 McKinsey Model

The McKinsey model argues that businesses should develop their growth strategies based on:

- Operational skills
- Privileged assets
- Growth skills
- Special relationships (Internet 5).

Growth can be achieved by looking at business opportunities along several dimensions as summarised in the diagram below:

Figure 2.16: McKinsey Model



Source : Internet 5

- Operational skills are the “core competencies” that a business has which can provide the foundation for a growth strategy. For example, the business may have strong competencies in customer service, distribution, or technology.
- Privileged assets are those assets held by the business that are hard to replicate by competitors. For example, in a direct marketing-based business these assets might include a particularly large customer database, or a well-established brand.
- Growth skills are the skills that businesses need if they are to successfully “manage” a growth strategy. These include the skills of new product development, or negotiating and integrating acquisitions.
- Special relationships are those that can open up new options. For example, the business may have especially strong relationships with trade bodies in the industry that can make the process of growing in export markets easier than for the competition (Internet 5).

The model outlines seven ways of achieving growth, which are summarised below:

Existing products to existing customers

The lowest-risk option; try to increase sales to the existing customer base; this is about increasing the frequency of purchase and maintaining customer loyalty.

Existing products to new customers

Taking the existing customer base, the objective is to find entirely new products that these customers might buy, or start to provide products that existing customers currently buy from competitors.

New products and services

Combinations of Ansoff's market development and diversification strategy – taking a risk by developing and marketing new products. Some of these can be sold to existing customers – who may trust the business (and its brands) to deliver; entirely new customers may need more persuasion (Internet 5).

New delivery approaches

This option focuses on the use of distribution channels as a possible source of growth. Are there ways in which existing products and services can be sold via new or emerging channels, which might boost sales?

New geographies

With this method, businesses are encouraged to consider new geographic areas into which to sell their products. Geographical expansion is one of the most powerful options for growth – but also one of the most difficult.

New industry structure

This option considers the possibility of acquiring troubled competitors or consolidating the industry through a general acquisition programme (Internet 5).

2.8 STRATEGIC EVALUATION

Strategies can be assessed against three evaluation criteria: suitability, acceptability and feasibility.

2.8.1 Suitability

Suitability is a broad assessment of whether a strategy addresses the circumstances in which the organisation is operating (Johnson and Scholes, 1999:319). Assessing suitability involves establishing the rationale for each strategic option and establishing the relative merits of an option when a number of choices are available through processes for screening options for further evaluation.

Establishing the rationale consists of assessing the extent to which a strategy:

- exploits the opportunities in the environment and avoids threats
- capitalises on the organisations strengths and core competencies and avoids or remedies the weaknesses
- addresses the cultural and political context

(Johnson and Scholes, 1999:322)

Tools that can be used to assist to test for suitability includes: lifecycle analysis, value chain analysis, portfolio analysis, positioning and business profile (Johnson and Scholes, 1999:321).

The approaches that may be used for screening options include:

- Ranking options against a set of predetermined factors concerning the organisations' strategic situation. Options are assessed against key factors in the environment, resources and stakeholder expectation.
- Decision trees also assess options against a list of key strategic factors. Introducing other criteria further eliminates options.
- Scenarios attempt to match specific options with a range of possible future outcomes. This method is useful when uncertainty is high and contingency plans may be prepared (Johnson and Scholes, 1999:330).

2.8.2 Acceptability

The acceptability of a strategy is concerned with the expected performance outcomes if the strategy were implemented and the extent to which they would fit the expectations of stakeholders (Johnson and Scholes,1999:319). The acceptability of strategies can be assessed according to three issues: the expected return from a strategy, the level of risk and the likely reaction of stakeholders.

Return may be analysed by the use of profitability analysis, cost-benefit analysis and shareholder value analysis. Risk may be analysed by use of financial ratio projections, sensitivity analysis and simulation modelling (Johnson and Scholes, 1999:337). Stakeholder mapping may be used to assess the likely reactions of stakeholders to new strategies, the ability to manage these reactions and hence the acceptability of a strategy (Johnson and Scholes,1999:348). The Game Theory may also be used to evaluate the likely response of competitors to a change in strategy (Johnson and Scholes, 1999:350).

2.8.3 Feasibility

Feasibility is concerned with whether an organisation has the resources and competencies to deliver a strategy (Johnson and Scholes, 1999:319). Some of the various analytic approaches to assess feasibility include fund flow analysis, break-even analysis and resource deployment analysis (Johnson and Scholes, 1999:350).

2.9 CONCLUSION

This chapter discussed the strategic theory that will be adopted to evaluate the appropriateness of the transformation of the South African electricity supply industry. The next chapter will discuss the international trends in electricity market reform and the options available to the South African ESI.

CHAPTER THREE: ELECTRICITY SUPPLY INDUSTRY RESTRUCTURING

3.1 INTRODUCTION

Electricity supply has been regarded for many years as a sector that was best run as a monopoly, and in most cases as a state-owned monopoly. Where private utilities have been allowed, they were tightly regulated. Over the last ten years, this view of electricity markets has changed and in most countries the electricity supply industry has undergone some reform. Restructuring the power sector is a very complex exercise based on national energy strategies and policies, macroeconomic developments and national conditions (Internet 10).

The electricity supply industry (ESI) in South Africa faces its greatest challenge i.e. it must bring electricity to that half of the population who presently do not have access to electricity, whilst at the same time supplying low cost electricity to industrial, commercial and agricultural consumers. This would enable economic growth and social development to take place to the advantage of all South Africans. In order to meet the challenge certain key constraints in the ESI will have to be overcome. This will require the restructuring of the ESI into an efficient and effective industry that will better meet the needs of all existing and future consumers of electricity (Internet 11).

The world of the generation, transmission, distribution and sales of electricity is changing. Many industrialised countries are at varying stages of deregulation. The objectives of restructuring are reduction of electricity costs, removal of subsidies, and elimination of special deals between fuel suppliers and power generators, among others (Internet 10).

This chapter describes the international trends in electricity market reforms.

3.2 INTERNATIONAL TRENDS IN ELECTRICITY MARKET REFORM

Electricity market reforms have generally involved the following elements:

- commercialisation, corporatisation and privatisation of government/public utilities;
- changes in the structure of the industry to increase competition and
- the creation of a set of electricity market trading mechanisms.

3.2.1 Commercialisation, corporatisation and privatisation

Commercialisation happens when the government relinquishes detailed control in favour of autonomy for the enterprise and a focus on profitability. This is a change in behaviour rather than organisation. It normally involves adoption of commercial accounting practices, economic tariffs and an effort to separate the core business from other activities (Internet 12).

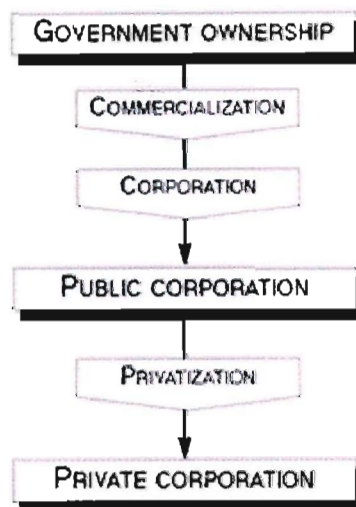
Corporatisation is the formal and legal move from direct government control to a legal corporation with separate management. This may be a government-owned corporation. The ownership of assets and the capital structure need to be determined before this step is taken. The government also needs to set out the objectives for the corporation and the process by which public policy objectives are taken into account. Economic regulation may be introduced at this stage to oversee pricing and investment policies (Internet 12).

Commercialisation and corporatisation initiatives assist in creating a level playing field, with private operators, through a degree of convergence in the cost of capital and acceptable rates of return on assets.

Privatisation is the move from a government corporation to a privately held corporation. Incentives for efficiency are considered even greater if management is subject to the disciplines of stock market valuation of the company, which happens when the enterprise is privatised. Privatisation may also be undertaken to increase the company's access to capital markets.

Privatisation is accomplished by a flotation on the stock market or a trade sale. This requires a valuation, a prospectus and registration on a stock exchange. It is accompanied by an increase in external regulation of the monopoly elements of the industry (Internet 12). This progression is shown in Figure 3.1 below.

Figure 3.1: Changes in Ownership / Management Dimension

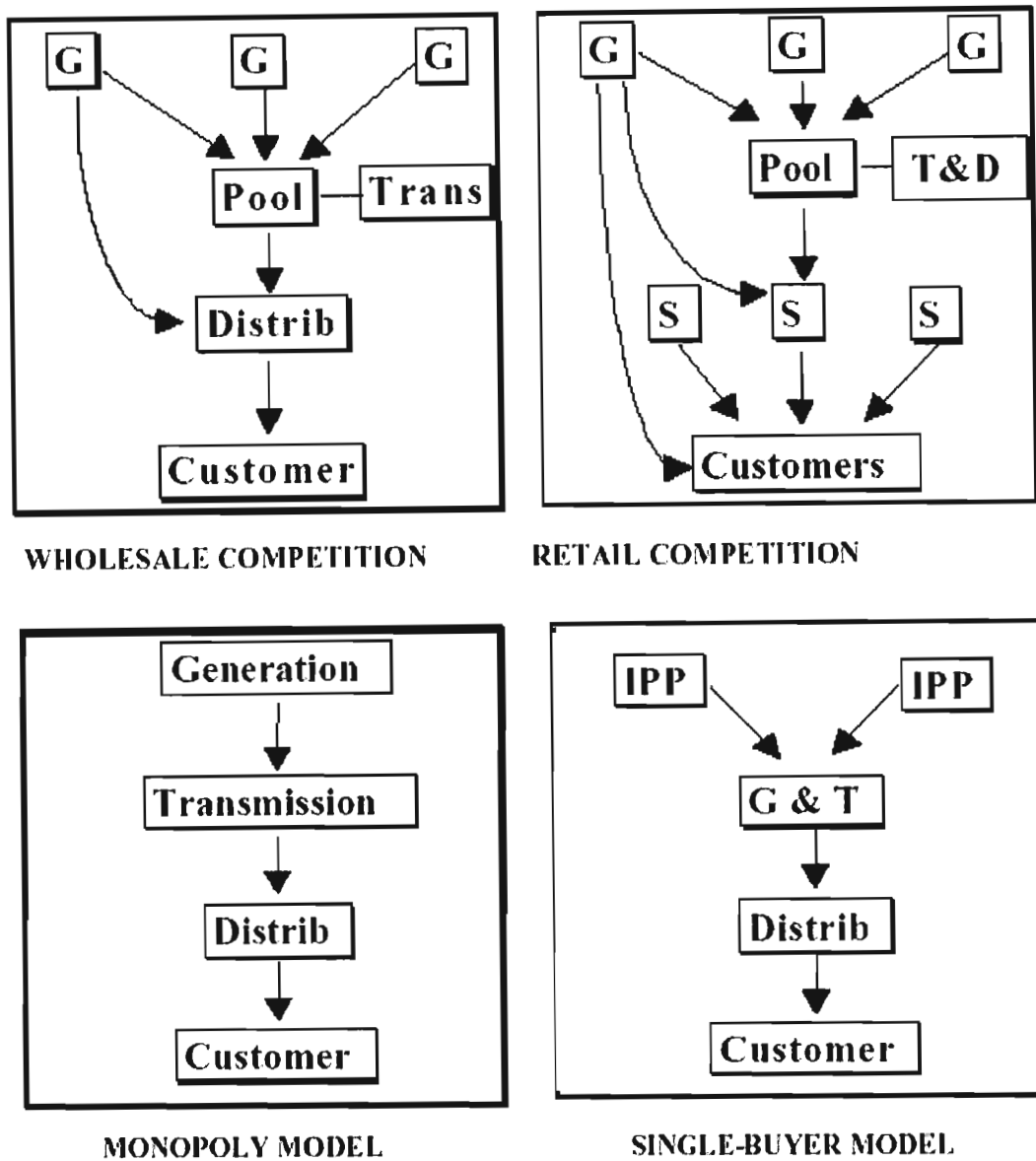


Source: Internet 12

3.2.2 Restructuring for Competition

If new entrants and technologies are to compete effectively then open, non-discriminatory access to the transmission and distribution system must be guaranteed, and no one generator or supplier should enjoy market power. The simplest way of achieving these objectives is to restructure the industry to increase choice and competition. The models commonly used to restructure monopolistic electricity supply industries include the Single-Buyer Model, the Wholesale Competition Model and the Retail Competition Model. Figure 3.2 illustrates the four generic models used in electricity supply industries world-wide.

Figure 3.2: Models of Electricity Supply Industries



Source: Internet 13

3.2.2.1 Monopoly Model

In the monopoly model, the generation, transmission and distribution of electricity to the final customer is carried out by one vertically integrated utility. Examples of countries employing the monopoly model include France, Italy, Venezuela and Japan (Hunt and Shuttleworth, 1996:31).

3.2.2.2 Single Buyer Model

Governments have sometimes introduced competition in phases - by first allowing independent power producers (IPPs) and/or importers to enter the market. These IPPs often have to secure future electricity sales through a power purchase agreement (PPA) with the dominant utility. This model is referred to as the single-buyer model. This approach has been followed in countries like Namibia, Kenya, Egypt, Vietnam, Northern Ireland and Taiwan. The suppliers compete for long-term contracts from the “state”.

This model involves a number of compromises as full wholesale competition is denied and there is a real danger that government and utilities might be stranded with costly PPAs that are uncompetitive in the future. PPAs might dictate a fixed price over a long period but if full competition were to be introduced prices might fall. There is growing consensus that it is preferable to introduce full wholesale competition from the beginning by separating generation from transmission. This would assist in ensuring non-discriminatory access to transmission of electricity to customers. Generators should also be broken up into a number of competing companies - none large enough to exert market power (Internet 13).

3.2.2.3 Wholesale Model

The old vertically integrated monopolistic industries have been vertically unbundled: i.e. generation has been separated from transmission and distribution, which are then operated as separate, independent entities. Secondly, there has been horizontal unbundling, where generation has been split into a number of competing companies (none big enough to exert market power) and/or the introduction of new generators has been permitted. Any generator may then send their electricity through the transmission and distribution system to customers. This is termed wholesale competition, which first emerged in Chile and the UK and is now being followed by the majority of countries undergoing reform (Internet 13).

3.2.2.4 Retail Competition

At a mature stage in the reform process, supply of electricity is often separated from the operation and ownership of the distribution wires and a number of suppliers compete to sell electricity to customers. All customers can choose their suppliers. This is termed retail competition. Choice of supply for large customers are often introduced at the same stage as wholesale competition - and then extended to smaller consumers at a later stage. Suppliers buy their electricity from the wholesale market and then pay the transmission and distribution companies a regulated price to transport their electricity to customers (Internet 13).

Customers often see their electricity bill split into an energy component (the price of electricity bought from a generator) and a transport cost (the wires charges). Customers may also elect to purchase their electricity directly from generators. The UK, Norway, New Zealand, Australia and many other countries have moved to retail competition - first allowing large customer choice and then eventually extending competition to all electricity customers (Internet 13).

3.2.3 Electricity Trading Market

A key element necessary for competition is the creation of an electricity market or set of trading mechanisms and instruments. There are two broad market models that describe the way in which sellers and buyers of electricity interact. These include the power pool model and the multi-market model.

3.2.3.1 Power Pool Model

The power pool model has been widely implemented, initially in countries such as the UK and South America. In this model generators bid their power into a pool (i.e. a block of power at a particular price for a particular period - usually an hour or half hour a day ahead). The bids are stacked from the lowest to the highest and the pool operator prepares a day ahead a commitment and dispatch schedule on the basis of a demand forecast and merit-order of power bids from

the pool based on the lowest price bids. Power is dispatched to meet demand and hence surplus generators (i.e. those with the higher prices) are not dispatched (Internet 13).

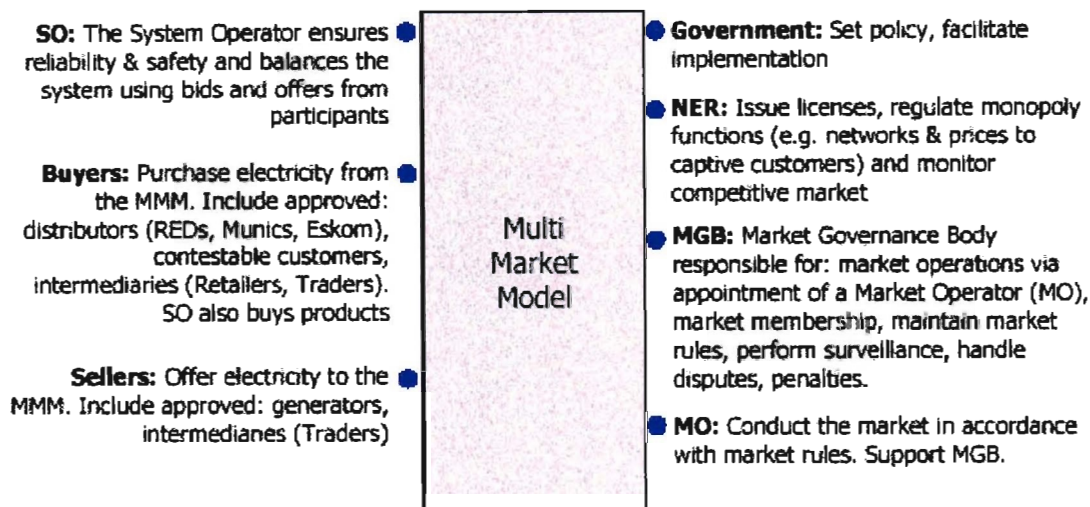
Purchasers buy their power from the pool at a price that is based on the bid of the last dispatched plant -i.e. the system marginal price, plus any capacity payments. The system operator handles constraints, largely by adjusting the dispatch schedule and ancillary services (e.g. reactive power and voltage regulation) are procured by the system operator. System balancing is managed by the system operator based on separate price schedules for increases or decreases in actual generation output or consumption (balancing market). The costs of the system operation and balancing are added to the pool price as an uplift payment. All generators and purchasers are required to make their physical purchases or sales of electricity through the pool - although they might hedge their risks with financial contracts for differences. Demand-side participation tends to be weak in this model (Internet 13).

3.2.3.2 Multi-Market Model

As more experience develops with competitive electricity markets - a multiple electricity trading market model is evolved: i.e. not all the power generated is traded through a single pool. The pool is voluntary not mandatory, as in the previous model. Countries adopting this type of market model include Scandinavia, the United States of America and New Zealand. A market develops for long or medium-term bilateral contracts between generators and suppliers and/or customers. A single system marginal price is replaced by a system where supply and demand market participants are paid, and pay, as bid or agreed. Market risk is hedged through trading in futures or forward contracts. A power pool is used as a day-ahead market (which usually becomes the reference price) and because electricity is generally not stored and supply and demand has to be matched on a real-time basis, a balancing market becomes critical. All market participants who are out of balance from their contracted positions will be exposed to the price in the balancing market.

These various market platforms have clearly delineated rules and settlement procedures. Essential elements of this model are the freedom for participants to choose their trading platform(s) and the fact that demand-side participation is stronger (Internet 13). The figure below illustrates the multi-market Model.

Figure 3.3: A Multi-Market Model



Source: Internet 14

3.3 CONCLUSION

The ESI has undergone various reforms world wide, some more successful than others. The choice of a restructuring model depends on the specific characteristics of each country. This chapter described the changes in ownership of ESIs and methods of increasing competition in ESIs. It also described the power pool and multi-market models. Competition at the generation and retail stages is important if consumer welfare is to be enhanced. Getting the structure of the markets right before introducing competition is also crucial, as is taking cognisance of the international investment climate. Government should look at the realities of the industry and employ a cautious approach by developing policies that are clear and that send proper signals to investors. At the moment, however, the industry is clouded with many uncertainties (Internet 13).

The next chapter describes the South African Electricity Supply Industry.

CHAPTER FOUR: THE SOUTH AFRICAN ELECTRICITY SUPPLY INDUSTRY (ESI)

4.1. INTRODUCTION

This chapter will describe the complex context of the South African electricity supply industry. It will explore the need for the transformation of the industry and will describe the proposed changes.

4.2. BACKGROUND

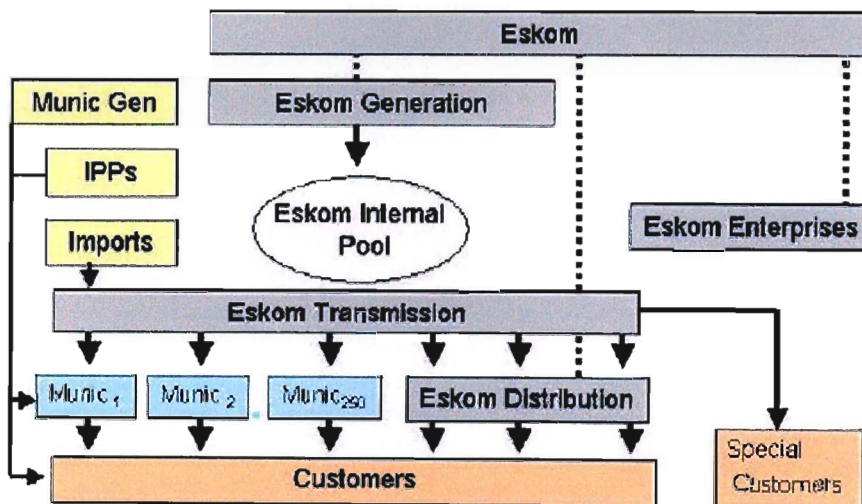
South Africa, which supplies two thirds of Africa's electricity, is one of four cheapest electricity producers in the world. Ninety-two percent of South African electricity is produced from coal, with generation dominated by Eskom. The national electricity grid is owned and operated by Eskom. Eskom supplies more than 96% of South Africa's electricity and more than 50% of electricity consumed throughout Africa. In global terms, the utility is the fourth largest in generating capacity, the fifth largest in sales, and has the world's biggest dry cooling power station. A massive electrification programme is under way with 1 000 electrical connections being made daily. Although Eskom is a public corporation, it is financed by net financial market liabilities and investments as well as reserves, and is run on business principles for the benefit of its customers (DME, 2000).

While Eskom does not have exclusive generation rights, it has a practical monopoly on bulk electricity sales. It also operates the integrated national high-voltage transmission system and supplies directly to large consumers such as mines, mineral benefactors and other large industries. In addition, it supplies electricity directly to commercial farmers and, through the National Electrification Programme (NEP), to a large number of residential consumers. It also sells in bulk to municipalities, which distribute to consumers within their boundaries. Both Eskom Distribution and the municipal distributors are monopolies in their licensed areas of supply (DME, 2000).

Established in 1995, the National Electricity Regulator (NER) is a statutory body funded from a small levy imposed on the generators of electricity. Legislation requires anybody wishing to generate, transmit or supply electricity to apply to the NER for a licence. This is issued on the basis of criteria that aim to promote and maintain a viable electricity supply industry. Municipalities are required by law to provide infrastructural services like roads, water and sanitation, health services, and electricity. Few municipalities generate their own power, while the majority purchase power from Eskom for resale to consumers within their boundaries. Amongst the municipalities there are a small number of large distributors and a large number of small distributors. Figure 4.1 illustrates the existing structure of the South African electricity supply industry.

Figure 4.1: Existing Structure of the South African Electricity Supply Industry

Integrated monopoly – existing industry structure



Existing industry structure

Source: DME. 2000

At the moment the sector is facing numerous difficulties that need immediate attention if the reform process is to succeed. These relate to financial instability, the inequitable treatment of customers and operational/management inefficiencies.

In September 1999, the NER unveiled its restructuring plan, outlining a new structure and several key strategic regulatory issues. These include a regulatory framework for independent power producers, the restructuring of the distribution sector, promoting the promulgation of an Electricity Regulatory Bill and further developing the wholesale electricity tariff (DME, 2000).

4.3 REASONS FOR THE EDI RESTRUCTURING

Current problems in the electricity supply sector are many and serious, and can be summarised as follows:

4.3.1 Financial viability

The ESI is currently in financial crisis. Many municipal distribution businesses in recent years have suffered financial collapse and many others are now close to bankruptcy – facing severe debt problems, including a backlog of non-payment for bulk supplies to Eskom. Over the past few years a “quick fix” approach has been taken where municipal distributors have collapsed. In some cases this has taken the form of Eskom distribution, another municipality or Provincial Government conducting the distribution operation on behalf of the municipality in question. This “restructuring by default” is not sustainable and does not represent a permanent solution that is consistent with the government’s social and economic development objectives. The financial crisis facing many distribution businesses has real and severe consequences – for example:

- Investment in the distribution networks is falling significantly short of that required to maintain the assets and to extend the network to meet growing demand. As a result the government’s objective of secure and reliable electricity for all is under increasing threat;

- The ability of many distributors to meet the financial demands of the electrification programme in future is under serious threat – both the initial installation costs and the ongoing financial support to low-income households;
- Failure of many municipal distributors to pay debts to Eskom, if continued under the current structure, will ultimately threaten the viability of the whole of the ESI. The financial viability of the whole sector depends critically on distributors being able to collect revenue from customers and meet their financial commitments to Eskom for generation purposes, and
- Many of the financially weak distribution businesses do not represent secure employment prospects for their labour force. This in turn is creating both pressures on many skilled staff to leave the industry for more secure employment elsewhere, and significant uncertainty and concerns among other members of the current labour force (DME, 2000).

4.3.2 Inequitable treatment of consumers

The current arrangements in the ESI are the result of the historic development of the sector and form no coherent pattern. As a result, consumers face significantly different levels of tariffs, standards of supply reliability and service across the country. The result is widespread inequity among consumers. This is inconsistent with government objectives of promoting economic and social development throughout the country. In particular:

- Wide disparities in the tariff structures caused by the high level of fragmentation of the industry (domestic tariffs supplied by municipalities ranging from 16 – 60 c/kWh). These tariff differences bear little or no relationship to the quality of service provided, the costs of supply or consumers' ability to pay. Unfair discrepancies exist between Eskom distribution and Municipal Distribution purchasing tariffs from Eskom Transmission – to the benefit of Eskom, but to the detriment of municipal customers;
- Reliability of supply and the ability of distributors to offer a basic and secure supply to low income households differ markedly across the country;

- Electrification needs are not evenly distributed across regions, with some of the poorer regions having the greatest need. Under the current ESI structure, the burden of financial support to newly connected rural and low income urban customers will fall randomly on some consumers and not others in an entirely unplanned and uncontrolled manner; and
- The threat of financial collapse is most acute for a number of municipal distributors in certain low-income rural, urban and industrialised areas in South Africa (DME, 2000).

4.3.3 Inefficiencies

The ESI is currently highly fragmented, with some 250-distribution businesses. These businesses are small by international standard. As a result, many of the basic economies of scale in the sector are being lost. Administration and technical functions are duplicated across adjacent distributors in rural, urban and industrial areas. Costs and prices in the sector are, in consequence, unnecessarily high, and will remain so until the number of businesses is reduced radically, in line with the earlier Cabinet resolutions. The highly fragmented nature of the sector also means that:

- The ESI is currently very difficult to regulate and monitor effectively;
- It is extremely difficult to attract and retain high quality management teams for such a large number of separate businesses; and
- Many of the businesses are too small to be able to invest in the specialist skills development and training required of a modern distribution business.

4.3.4 Summary

In summary, the current arrangements in the ESI are unsustainable, from a financial, efficiency and equity point of view. The need for reform is urgent, if the problems in the current ESI are not to present a significant obstacle to the government's social and economic development programme. Such is the scale and urgency of the problem that distributors are starting to restructure the ESI on a micro-regional basis and in an uncontrolled manner.

These restructuring exercises are being paid for by a small number of consumers, and the result will be an industry structure that is consistent neither with government's social and economic priorities, nor with the long-term interests of the South African electricity consumer or employee in the sector. A single, co-ordinated programme of reform is now required.

4.4 PROPOSED STRUCTURE

In the future structure, Eskom will own up to 70 % of the generation capacity while the remaining 30 % or more will be owned by Black Economic Empowerment Companies (BEEs) and Independent Power Producers (IPPs). Transmission will be fully independent from Generation and 100 % owned by the State. With regard to distribution, the EDI blue-print report recommends the establishment of a holding company (EDI Holdings), with a 100% ownership by government, to which municipalities and Eskom distribution will be transferred. These will form six regional electricity distributors (REDs) who will be responsible for the distribution of electricity to consumers within their respective boundaries. EDI Holdings will be mandated to consolidate the fragmented and inefficient distribution industry and to oversee its restructuring. EDI Holdings will be established for an initial period of six years after which its role will be reviewed to determine whether it should continue, and if so what role it should fulfil (DME, 2000).

As a starting point, large customers (consuming at least 100GWh of electricity per annum at a single site) will be able to purchase power directly from generators of their own choice. In the short term, smaller customers will remain captive under a particular RED, and hence will require some form of regulatory protection through control over tariffs and quality of service. Hence it can be seen that South Africa intends adopting the Wholesale Competition Mode. Eventually, full retail competition should be possible where all customers, of all sizes, should be able to choose their supplier. The proposed structure is illustrated in the figure below.

Figure 4.2: Proposed Structure of the new South African Electricity Supply Industry

Regulatory Framework for the Economic Regulation of the Electricity Supply Industry of south Africa

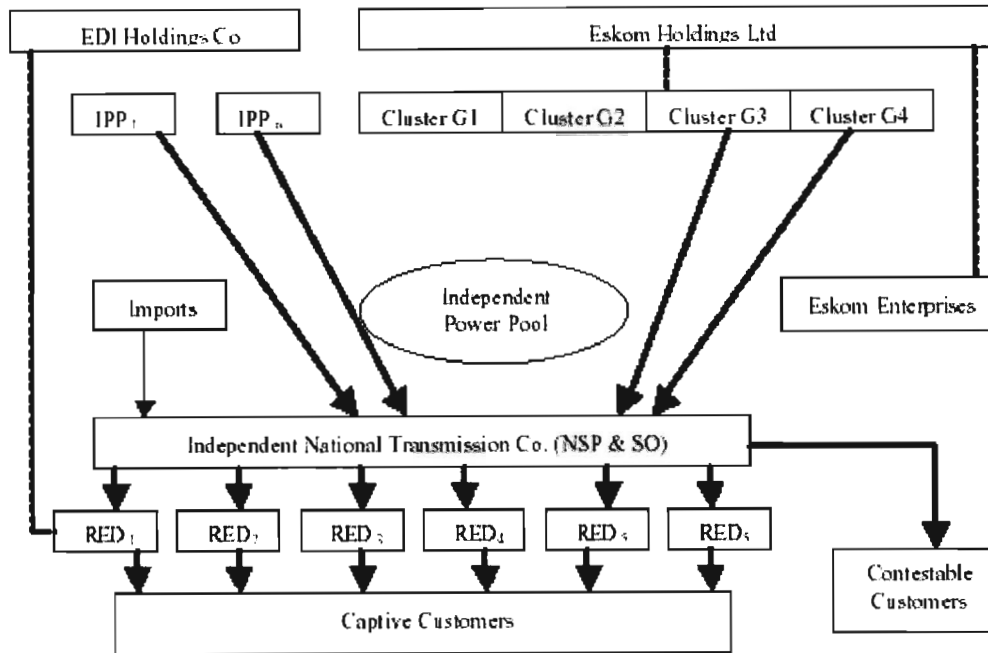


Figure Future industry structure

Source: DME 2000

In order to facilitate wholesale competition, the establishment of a multi-market model (MMM) has been proposed. Here, the various market participants (generators, traders and buyers) will interact through a variety of mechanisms including bilateral agreements, futures markets, day-ahead markets and real-time markets. The existing Eskom power pool (EPP) with some modifications, is considered an appropriate basis for forming the MMM. However, this might put Eskom's generation clusters at an advantage since they are already familiar with the functioning of the power pool (DME, 2000).

4.5 OBJECTIVES FOR THE SOUTH AFRICAN ENERGY SECTOR

The White Paper on Energy Policy (1998) set out the policy objectives for the energy sector in the following way:

- increase access to affordable energy services,
- improve energy governance,
- stimulate economic development, and
- manage energy-related environmental impacts.

The objectives are to give customers choices and to take gradual steps towards a competitive electricity market. The NER regulates pricing, national tariff systems, national service and technical standards (Internet 13).

4.6 CONCLUSION

Electricity supply throughout the world is undergoing a revolution. This is being caused mainly, but not solely, by electricity utilities having to meet new pressures resulting from global markets and governments opening up their countries to foreign investors to help fund power sector expansion and development. As a result, utilities have to see themselves as businesses, and act accordingly. South Africa is not immune from these forces, and will have to move broadly in line with developments taking place in the rest of the world, while also ensuring that the industry evolution meets South Africa's special requirements.

As part of South Africa's energy policy objectives, the electricity supply industry objectives must:

- improve social equity by specifically addressing the energy requirements of the poor;
- enhance the efficiency and competitiveness of the South African economy by providing low-cost and high quality energy inputs to industrial, mining and other sectors; and
- achieve environmental sustainability in both the short and long-term usage of our natural resources.

To ensure the success of the electricity supply industry as a whole, various developments will have to be considered by government over time, namely:

- giving customers the right to choose their electricity supplier;
- introducing competition into the industry, especially the generation sector;
- permitting open, non-discriminatory access to the transmission system; and
- encouraging private sector participation in the industry.

The Government believes that the operation of the industry will have to be constantly optimised to maximise the potential for adequate, reliable, and low cost electricity to serve the people and industries of South Africa. To ensure this result, as an initial goal the distribution sector of the electricity supply industry will have to be rationalised, by reducing the number of distributors to a much smaller number. As investigations have demonstrated, it is the distribution sector that is most urgently in need of reform. But changes will also be adopted in the generation and transmission sectors.

Addressing the mid- to long-term issues will require substantial analysis and additional stakeholder consultation and input. Eventually, however, these measures must translate into an electricity supply industry that is financially viable, technically healthy and well managed. In other words, one that is capable of being the engine for growth, development and prosperity for South Africa.

In the next chapter strategic tools and techniques will be used to analyse the South African ESI and evaluate the choice to restructure.

CHAPTER FIVE: ANALYSIS OF THE SOUTH AFRICAN ELECTRICITY SUPPLY INDUSTRY

5.1 INTRODUCTION

This chapter will analyse the South African electricity supply industry using the strategic theory discussed in Chapter Two and the information presented in the case study as Chapter Four. The vision and objectives of the ESI will be discussed. The environment will be investigated by using the PEST analysis and Porter's diamond. The five-force analysis will be used to analyse the competitive environment. Market segmentation and perceived value will be examined so as to determine competitive positioning. A competitor analysis will also be carried out and core competencies will be discussed. The information obtained from this analysis will then be used to draw up a SWOT analysis. The SWOT analysis will then be applied to the SWOT matrix, the grand strategy matrix and the model of grand strategy clusters to examine strategic choice. The industry lifecycle will be identified and its strategic impact will be discussed. The generic strategies adopted by the electricity supply industry will also be examined and discussed. The strategies implemented by the South African electricity supply industry will then be evaluated.

5.2 VISION AND OBJECTIVES FOR THE SOUTH AFRICAN ELECTRICITY SUPPLY INDUSTRY

In order to change, improve and succeed in the long term, the vision and objectives that the South African electricity supply industry will adopt is discussed below.

5.2.1 Vision

The electricity supply industry in South Africa needs to have a vision so that all stakeholders know the direction in which the industry is moving. Changes in the industry must be planned, phased and ongoing.

To ensure the success of the industry, the National Electricity Regulator (NER) believes that government should promote the following developments:

- The establishment and operation of an effective and efficient rationalised, viable electricity supply industry
- Eliminating monopolies in the generation and distribution sectors
- Rationalising end-use prices and tariffs
- Giving customers the right to choose their electricity supplier
- Creating an electricity market
- Introducing competition into the industry, especially in the generation sector
- Addressing the impact of generation, transmission and distribution on the environment
- Permitting open, non-discriminatory access to the transmission system
- Levelling the playing fields between distributors of electricity
- Encouraging private sector participation in the industry (Internet 14).

These measures will ensure that the electricity supply industry is capable of being the engine for growth, development and prosperity for South Africa. All of these measures are of critical importance but due to their magnitude they can only be phased in over time.

5.2.2 Objectives

The objectives of reform need to be clearly defined and prioritised, and the design adapted accordingly. Objectives can vary markedly, for example, from lowering electricity prices, to enhancing customer service, attracting investment, or paying off debt through asset sales. These objectives may call for different reform steps and may even be in conflict with one another. For example, achieving a good price for assets to pay off debt will be compromised by reforms that lower prices, as may the objective of attracting investment. One of the most widespread confusions about market reform is the view that it is always designed to reduce power prices.

The objective should be to assure the cheapest electricity consistent with reliable future supply and environmental objectives. Where electricity is being sold below cost through subsidies, as in South Africa and many other developing countries, reform would result in increased prices, as permanent subsidy is unlikely to be sustainable. The propensity of many promoters to sell market reform in terms of lowering costs is the cause of much flawed design. Whatever the priority objective, very careful cost-benefit analysis should be undertaken of whether the expected benefit will outweigh the cost of introducing reforms. For example, if the objective is to lower the cost of electricity, but prices are already quite close to costs, it is questionable that the gains will outweigh the quite considerable costs of creating a market.

The primary objectives for the restructuring of the South African electricity supply industry is to:

- Maximise financial and economic returns to the state, both from the point of view of increased opportunities for debt reduction and increased fiscal revenue.
- Increase economic efficiency in terms of primarily achieving allocative efficiency with regard to the next investment in generation capacity, in driving operational costs down.
- Widening resource availability and opportunities for technological change by considering competitive imports from southern Africa, in particular natural gas from Namibia and Mozambique, as well as information and computer technologies.
- Promote opportunities for black economic empowerment.
- Improve customer service and introducing choice of supply.
- To protect public benefits such as widened access to the poor, energy efficiency, ongoing research and development and environmental sustainability (Internet 15).

5.3 ENVIRONMENTAL ANALYSIS

The environmental analysis will include an examination of the nature of the environment and a PEST analysis. Porter's Diamond will also be used to determine the competitiveness of the industry.

5.3.1 Nature of the Environment

In order for strategic managers to effectively carry out the strategic management process it is necessary for them to understand the uncertainty in the environment. The South African Electricity Supply Industry is dynamic due to the evolution of technology and the changing public policy issues. Furthermore, as a result of the local governments participating in the electricity supply, the varying public policy issues add to the complexity of the industry. The dynamic and complex industry requires that there have to be decentralisation of organisations.

5.3.2 Political, Economic, Social and Technological (PEST) Analysis

The following contextual issues will have to be considered by regulation, competition policies and systems in South Africa.

5.3.2.1 Political Analysis

- South Africa has become a global player. Since the dismantling of apartheid, new markets are opening up, whilst at the same time South African markets are opening up to foreign competition.
- Politically, there are issues such as the perceptions and action of powerful actors, like organised labour and the business sector, in respect of regulation and competition. Cosatu holds very strong policy views on the nature and extent of the role of the state in the South African economy and in regulation and competition.
- The Basic Conditions of Employment Act, Labour Relations Act, Employment Equity Act and the Skills Development Act affect employment in the industry.
- Eskom did not pay taxes.

- The ESI was a monopolistic industry and not subject to competition legislation.
- Environmental protection legislation is increasingly being enforced.
- The quality of supply and service standards impact upon the cost of service delivery.

5.3.2.2 Economic Analysis

- Existing growth rates are between 1% and 3%. South Africa has a struggling economy and requires investment to improve and to promote sustainable growth levels.
- Half of the citizens live in abject poverty, hence policies are required to contribute to the alleviation of poverty.
- About one-third of the economically active population is unemployed and the unemployment is even higher amongst black South Africans, rural residents and females. The de-regulation must contribute to job creation.
- The degree of income inequality, in South Africa, as measured by the Gini coefficient, is one of the highest in the world. The new policies should contribute to an improved distribution of wealth.
- High and fluctuating interest rates negatively affect confidence and investment in the industry.
- The unstable value of the Rand does not encourage investment.

5.3.2.3 Social Analysis

- Socially, the regulation, competition policies and systems should aim at development, improved social equity and personal empowerment, especially for those sectors and individuals in the South African society that were fundamentally disadvantaged by the discriminatory policies and practices of the previous apartheid system.
- HIV/AIDS is negatively impacting upon the economically active population. It is estimated that 1 in 9 South Africans have HIV/AIDS.

- South Africa has a high crime rate, increasing levels of theft of energy, copper, assets and material and a culture of non-payment, which negatively affects investment and financial stability.

5.3.2.4 Technological Analysis

- New technologies such as relatively smaller natural gas turbines (with shorter construction times and high efficiencies) have turned economies of scale upside down.
- Technological changes associated with metering and billing have also opened up the possibility for a range of firms to compete in the final retail of electricity to the customer.
- There is limited spending on research and technological effort. However, research, of international interest, is being carried out in the fields of renewable technologies in rural areas, the Pebble Bed Modular reactor and the Solar Chimney.
- Innovative designs to cut the cost of electricity supply and distribution in an attempt to supply electricity to all the people of South Africa resulted in it being a leader in pre-payment technology.

5.3.2.5 Summary of PEST

The combined effect of the political, economic and social contexts of regulation and competition should be that it delivers development, goods and opportunities to the previously disadvantaged majority in South Africa. This has to be done by means of prioritisation towards less-developed communities and geographic areas, as well as preferential actions for the previously disadvantaged in terms of access to opportunities in respect of business, procurement and in the fields of human development education, training and employment. The primary issue is, of course, to reconcile this preferential prioritisation with economic effectiveness, efficiency and productivity.

The most fundamental issues emanating from the context of regulation and competition in South Africa can be summarised as creating an approach that

simultaneously provides for growth and development as well as for the alleviation of poverty and inequality. Assuring the public that on the one hand competitiveness and efficiency are pursued, and on the other that this process will ensure access to many more people previously denied an equal opportunity to participate in the economy should do this.

Lewis (2000:3) also refers to these particular issues when he indicates the multiple objectives that a system of regulation and competition has to satisfy in the South African context. According to him, in a developing country like South Africa, the distribution and poverty problems are large and all social and economic policies, including competition policy, are expected to contribute to the alleviation of poverty and improved economic distribution.

5.3.3 Porter's Diamond

Porter's Diamond, is used to analyse the factors of national advantage (or disadvantage) in the South African electricity supply industry. The strategy, structure and rivalry; factor conditions, demand conditions and related and supporting industries are discussed below.

Strategy Structure and Rivalry

- Eskom is a monopoly generator and distributor.
- There are also about 250 monopoly local government distributors

Factor Conditions

Positive Factor Conditions include:

- Diverse primary fuel sources: coal, solar, gas, uranium and water
- Good quality infrastructure
- One of the lowest electricity prices in the world
- Large labour force

Negative Factor Conditions include:

- Limited capital resources
- High crime rates

Demand Conditions

Positive Demand Conditions include:

- Increasingly demanding customers
- Demand for low cost electrification

Negative Demand Conditions include:

- Culture of non-payment for services
- Theft of electricity and infrastructure

Related and Supporting Industries

- The low cost electricity in South Africa leads to competitive advantage for its energy intensive industries
- South Africa is a leader in pre-payment technology
- The ESI support industries are strong

5.4 COMPETITIVE ENVIRONMENT – FIVE FORCE ANALYSIS

An analysis of the competitive forces in the South African electricity supply industry reveals the following:

Barriers to entry

These are the important structural components within an industry to limit or prohibit the entrance of new competitors. The major components in South Africa are economies of scale enjoyed by both Eskom and the municipalities, they have an understanding of the buyer needs based on experience. Eskom and the municipalities also enjoy brand image and loyalty.

New entrants would also face a risk premium. The existing suppliers have access to distribution channels. Therefore it may be assumed that the barriers to entry are high.

Rivalry among existing competitors

Eskom is a monopolistic generator and there are only a few competitors in distribution. The industry has a slow growth, with high fixed costs. There is also minimal opportunity for differentiation. Electricity is a standardised product with high volume sales. Presently there is not much competition, however this would change with the introduction of competitive markets.

Substitutes

These are products or solutions that basically perform the same function but are often based on a different technology. Presently there is a threat of substitution from alternative energy sources like low-pressure gas, coal, paraffin and solar. With the introduction of competition, the suppliers of electricity will also have to deal with generic substitution from other private electricity suppliers.

Power of buyers

Through their bargaining power buyers can force the competitors to lower their prices or force higher quality or better service. The major factor determining the increasing bargaining power of electricity users is the high volume of the standardised product consumed.

Power of suppliers

Suppliers can exert their bargaining power over participants by threatening to raise prices or reduce the quality. Eskom is a dominant supplier. With the introduction of competition, Eskom's power over the supply industry will decrease.

5.5 IDENTIFYING COMPETITIVE POSITION

5.5.1 Market Segmentation

A historical summary of electricity generation and consumption in South Africa is shown in the Table below.

Table 5.1: Electricity Generation and Consumption in South Africa, 1990-2001 (in billion kWhr)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Net Generation	156.0	158.9	157.1	163.3	170.7	176.1	186.9	195.9	191.7	189.2	196.2	195.6
<i>hydroelectric</i>	1.0	2.0	0.8	0.1	1.1	0.5	1.3	2.1	1.6	0.7	1.3	2.1
<i>nuclear</i>	8.4	9.1	9.3	7.3	9.7	11.3	11.8	12.6	13.6	12.8	13.0	10.7
<i>geo/solar/wind/biomass</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>conventional thermal</i>	146.6	147.8	147.1	155.9	160.0	164.2	173.9	181.1	176.5	175.6	181.8	182.9
Net Consumption	143.8	146.1	144.6	149.4	156.2	160.9	168.3	175.6	175.8	178.1	183.8	181.2
Imports	0.3	0.3	0.4	0.1	0.1	0.2	0.0	0.0	2.6	6.7	5.3	6.2
Exports	1.6	1.9	1.8	2.6	2.6	3.0	5.6	6.6	5.1	4.5	4.0	6.9

Source: Internet 16

South Africa imports electricity from the Cahora Bassa hydroelectric station, Zambia and the Democratic Republic of Congo. It exports electricity to Botswana, Lesotho, Mozambique, Zimbabwe and Swaziland.

Eskom supplies electricity directly to commercial farmers and, through the National Electrification Programme (NEP), to a large number of residential consumers. It also sells "in bulk" to local municipal authorities who distribute to consumers within their boundaries. Manufacturing is the largest consumer of electricity in South Africa, accounting for 44% of consumption. Mining and residential customers each account for 18% of demand, with another 9% going to commercial customers. Residential consumption is experiencing the fastest growth due to the country's success with rural electrification. Having more residential consumers connected to the grid has in turn heightened demand during peak periods and has had the biggest effect on the shape of the country's load profile (Internet 16).

A problem with the distribution system is that prices do not accurately reflect relevant costs and a differentiated pricing system is in use. The prices consumers are charged for electricity vary greatly across consumer class and are not closely related to the costs associated with servicing those markets. For example, mining operations pay from 9 to 17 cents per kWh in Gauteng province, and anywhere from 23 to 32 cents per kWh in Mpumalanga province. Average distribution costs (including purchased energy) range from 23.9 cents per kWh for distributors of less than 1 gigawatt-hour (GWh) in annual sales to only 13.4 cents per kWh for distributors of more than 1,000 GWh in annual sales, a 46% difference in costs. At distribution level there are approximately 2000 different tariffs (Internet 16).

5.5.2 Perceived Value

An analysis of those dimensions of strategy most valued by the South African consumers is as follows: the industrial and commercial users value reliability, price and energy efficiency, whilst the residential consumers value price, accessibility and quality.

5.6 COMPETITOR ANALYSIS

The South African electricity supply industry presently does not have any dominant players other than Eskom and the municipalities. However, it should be noted that Electricite de France, AES Corporation and Siemens have established themselves in the rest of Africa. With the introduction of competition in the South African Electricity Supply Industry, these huge multinational corporations could be potential entrants (Internet 16).

Other competitors in the South African Energy Sector include coal, nuclear, gas and solar.

COAL

South Africa's indigenous energy resource base is dominated by coal. Many of the deposits can be exploited at extremely favourable costs and, as a result, a large coal mining industry has developed. The country ranks as the world's fifth largest coal producer. In addition to the extensive use of coal in the domestic economy, large amounts are exported, South Africa being the second-largest exporter of steam coal.

South Africa's coal comes from collieries ranging from among the largest in the world to small-scale producers with output in the range of 5 000 to one million tons per month. With mergers and purchases, operating collieries were reduced to 55 in 1998. Of these, a relatively small number of large-scale producers supply coal primarily to the electricity and synthetic fuel producers.

South African coal for local electricity production is among the cheapest in the world. Thirty percent of raw coal mined for the export market and between 15% and 25% of the raw coal mined for local demand (excluding power-station coal) is not marketable and therefore discarded. Total discards could reach 2 300 Mt by the year 2020 and, as a result, ways are being investigated to make use of them (Internet 16).

NUCLEAR POWER

South Africa has one nuclear power station in operation. The Eskom nuclear power station, Koeberg, is located in the Western Cape and operates two PWR reactors of 1 840 MW. Eskom is developing a fail-safe and highly efficient nuclear technology called the pebble bed modular reactor (PBMR). This technology is exceptionally safe and cost-effective, and promises to have a significant positive impact on the national economy. Nuclear power remains one of the possible options once low-cost coal reserves become depleted (Internet 16).

GAS

During 1999 South Africa produced about 1 616 462 tons of natural gas and 300 886 tons of condensate liquid fuels in addition to coal gas and liquid petroleum gas. The entire output is dedicated to the State-owned Mossgas liquid fuels synthesis plant and accounts for about 1.5% of total primary energy supply. Gas manufactured from coal accounts for 1.2% of net energy consumption and liquid petroleum gas accounts for about 0.5%.

Natural and coal gas play separate roles in the energy system, with natural gas being used solely as a feedstock for production of synthetic fuels and coal gas as an industrial and domestic fuel. However, current development of regional gas fields will most probably lead to natural gas becoming a more important fuel in South Africa.

Through the Sasol Gas Division, Sasol Oil markets industrial pipeline gas produced by Sasol Synthetic Fuels and Sasol Chemical Industries to about 700 industrial customers. Its distribution network consists of about 1 500 km of underground pipelines. These customers are mostly in the greater Johannesburg-Pretoria region, as well as the industrial areas of Witbank-Middelburg and Durban. Most of the remaining 10% of gas sales in South Africa is on-selling of Sasol gas by Metrogas in Johannesburg, which owns 1 300 km of distribution pipe and supplies 12 000 domestic and 3 000 industrial customers.

Metrogas is in the process of being privatised. Industrial customers use 87% of the gas and domestic consumers the rest. The supply of cost-competitive pipeline gas is complemented by the fuel oils department's range of low-sulphur residual and distillate fuel oils derived from coal and other synthesised forms, as well as crude oil (Internet 16).

SOLAR ENERGY

Most areas in South Africa average more than 2,500 hours of sunshine per year. Average daily solar radiation levels range between 4.5 and 6.5 kilowatt hours (kWh) per square meter. The annual 24 hour global solar radiation average is about 220 watts per square meter for South Africa, compared to about 150 watts per square meter for parts of the United States and about 100 watts per square meter for Europe. A solar equipment industry has begun to take root in South Africa; annual photovoltaic panel assembly capacity totals 6 MWe and a number of companies manufacture solar water-heaters (Internet 16).

5.7 ANALYSING CORE COMPETENCIES

South Africa has been recognised globally as having one of the most cost effective electricity energy solutions and for pioneering new technologies to support economic growth. A number of these South African companies are expanding their footprints into Africa to assist the continent in realising economically viable solutions that are sustainable and provide both economic and social upliftment platforms for emerging economies (internet 17). Core competencies in the new de-regulated market would include innovative processes to enhance efficiency, low cost generation processes; distribution would require reliable delivery and good service. Also, energy trading skills would become critical.

5.8 SWOT Analysis

The SWOT analysis focuses on socio-political, economic, technological, and environmental factors in South Africa as they impact on the sector.

Strengths

- South Africa has a strong natural resource base and a variety of energy options are available. South Africa has extensive coal resources and Eskom's generation strategy and technology resulted in one of the world's lowest cost producers of electricity. The natural resources include:

- Abundant coal reserves of more than 200 years at the present rate of consumption, although the quantification of reserves versus grade is uncertain;
 - Indigenous uranium reserves, and
 - High solar radiation.
- A well-developed energy, rail, road, and grid infrastructure. An established research and educational infrastructure supports this.
- An electrification programme that is delivering infrastructure and electricity to previously disadvantaged communities. The following has been achieved:
 - Grid extension to remote areas and regions.
 - A rate of approximately 400 000 household connections per annum.
 - Export of electrification skills and technology.
 - Low-cost solutions that make it more affordable for low-income consumers.
- The benefits of economies of scale. Large companies with low-cost and appropriate technologies exist. Home-grown technologies have been developed successfully. This was partially due to the following:
 - Large and strong institutions in the private and public sector.
 - Finance that was available to these institutions at reduced cost because of their good credit rating.
 - Large companies with access to resources that undertook appropriate research and development (R&D).
 - A spirit of accepting challenged existed, with companies prepared to take risks that were supported by a national political will.
- South Africa has a well-developed core skills base. They are focused on the following:
 - Operation and maintenance of a sophisticated plant.
 - Project management of large projects.
 - Implementation levels.
 - The supply side of the energy chain.
 - The existence of multidisciplinary skills.

Weaknesses

- There is a limited national policy and vision for energy research and technology development.
- The energy industry has a supply side mentality and is not market-focused. The following are some of its characteristics:
 - Energy suppliers are strong.
 - Strong groups influence policy makers.
 - Equipment is mainly imported and only limited local manufacture exists.
 - Financiers, consultants, and education are mainly focused on the supply of energy.
- The economy is dependent on polluting, primary energy sources (fossil fuels) that have a significant environmental impact. This leads to a poor international perception and image, which is mainly due to:
 - coal being largest polluter;
 - leaded fuels still dominating the market;
 - paraffin not always being used effectively;
 - wood-fuel pollution, especially inside dwellings; and
 - little attention being given to end-use energy efficiency and renewable energy development, especially matters relating to implementation.
- Insufficient local energy related R&D expertise exists that lead to a dependency on imported technologies. This is evident from:
 - The low number of scientists, engineers and technologists (SET) in the energy and related fields;
 - A shortage of skilled manpower and the incorrect application of the few SETs in the energy sector; and
 - Institutional inefficiencies in the system.
- A lack of knowledge about the needs and technologies in the energy environment. The statistics and information in the sector is poor or lacking in detail. Some of the characteristics are the following:
 - Awareness of energy and appliance options by users is low.

- The level of competitiveness in the sector is low.
- The dissemination and capturing of appropriate information is ad hoc.
- Limited or low value-addition to resources takes place. The low beneficiation is evident from:
 - a focus on raw material and semi-processed materials production;
 - the fact that the economy has a high energy intensity;
 - the fact that the economic efficiency of production is low;
 - the fact that limited export of refined products takes place.
- Governmental capacity in the energy sector is limited. Some of the characteristics are the following:
 - Lack of adequately qualified people.
 - Lack of process knowledge.
 - Lack of strategic thinking and prioritisation in the energy sector.
 - Policy gaps and poor implementation of policy in parts of the energy sector.
- Lack of regulation that stimulates competition and higher efficiency such as in some other countries.
- Huge barriers to entry for new entrants and entrepreneurs in the energy sector. This is mainly due to the following:
 - Lack of suitable and reliable information.
 - High cost and knowledge that is required to enter the market.
 - Lack of technology and technology transfer being available to entrepreneurs.
 - Structure and regulation efficiency prohibiting new entrants.
 - High cost of capital.
 - Uncertainty of future policy.
- Energy prices are not cost- or market-related, which leads to non-sustainability of the national electrification programme because of :
 - hidden cross subsidies, across and within the electricity sector;
 - the fact that the planning and funding process is not transparent;
 - wrong technology choices that could be made.

- Barriers to large-scale implementation of new, renewable and efficiency technologies because of vested interests of organisations, cost structure and cultural acceptability.
- Infrastructure in rural areas is not well developed.
- The distribution sector of the industry is highly fragmented, with more than 400 distributors, resulting in low efficiencies, high costs, wide disparities in tariffs, and financial viability problems in many distributors.

Opportunities

- The availability of natural resources adds value to the country and the region. This could also apply to energy resources such as coal, uranium, sun, and wind.
- The improvement of quality of life can be achieved by utilising energy technologies for job creation, rural development, equity improvement, and SMME development.
- Energy efficiency improvements can be achieved throughout the energy chain, i.e. conversion, transport, and end-use technologies. Integrated energy planning with a focus on economic efficiency will lead to more efficient housing, transport, appliances, manufacturing, etc.
- Renewable energy technologies such as solar and biomass have significant growth potential in South Africa and the region.
- Environmental pressure for pollution reduction internationally could lead to funding and technology transfer opportunities for South Africa.
- New distribution generation technologies and opportunities will become available.
- The regional and international integration of markets, R&D, etc. would increase access to funds, technology, etc.
- The development of a national and regional gas infrastructure is anticipated.
- Approximately 40% of all homes in South Africa, and tens of thousands of schools and clinics, are without ready access to an electricity supply.

Threats

- The level of poverty is high and it could worsen if the low economic growth and a low rate of development continue.
- The spiral of non-payment and non-delivery could continue. Ongoing non-payment for services, rates and taxes places a question mark behind the potential success of electrification, housing, water provision and other programmes.
- Slow technological development in South Africa and a lack of appropriate technological skills would have a significant impact on the energy sector. A lack of sufficiently trained workforce to produce globally competitive manufactured goods would also lead to lower growth in the country. The situation is exacerbated by:
 - A small pool of skills in the country; and
 - A brain drain of many skilled people.
 - The low level of funding and a lack of appropriate incentives for research and technology development. A declining trend has emerged in an already small R&D expenditure.
- Taking into account the limited resources, a lack of focus exists in technology development. A continued dependence on external sources may continue as limited technological development is done in critical areas.
- The costly delivery of energy to some consumers because of inappropriate policies. In rural areas, supply could become very uneconomical for certain energy types. This is caused by costly infrastructure development, low population densities, low consumption and affordability of certain energy types, incorrect pricing policies, etc.
- There is a poor perception of the characteristics of renewable energy sources by consumers and a resistance to change.
- The environmental burden of the current energy system is high and this should influence future energy decisions, i.e. comparing the impact of coal, nuclear, renewables, etc. Indoor pollution due to coal burning still has a major impact on the health of a large number of South Africans and must be

addressed. Stricter environmental legislation by South Africa's major trading partners could lead to carbon taxes being placed on manufactured products utilising fossil fuels as a source of energy.

- Poor policy, strategy, and legislation lead to over regulation of industry. The lack of policy and policy implementation in the energy sector continues. A policy framework for rapid economic development has been put in place in the form of Government's macro-economic strategy called Growth, Employment, and Redistribution (GEAR), but this is not implemented rigorously.
- Mass urbanisation and overpopulation lead to high population densities that cannot be serviced because of limited resources. Rapid population growth accompanied by poor rates of economic growth, or even civil unrest in the Southern African countries, could lead to a large-scale migration to South Africa.
- The electricity distribution industry continues to experience high levels of non-payment and electricity theft, resulting in increasing arrears and payment defaults. Municipal electricity departments are expected to make a contribution towards the funding of other municipal services, particularly in the major urban areas, but are also faced with the burdens of non-payment and the need for significant expenditure on electrification.
- In some cases electricity is used inefficiently, perhaps because of a consumer perception that electricity is cheap, thus wasting scarce energy and capital resources.
- Although growth in electricity demand is only projected to exceed generation capacity by approximately the year 2007, long capacity-expansion lead times require strategies to be in place in the mid-term, in order to meet the needs of the growing economy.

5.9 EVALUATION OF STRATEGIC CHOICE

The strategic choice to transform the South African electricity supply industry is discussed by using the SWOT Matrix, Industry Lifecycle, Generic Strategies, Grand Strategies and Model of Grand Strategy Clusters.

5.9.1 SWOT MATRIX

From the SWOT analysis it was found that there were numerous critical weaknesses, many environmental threats and policy changes. South Africa could use some of the unique opportunities present in its environment and its strengths to make the South African Electricity supply industry a success story.

When the SWOT analysis is applied to the SWOT Matrix as per section 2.7.1, it can be seen that the many environmental threats and numerous critical weaknesses places the South African ESI in Cell 4. This situation is unfavourable and supports the defensive strategy. Hence a redirection of resources within the industry is appropriate.

5.9.2 Industry Lifecycle

The ESI is in a shakeout (late growth or early maturity) phase as:

- There is slow growth in the industry .
- There is growing selectivity of buyers who want better quality at a lower cost.
- Competitors offering alternate energy sources are entering the market.

Firms in such industries should carry out strategic reassessment, therefore the strategic reassessment and restructuring of the ESI is appropriate.

5.9.3 Generic Strategies

Companies in the South African ESI are currently following a low cost strategy.

This strategy is supported by:

- A large supply of low cost coal
- All costs being passed onto the customer due to the monopolistic nature of the industry
- Electricity suppliers receive government subsidies and Eskom does not pay taxes

However this strategy may not be sustainable in the long-term as a result of:

- Coal reserves running out
- Customers are becoming increasingly demanding. Customers want better quality at lower cost
- Government cannot sustain the subsidies
- Eskom will be required to pay taxes
- Increased competition in the new de-regulated market

5.9.4 Grand Strategies

Organisations in the South African electricity supply industry followed vertical and horizontal integration grand strategies. These strategies provided a basic direction to overcome weaknesses and maximise strengths with an external emphasis. However, due to the complex and dynamic environment these strategies have failed the industry. The South African Government has correctly decided to follow turnaround and divestiture grand strategies so as to overcome weaknesses internally. This involves the introduction of competition in the failing monopolistic electricity supply industry and selling off parts of the industry to ensure sustainable financial viability.

5.9.5 Model of Grand Strategy Clusters

The horizontal and vertical integration strategies employed by Eskom and some of the municipal electricity distributors were previously appropriate. Eskom and the municipalities enjoyed a strong competitive position as a result of their monopolistic hold over the industry and customers in a rapidly growing market. However, the market growth rate declined; poor financial control, managerial incompetence, theft, non-payment and other socio-economic reasons resulted in the failure of these strategies. With weakening competitive position and a decrease in market growth rate, the decision by the South African Government to turnaround the industry and sell off its assets is appropriate.

5.10 STRATEGIC EVALUATION

In order to assess the circumstances of the South African electricity supply industry, various strategic tools and techniques were employed. These included examining the vision and objectives of the industry, its nature and environmental circumstances, competitive environment and a SWOT analysis. The data was then applied to the SWOT Matrix, Grand Strategy Matrix and the Model of Grand Strategy Clusters. The industry lifecycle and generic strategies were also examined. It was found that the decision to turnaround the industry and sell off its assets was suitable to overcome weaknesses inherent in the industry. The opportunity of attracting foreign direct investment, encouraging black empowerment and meeting Government's socio-economic objectives would also be facilitated by the strategies to be adopted.

5.11 CONCLUSION

From the strategic analysis it was found that the fragmented South African electricity supply industry is complex and dynamic. The dominant players in the industry are Eskom and municipal electricity distributors. There is minimal competition from alternate energy sources such as solar, coal, nuclear and gas. The industry is in the shakeout phase of its lifecycle. Customers of the electricity supply industry value, cost, reliability, and quality of supply and energy efficiency.

However, with the introduction of competition in the electricity supply industry, there will be increased competition from the suppliers of generic substitutes. Competition will become intense as competitive rivalry increases. Core competencies in the new market will include innovative processes, reliable delivery, good services, financial benefits and risk management. On application of the strategic choice models it was found that the decision to restructure the industry is appropriate and the evaluation of the strategic choice showed that the restructuring of the electricity supply industry is appropriate.

Eskom is one of the top seven utilities in the world in terms of size and sales. The South African Government should maintain this position by adopting strategies that strengthen its ability to react to changing requirements, while embracing flexibility to deal with uncertainty.

The next chapter will provide a conclusion to the study and will also make recommendations for a smooth transition to increased competition in the industry.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

South Africa boasts a modern electricity supply industry that is equal to the best in the world. This, together with the availability of cheap coal, enables the country to produce electricity at a cost that is one of the lowest in the world. Yet, as South Africa enters the new millennium, the majority of South Africans in disadvantaged communities do not have access to electricity. The beginning of the new millennium signals the end of an era and the beginning of a new era in the electrification of South Africa. The new era entails an emphasis on the optimal use of available resources by transforming its monopolistic electricity supply industry to one with increased competition and choice.

The aim of this study was to determine whether the strategic decision to transform the South African electricity supply industry is appropriate. It also described models used in electricity supply industry restructuring internationally and determined which model could be used to gain sustainable competitive advantage in South Africa.

This chapter provides a conclusion to the study and makes recommendations.

6.2 CONCLUSION

From the strategic analysis it was determined that the South African electricity supply industry is dynamic, complex and uncertain in nature. It is a highly fragmented industry facing severe financial, economic and managerial decline. Presently there is minimal competition from alternate energy suppliers like coal, gas, solar and nuclear energy. The customers value reliability, price, quality, energy efficiency and accessibility. The power of buyers and suppliers are both high, the threat of substitution and competitive rivalry is minimal. The ESI is in a shakeout phase, hence the strategic reassessment and restructuring is appropriate.

Based upon the application of the SWOT matrix, it can be assumed that the defensive redirection of resources within the electricity supply industry is appropriate. However, the organisations within the ESI, should eliminate the weaknesses that are constraining them and take advantage of the numerous opportunities present (as per cell 3). Therefore a turnaround-oriented strategy would be appropriate so as to effectively pursue market opportunities and realise sustainable socio-economic gains.

The South African electricity supply industry is currently following a low-cost strategy. This strategy allows the organisations to become the lowest cost producers and places emphasis on minimising costs in the entire value chain. However, this strategy alone will not be sustainable in the long-term. To ensure success and competitive advantage, organisations will have to adopt a combination of a low cost and differentiation strategy. This should satisfy customers who value reliability, price, quality, energy efficiency and accessibility. The combination of low cost and differentiation strategies will also enable organisations in the new de-regulated market to focus on cost reductions, efficiencies and customer focus, thereby defending them from increased competition.

The horizontal and vertical integration grand strategies have proven to be unviable for the South African electricity supply industry. The government is therefore appropriately following turnaround and divestiture grand strategies by unbundling the industry and introducing competition. Other options available to the South African electricity supply industry include joint ventures, concentrated growth, market and product development.

- Joint ventures would assist in maximising strengths with an external emphasis. It can be used to increase resources by attracting foreign direct investment and promoting black empowerment initiatives.
- Concentrated growth, innovation, market and product development would allow for the maximisation of strengths with an internal emphasis.

- Concentrated growth may be employed to satisfy the suppressed demand for low cost electricity.
- Market development may also be adopted to increase sales of electricity in new geographic markets and attract other market segments.
- Product development may be adopted so that existing companies may benefit from their reputation and sell related products. There is also the opportunity for expansion into non-grid electrification.
- The innovation grand strategy would be critical for organisations in the new competitive environment. It would allow organisations to continuously offer new and improved products and services thereby satisfying the increasing demands of customers.

Based upon the Model of Grand Strategy Clusters, it was found that the South African Government correctly decided to turnaround the industry and sell off its assets (divestiture) as the competitive position of the organisations had weakened and the market growth rate slowed down. The unbundling of previously integrated organisations and the sale of assets may help in attracting much needed foreign and local investment in the industry. The organisations in the new de-regulated industry should adopt joint ventures with multi-national companies so as to gain resources and knowledge. This would facilitate a strengthening of competitive positioning and perhaps enable the South African Government to meet its socio-economic objectives.

It may be concluded that the South African Government has appropriately decided to restructure its monopolistic electricity supply industry to one with increased competition. South Africa has decided to adopt the wholesale competition model. This would result in competition becoming intense. Barriers to entry and the power of suppliers would decrease. Generic substitution and competitive rivalry would increase. Pricing and differentiation will become key strengths for organisations in the industry. Competencies in the new de-

regulated industry would include innovative processes, reliable delivery, good service, financial benefits and risk management.

The requirements for competition to work in the wholesale power market include:

- Careful design of market rules and price regulation, in the spot markets for wholesale power, to allow participants to manage their trading risks efficiently.
- Adequate capacities to meet demand without experiencing supply constraints (generation, transmission, fuel, etc.). The market must provide signals and incentives for investment in new generating capacity when needed. These can be provided by various means, such as imposing a capacity obligation on distribution companies purchasing power in the market, setting up a parallel capacity market to the energy spot market, or developing a forward energy trading market whose prices signal expectations about future supply/demand balances.
- Investors in new supply capacity should not face major barriers to entry to the wholesale power market. These barriers include uncertainty and expense in facing delays to the permitting process, regulatory uncertainty about after-the-fact price reviews, and regulatory constraints on managing trading risks efficiently by means such as hedging instruments.
- Market design should be firmly guided by sound economic principles. The design of a competitive power market is too complex and delicate to be dominated by heavy political compromises that are intended to shield stakeholders from the consequences of the reform.
- Trading arrangements in a wholesale power market should be introduced carefully to provide scope for dealing with design flaws as well as settling-in problems.

Wholesale competition would provide more buyers for the generators, making the market more competitive and dynamic. Market and technology risk would be pushed back to the generators making them more competitive and alleviating some of the associated costs being passed onto the customers. Non-generation

related social policy objectives such as rural electrification and low-income assistance would still be possible. However, it should be noted that the model is unstable as pressures force a change to retail competition. The wholesale and retail competition models carry with it high transaction costs. The obligation to supply and demand side management would not be possible in the open competitive market.

It is therefore recommended that South Africa should first adopt the single-buyer model as it provides the following advantages:

- There will be improved capital expenditure decision making, as generators will be forced to bear the risk of construction and operation.
- It avoids the high transaction costs associated with other forms of competitive models.
- Socio-political objectives such as low cost electrification, subsidies to producers and low-income assistance can be practised.
- Capital and resources may be conserved as competitive bidding forces the identification of low cost energy sources.

It should however be noted that with the single buyer model, discrimination between generators is possible and would require monitoring. South Africa should also rationalise its tariffs, develop the required skills for free and open competition, develop necessary capacity (infrastructure and human resources) before introducing wholesale or retail competition.

6.3 RECOMMENDATIONS

Some of the lessons that South Africa may learn from international experience include:

- Getting the structure of the market right is the first and most crucial step in restructuring the ESI. According to Binz and Frankena (1996), "If legislators do not get market structures 'right' as current restructuring plans are being developed, it is unlikely they will have an opportunity to go back and fix structural problems at a later date." Eskom will still wield the

majority of market power, which will insulate it from the threat of competition. The 30% private sector participation is certainly not sufficient to provide an antidote to abuse and does no justice to effective competition. Furthermore, there will be institutional barriers to entry, preventing further entry by independent power producers for a certain period of time. If restructuring is to be done, it should be done properly; otherwise changing the status quo of the industry will not fully achieve, the desired outcomes.

- There must be coherence in market design across the whole value chain. The Indian Government has identified quite correctly that reform in the retail sector, in particular with respect to payments systems, is a pre-requisite for attracting investment into generation and transmission. Pricing in the wholesale market needs to be linked to pricing in the retail market. In California, this was not done on the assumption that wholesale prices would fall. With demand rising strongly and supply constant because of permitting restrictions, wholesale prices rose. Retail prices were pegged, however, thus protecting consumers from price signals that might have moderated consumption and bankrupting several utilities.
- Market design should be kept as simple as possible to achieve the chosen objectives. Complexity is the friend of the market manipulator. In particular, pricing timeframes should be simplified (dispatch needs to be real time, but pricing does not). Blending regulated and competitive elements can help simplify design and a regulated market may be the best solution in some situations, especially in immature markets like the South African market. Competitive pressure, even in limited areas, may still be useful.
- Prices must be allowed to reflect cost and the supply and demand balance so that there are price signals to attract investment and

stimulate the development and use of risk management products. This means their needs to be price volatility.

- The ESI restructuring has succeeded, e.g. in the UK, is the presence of two or more equal-sized competitors and a few small players to start with. Here the market has been opened up gradually. This reinforces the viewpoint that effective competition at the beginning of the process is paramount.
- Successful restructuring needs to be undertaken against the background of excess generation capacity. This is done in order to contain price increases and enhance consumer welfare. Excess capacity is running out in South Africa. The market system, as envisaged, may still work, but it may not produce the desired benefits of lower prices for consumers. Government has indicated that independent power producers and not Eskom should install new generation capacity. Considering the long lead-times needed for such investments, and the lack of interest by private investors at this stage the only plausible option would be to put the generation of new capacity up for tender.
- The policy focusing on the supply side of energy faces obstacles due to strengthened international energy regulations and local residents' opposition to the siting of new energy supply facilities. As a solution to this issue, it is urgent to manage the demand side, thereby realising a less energy-consuming economy.
- The presence of gas is a very close substitute for electricity. South Africa has begun the exploration for gas in Mozambique and Namibia. These efforts should be encouraged, as they will strengthen competition. The viability of gas as an alternative source of energy will depend on its cost advantages relative to coal.

- The Government should carry out different restructuring in each energy industry according to the characteristics of the industry so that the efficiency of the energy market can be maximised and the public interest in the energy industry can be considered. The South African Government should take into consideration the following:
- Restructuring should be carried out gradually in stages, considering the effects on the national economy.
 - The direction and schedule of restructuring should be provided so that the energy sector can prepare for the changes.
 - The autonomy and creativity of market participants should be respected.
 - Harmonisation between interests of energy industries and the whole energy system should be considered.
 - Regulatory efficiency is extremely important. Reasonable independence from the political process and transparency are also critical to attracting investment. Above all, investors want predictability.
 - The regulator should make the obligation to meet electrification targets part of the licensing requirements for REDs. In a restructured energy sector, the priority given to rural electrification needs to be maintained.
 - An institutional home for public benefit energy efficiency needs to be found. Alternative options should be explored for the financing of public benefits, including dedicating Eskom taxes and dividends to fund social programs.
 - Government must follow a transparent process of funding of future energy investments. An effective IEP process is critical for the holistic consideration of different supply- and demand-side options, and should include public participation. NGOs, unions and other civil society

organisations should lobby for effective mechanisms of representation in the ESI.

- Distributors should be required by the regulator to invest a minimum percentage in energy efficiency.
- Public interest research capacity needs to be maintained under restructuring. Such research needs to be located in independent institutions that can carry out research in the public interest, so that research and development is driven not only by commercial interests. Important aspects would include environmental and social benefits. The research capacity should be publicly funded.
- When and if retail competition is introduced in South Africa, the possibilities of developing 'green power' markets should be explored.

REFERENCES

Abell, D. 1999. Competing today while preparing for tomorrow, Sloan management review, Spring.

Andrews, K. 1987. The concept of corporate strategy, Irwin: Homewood.

Babbie, E. 1998. The Practice of Social Research. 8th Ed. Belmont:Wadsworth.

Benefits & Deficiencies of Energy Sector Liberalisation, World Energy Council, 1998

Binz , RJ & Frankena, MW. 1998. Addressing market power. The next step in electric restructuring. Competition Policy Institute. Policy Paper.

CEF 2000. Newsletter November 2000. Clean Energy Finance 5 (1).

Chalmers, R. 2001a. Eskom net profits hit by R1,5bn tax provision. Business Day. 5 April.

Chalmers, R. 2001b. SA must get it right first time. Business Day.17 July.

Chalmers, R. 2001c. SA needs to invest in the generation of its electricity. Business Day.12 July.

Chalmers, R. 2001d. State outlines its plans for power sector. Business Day. 28 May.

Chalmers, R 2001e. State puts Eskom privatisation on the back burner. Business Day. 4 July.

Chandler Jr, A.D. 1962.Strategy and structure: chapters in the history of the American industrial enterprise, MIT Press: Cambridge, MA.

City Press 2001. SACP, Cosatu won't budge. City Press.29 July.

Clark, A . 2000. Demand-side management in restructured electricity industries: An international review. Energy & Development Research Centre, University of Cape Town.

Clark, A . 2001. Implications of power sector reform in South Africa on poor people's access to energy: Lessons for Africa. Proceedings of the African high-level regional meeting on energy and sustainable development for the ninth session of the Commission on Sustainable Development, Nairobi, United Nations Environment Programme.

Clark, A & Mavhungu, J 2000. Promoting public benefit energy -efficiency investment in new power contexts in South Africa. Energy & Development Research Centre, University of Cape Town.

Cooper, D.R. and Schindler, P.S. 2001. Business Research Methods.7th Ed. Boston:McGraw-Hill.

COSATU 2001a. Action steps up against Eskom Conversion Bill. Press statement 15-06-2001,

http://www.cosatu.org.za/press/2001/Anti-privatisation_campaign--29818.html.

COSATU 2001b. Eskom Conversion Bill. Press statement 31-05-2001,

http://www.cosatu.org.za/press/2001/Eskom_Conversion_Bill--29005.html.

Davidson, W. (1993), "Beyond re-engineering: the three phases of business transformation", IBM Systems Journal, Vol. 32 No. 1, Winter, pp. 65-79.

Devers, K.J. December 1999. How Will We Know "Good" Qualitative Research When We See It? Beginning the Dialogue in Health Services Research. [online]. Available from http://www.findarticles.com/cf_0/4149/5_34/58451870/print.jhtm. Accessed 28/11/2002.

DME (Department of Minerals and Energy) 1998. White Paper on Energy Policy for South Africa. Pretoria, DME.

DME (Department of Minerals and Energy) 2000. Background research on renewable energy independent power production, South Africa. Supported by DANCED. Pretoria.

DPE (Department of Public Enterprises) 2000. Eskom Conversion Bill. Government Gazette, Vol. 424, No. 21628, 13 October 2000. Pretoria.

Eberhard, A 2000. Competition and regulation in the electricity supply industry in South Africa. Paper for the Competition Commission. University of Cape Town.

Electricity Market Design and Creation in Asia Pacific, World Energy Council, 2001

Ellman, M J & Alberts, E 1999. Integrated Electricity Planning (IEP) in Eskom. Sandton, Eskom.

Energy Daily, 18 July 2002

Energy Daily, 23 July 2002

Energy Intensive Users Group 2000. The EIUG gives its view on ESI restructuring. Electricity Regulatory Journal (October 2000): 4-5.

Ensor, L. 2001. Eskom wins support for big tariff hikes. Business Day. 10 May.

Eskom 1985. Annual Report 1985. Sandton, Eskom.

Eskom 2000a. Annual Report 2000. Sandton, Eskom.

Eskom 2000b. Environmental report: Towards sustainability. Johannesburg, Eskom.

Fine, A .2001. Cape City Council to fight electricity plan. Business Day. 1 June.

Graniere, B. 2001. What must be learned from California? *Electricity Regulatory Journal* (April 2001): 4-6.

Grant, Robert M. "The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation." *California Management Review*, Volume 33, Number 3 (Spring 1991): 114-135.

Hunt, Sally and Graham Shuttleworth, "Competition and Choice in Electricity," New York: John Wiley & Sons, 1996.

Ghuri, Pervez & Gronhaug, Kjell & Kristianslund, Ivar (1995). *Research Methods in Business Studies; A Practical Guide*. 162. Prentice Hall, New York.

Internet 1: www.mvcc.edu/jkimball/papers

Internet 2: www.dis.unimelb.edu.au

Internet 3: www.lemberg.com/secretofstrategy

Internet 4: www.student.mikkeli.amk.fi/eng/studiescounselling/materials

Internet 5: www.tutor2u.net/business/strategy

Internet 6: www.managerialdesign.com/planning

Internet 7: www.themanager.org/models/diamond

Internet 8: www.quickmba

Internet 9: www.mmd.eng.cam.ac.uk

Internet 10: www.caer.uky.edu/iea/ieacc21.htm

Internet 11: www.pretoria.mfa.no/cgi-bin/wbch3

Internet 12: www.mmc.com/views/97winter.hunt.shtml

Internet 13: www.tips.org.za/events/f2001/Eberhard

Internet 14: www.eskom.co.za/about/companyinformation/ner

Internet 15: <http://www.energypublicbenefits.com>

Internet 16: <http://www.fe.doe.gov/international/safrover.html>. Infrastructure

Internet 17: <http://www.esi.co.za/awards/conlog.htm>)

Johnson, G. and Scholes, K. "Exploring Corporate Strategy". 1984. Prentice-Hall, Englewood Cliffs, NJ

Leedy, P.D. and Ormrod, J.E. 2001. Practical Research: Planning and Design. 7th Ed. New Jersey: Prentice Hall.

Lewin, K. (1951) 'Field Theory in Social Science', Harper and Row, New York.

Lünsche, S 2000. Govt announces electricity plans. Business Day.3 November.

Markides, C.1997. Strategic innovation, Sloan management review, Spring.

Maslen R. Platts K.W. (1994) 'Force Field Analysis: A Technique to Help SMEs Realise their Intended Manufacturing Strategy', in Operations Strategy and Performance, 1st European Operations Management Association Conference, University of Cambridge, June, pp.587-588.

Mintzberg, Henry. "Crafting Strategy." Harvard Business Review. 65 no. 4 (July-August 1987): 66-75.

Mintzberg, Henry "Five Ps for Strategy" in The Strategy Process, pp 12-19, H

Mintzberg, Henry and JB Quinn eds., 1992, Prentice-Hall International Editions, Englewood Cliffs NJ.

NER (National Electricity Regulator) 1999. Electricity supply statistics for South Africa 1999. Sandton, NER.

NER (National Electricity Regulator) 2001. EDI restructuring update. Electricity Regulatory Journal August 2001: 1-3.

Patton, M.Q. 1999. Enhancing the Quality and Credibility of Qualitative Analysis. [online]. Available from http://www.findarticles.com/cf_0/m4149/5_34/5851871/print.jhtm. Accessed 04/04/03.

Porter, M.E, 1979 Mar/Apr, 'How competitive forces shape strategy', Harvard Business Review.

Porter, M.E, 1980, "Competitive Strategy: Techniques for Analysing Industries and Competitors". The Free Press.

Porter, M.E, "Towards a Dynamic Theory of Strategy", Strategic Management Journal 1991, vol. 12, 95-117.

Prahalad, C.K. and Hamel, G. 1990. "The Core Competence of the Corporation". Harvard Business Review, May-June, pp. 79-91.

Pricing Energy in Developing Countries, World Energy Council, June 2001

PWC (PriceWaterhouseCoopers) 2000. Consolidated emerging views. Electricity distribution industry restructuring project: Working paper 7. Johannesburg.

Ragin, C.C. December 1999. The distinctiveness of Case Oriented Research. [online]. Available from http://www.findarticles.com/cf_0/m4149/5-34/58451869/print.jhtm. Accessed 09/11/2002.

Reddy, A.K.N. 2001. The California energy crisis and its lessons for power sector reform in India. Bangalore, International Energy Initiative.

Rosen, R, Stutz, J. & Sverrisson, F 2001. The progressive pro-consumer solution to today's electricity crisis: Just and reasonable rates. Boston, Tellus Institute.

Spalding-Fecher, R, Clark, A, Davis, M & Simmonds, G 1999. Energy efficiency for the urban poor: Economics, environmental impacts and policy implications. Energy & Development Research Centre, University of Cape Town.

Steyn, G 2000. A competitive electricity market for South Africa: The need for change and a strategy for restructuring South Africa's electricity supply industry. Pretoria, for the Department of Minerals & Energy.

Thomas J. (1985) 'Force Field Analysis: A New Way to Evaluate Your Strategy', Long Range Planning, Vol. 18, No. 6, pp. 54-59.

Whitehead, H 2000. Restructuring in the EDI in South Africa: A local government perspective. *Electricity Regulatory Journal* May 2000: 6-8. National Electricity Regulator.

Winkler, H & Mavhungu, J. 2001. Green power, public benefits and electricity industry restructuring. Energy and Development Research Center, University of Cape Town.

Winkler, H. 2001. *Energy-efficiency in low-cost housing: Costs and benefits of global and local externalities*. Paper presented at the Domestic Use of Energy conference, 10-12 April 2001, Cape Town, Cape Technicon.

Xundu, X. 2001. Reforms ignore local governments. *Business Day*. 18 June.

Yelland, C 2000. EDI restructuring shaping up. *Electricity Regulatory Journal* July 2000: 1-3. National Electricity Regulator.

Yin, R.K. December 1999. Enhancing the Quality Of Case Studies in Health Services Research [online].

http://www.findarticles.com/cf_0/m4149/5_34/58451872/print.jhtm Accessed 08/05/2003.