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# **Evaluation of the Strategies of Smiths Manufacturing, a South African Automotive Component Manufacturer**

**By**  
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## **CONFIDENTIALITY CLAUSE**

The information contained herein is proprietary & confidential. This dissertation is embargoed for a period of five years, as it contains information concerning strategic issues pertaining to Smiths Manufacturing (Pty) Ltd.

## DECLARATION

I, A. Rathakrishnaiyar, hereby declare that this work is my own original work. This dissertation is the representation of my thoughts, independent work and investigation, except where otherwise indicated. This work has not previously been submitted for any degree and is not being submitted in candidature for any other degree.

Signed: .....  .....

Dated: ..... 10/08/2006 .....

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## **ABSTRACT**

This research evaluates the strategies being pursued by Smiths Manufacturing a South African automotive component manufacturer in order to determine their appropriateness given the changing external environment. World economies are becoming more integrated and the increasing trend of globalization has elevated the markets into a hyper-competitive era. Consequently, the competitive landscapes are constantly changing and manufacturing firms need to monitor this environment continuously to be able to adapt to the changes. The research commences with a brief outline and defines the objectives of the study. This is followed by theoretical discussions that are centred on strategic models and concepts which are applicable to this research.

The case study is based on Smiths Manufacturing. Global automotive trends are identified. The main trends being that Original Equipment Manufacturers (OEMs) are looking to outsource for modularity rather than componentry with a ‘follow design’ ‘follow source’ strategy being prevalent amongst automotive vehicle giants and their worldwide subsidiaries. Major OEMs are also looking to forge closer collaborations with their suppliers. In framing Smiths’ strong domestic competitive position locally, the research also identifies the imminent threats from global excess capacity. Smiths’ competitive position stems from factors such as product license agreements, internationally accredited quality agreements, Smiths’ experience in supplying of modules to Toyota, Ford and BMW and Japanese firm Denso’s 25% stake in Smiths. In applying the strategy theory to these findings highlights that aggressive strategies can be pursued successfully to enhance Smiths’ position. In view of other global trends, some of the identified threats and weaknesses need to be neutralised. Moreover, opportunities arising through Africa’s Growth Opportunity Act (AGOA), the redefinition of after market parts in Europe and other trade agreements are recommended to be pursued aggressively by Smiths. The research concludes with suggested strategies for Smiths to pursue for future growth.

Smiths’ growth has been above average and to sustain this level of growth will not be easy, but, in keeping with the global trends, it is recommended that Smiths also pursue closer collaboration with other major global first tier suppliers.

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# CHAPTER 1

## INTRODUCTION AND OVERVIEW

### 1.1 Introduction

Over the last two decades the world economy has been dramatically transformed (International Marketing Review, 2004). The business environment is characterised by increasing complexity, uncertainty and discontinuity. With the current trend towards globalisation and the increasing competitive and technological challenges of today's environment, the companies are having to continuously evaluate their position in order to sustain growth (Shaw and Kauser, 2000: 51-69).

As a consequence of globalization, firms are able to capitalize on the blending of national markets through attacking these markets with universal strategies and products (Internet 1). Firms are also able to capitalize on the disparities of production costs between nations through locating their production facilities in low cost economies; although this is less of a benefit in the automotive industry due to the high logistics costs involved in transporting vehicle/components between markets (Internet 1).

The automobile industry remains one of the largest sectors in the global economy, playing a significant role in value added and trade flows in a number of developing and industrialised economies. The global automotive industry has for decades been attempting to develop and produce international motor vehicles (IMV's) for the mass market that can be sold around the world with only minimal modifications (Internet 1).

It is argued that the "IMV" strategy has traditionally only been successful in the upper end of the consumer market with cars of international appeal such as Mercedes, BMW, Porsche, etc. Successfully bringing this strategy to the mass-market segment would result in tremendous economies of scale for the automotive industry that would drastically reduce development and manufacturing costs as well as providing global opportunities for automotive componentry manufacturers. Due to the substantial benefits that could be gained from such products, the trend is moving towards the direction of global product strategy (Internet 1).

In the South African automotive sector, a growing share of automotive components is exported. For example, the ratio of component exports to components purchased by the domestic assemblers rose from 0.38 to 0.72 between 1994 and 1997 (Black, 1998). However, not only do sales destined for the domestic assemblers continue to exceed component exports, but they are the foundation on which component exports are built.

Beginning in the pre-transition era, and gathering pace since 1994, the South African economy has seen a significant reform of the trade policy regime (Padayachee, 1997; Jenkins and Siwisa, 1997). Ever since the move away from an inward oriented economy, South African industry has faced a new competitive environment as trade barriers have fallen.

## **1.2 Background to the Research**

Globalisation has led to increased product awareness by customers and greater competition. Companies have had to reassess their product profiles, their manufacturing processes and their logistics strategies in terms of these changed markets (Zairi, 1996). To remain competitive they are having to differentiate their products through new approaches and or new philosophies (Buxey, 2000:999). This has led to a shift of focus from item production to supplier management, and for fulfilment of services for customers.

This makes the manufacturing processes, and the inbound and outbound logistics, more complex. Certainly companies have to become more flexible or agile, both in terms of their processes and their structure. They need to be in a position to understand and respond quickly to changes in customer demand. Effective communications and information systems will be necessary to provide such agility. The speed and visibility of accurate data within the extended enterprise is now seen as the key to commercial success in the future (Graham, 1999).

In the automotive industry, globalization can have tremendous cost benefits. The automotive OEMs have traditionally taken a multinational strategy in forming a global strategy. For example, the OEMs have traditionally operated separate organizations in North America, Europe, Asia, and South America that for the most part have acted independently with little, if any, synergies across organizations (Internet 1).

This strategy has resulted in substantial inefficiencies in product development costs and to a lesser extent production costs. Traditionally, the separate geographic organizations within each OEM have developed and launched overlapping models. This overlap represents substantial cost savings for the OEMs as they spend several years and billions of dollars designing and engineering a new car model (Internet 1). Additionally, within the past decade, the changing face of competition in the automotive industry has resulted in the OEMs having to develop more models in quicker time to meet the changing tastes of consumers. Competitors such as Toyota and Honda have refined their product development cycles to introduce new models to consumers in as little as twenty four months (Internet 1).

The increasing product demands on the OEMs resulting in higher volumes results in untapped opportunities to be exploited by companies such as Smiths Manufacturing. There are more global products and fewer trade barriers than a generation ago. As globalization increases, there will inevitably be winners and losers with some firms who are currently significant players in local markets becoming marginalized (Ma 2004:907). Rugman (2000: 15) claims that Globalisation is a myth and it never really occurred. Rugman defines globalisation as “the activities of multinational enterprises engaged in foreign direct investment and the development of business networks to create value across national borders”.

Managers are realising that, no matter how strong and resourceful their firms might be, they are no longer able to maintain a competitive advantage at every step in the value chain in all national markets, nor are they able to maintain a cutting edge in the wide range of technologies required for the design, development, manufacture and marketing of new products. Thus international strategic alliances have become an important means to rationalise operations to overcome potential difficulties and to help firms regain and maintain their competitive position in international markets (Ohmae, 1989). The past decade has been an era of global evolution. Concurrent to the increase in global competition was the increase in the number of strategic alliances formed among rival firms in the same industry. The form of strategic alliances ranges from mergers, acquisitions and joint ventures to non-equity, co-operative strategies such as technological licensing or marketing agreements.

Corporate expansion and a developing global culture are the driving standardisation of business practices and a reliance on co-operation between customers, suppliers and other

partners. Retaining customers in turbulent markets has become just as important as finding new ones. Manufacturers, brought closer to customers by meeting the need for increased variety through customisation of the product, and then providing an acceptable level of service, after the market, are beginning to see business opportunities through such interactions in terms of increased perceived value of their product in the marketplace. Globalisation has enabled companies to expand into new markets bringing with it much larger, more diverse, customer bases. Managing and supporting such customer networks is becoming increasingly complex.

Global competition requires a simultaneous need for global-scale efficiencies, worldwide learning and local responsiveness. Underlying responses to global competition has been the recognition of the role of product and process improvement in business strategy. A single firm is unlikely to possess all the resources and strategic capabilities to achieve global competitiveness. However, recent experiences suggest that the weakness in corporate culture cannot be compensated for by strategic alliances. This is because corporate culture is a heritage from one generation of managers to the next, as people are promoted they tend to use the same strategies used by their mentors. Corporate culture is the outcome of lengthy organizational learning and is extremely difficult to change. In short, strategic alliances should not be used to compensate for cultural weaknesses, but rather to create competitive strength or to create a strategic position.

According to Barnes and Kaplinsky (2000:13), there have been three key global developments defined. First, a simultaneous process of model rationalisation (reducing the number of platforms each company makes). Model differentiation is forcing the assemblers to concentrate their attention on overall vehicle design and systems integration. As a consequence of this, the first tier suppliers are assuming increasing responsibility for the technological content of their sub-systems, and for the upgrading of their supply chains. Secondly, in order to facilitate the growth of scale economies and technological capabilities amongst these first tier suppliers, the assemblers are agreeing global sourcing relationships with them in which the suppliers serve the needs of the assemblers throughout their global operations. However, thirdly, in order to avoid the build-up of global inventories, a necessary complement to this process of global sourcing is the development of follower supply relationships, in which the first tier (and sometimes also second tier) suppliers

locate supply plants in close proximity to final assembly plants throughout the global operations of the automobile assemblers.

South African industry, which previously had an inward oriented economy, is facing a new competitive environment as trade barriers have been falling. According to Barnes and Kaplinsky (2000) a survey of the major auto assemblers and a comparative review of the automobile sector in Brazil and India suggests that the prognosis for the future of the South African components industry is not good unless corrective action is taken. Beginning in the pre-Transition era, and then gathering pace since 1994, the South African economy has seen a significant reform of the trade policy regime (Padayachee, 1997; Jenkins and Siwisa, 1997).

### **1.3 Problem Statement**

The problem statement was developed from an observational study, based on the researcher's perception that the strategies adopted by Smiths may need revision. It was perceived that the current strategies that Smiths Manufacturing follows are inappropriate given the changed environment in which the company operates.

As a result, it was decided to study Smith's strategies and determine, if it were to be found that the present strategies are inappropriate, what new strategies should be followed in order that they become competitive to ensure their survival and success against intense global competition world over.

### **1.4 Objectives of the Study**

The objectives of the study are as follows:

The first part is to evaluate the current strategies being pursued by Smiths Manufacturing and the second part is to establish the necessary strategies to be implemented by Smiths to exploit newly arisen market opportunities through various circumstances, such as the creation of trading blocs, which opens up new markets. In analysing the above, the following areas will be explored in order to more fully understand the environment Smiths operates in and thus make more appropriate recommendations:

- The general trends, patterns & requirements within the automotive component industry

- The level of competitiveness of Smiths in comparison to other local as well as international firms
- The levels of improvements and quality concepts such as Kaizen and TQM that are noticeable at Smiths and other South African automotive heat exchanger component manufacturers
- The future growth potential of local as well as export markets and the viability thereof for local manufacturers such as Smiths

These issues will help the researcher with the main research objectives related to Smiths' strategy.

The above would require an assessment of various factors, some of which include the current market position, levels of competition, intensity of rivalry, organizational resources and regulations in the context of dynamic market conditions. An analysis of these factors would also assist in identifying any shortcomings or flaws in the strategies being followed, which would in turn enable the organization to review its strategic policies timeously; as well as providing the necessary focus on available strategic options for future growth.

## **1.5 Research Methodology**

### **1.5.1 Case Study**

The methodology is qualitative in nature. The dissertation approach is a case study of Smiths. The first part of the document forms a strategic analysis of the case study, where existing and available literature on the subject matter will be thoroughly reviewed. The focus of the literature concerned will be in the first tier automotive componentry suppliers, more specifically in the heat exchangers and air-conditioning systems in the local (South African) as well as global markets. Available company documentation and business related documentation will be used to assist in the evaluation phase of the research. Desk research in conjunction with interviews conducted with a questionnaire guide will be used to gather data.

### **1.6 Limitations of the Research**

It is expected that certain critical business related documentation might not be divulged or made available to the researcher due to the nature of its sensitivity. This study will be confined to the automotive component air-conditioning markets locally with the focus being on Smiths. A thorough review of the South African market conditions can be done with relative ease whereas the same may not be applicable to global factors hence there are



potential elements of bias that may result in the study. There is also a danger in inferences where success factors for one organization could be thought to be applicable to similar organizations and that may not necessarily be true and a pilot study should be conducted to test applicability in such cases.

## **1.7 Budgets & Costs**

There are obvious costs such as internet searches for information, purchasing of online journals, local travel/transportation costs and telephone costs, all of which are to be borne by the researcher. Should the necessity arise for any advanced statistical data analysis, experts will need to be consulted at the expense of the researcher; however University of KwaZulu-Natal (UKZN) does issue special student licenses (at no cost) for a statistical package known as Statistical Package for the Social Sciences (SPSS). As there are no sponsors of this research, there is no undue pressure on the researcher to come up with results that would please third parties.

## **1.8 Structure of the Study**

The structure of the study consists of six chapters. The first chapter is an introductory chapter which outlines why the research is being undertaken and how the research will be conducted. It covers the research problem, the objectives, limitations, and provides an overview of the study.

### **1.8.1 Chapter Two – Literature Survey**

This chapter is dedicated to the theoretical discussions about strategies. Various models that are suited for this purpose are discussed. Some of the models are Porter's Value-chain, Product Life Cycle (PLC), Portfolio analysis, Directional policy matrix, Blind-spot analysis and Scenario planning, but to mention a few. As there are numerous techniques that can be used, one has to ensure that most suitable tool is selected and it is important to keep the discussions succinct and apt.

### **1.8.2 Chapter Three – Research Methodology**

Chapter three focuses on research methodology and has a discussion on the qualitative methodology used in this research. The chapter also highlights the fieldwork that was done.

### **1.8.3 Chapter Four – Background Information and Case Study**

This chapter incorporates the presentation of the case study (of Smiths), based on the theoretical framework developed in the previous chapter. The case study is based on Smiths, a first-tier automotive air-conditioning supplier to predominantly South African Original Equipment Manufacturers (OEM's). This chapter will also highlight their market position, intensity of rivalry and their current strategies being pursued on the basis of internal analysis, external analysis as well as the analysis of the remote environment.

### **1.8.4 Chapter Five – Strategy Formulation and Evaluation**

The analysis and evaluation takes places in this chapter using various models available. Three main criteria used for the evaluation of strategies are suitability, acceptability and feasibility, each of which in turn will be broken down into smaller parts; for an example, suitability is in turn assessed in terms of the Value Chain, Product Life Cycle (PLC), Positioning, Business profile and Portfolio analysis. Acceptability may be evaluated using Risk, Return and Stakeholder reactions. By the closure of this chapter, key areas for the company such as good performance areas as well as poorly performing areas will be highlighted.

### **1.8.5 Chapter Six – Recommendations and Conclusions**

Upon the completion of all the above chapters, the necessary strategies to be implemented to improve the current performance of the organisation as well as enable them to go global will have been determined. Any organization wanting to go global faces a huge challenge in terms of key decisions such as:

- How to go global, whether by strategic alliance or joint ventures (JV's)?
- How to manage different cultures?

Factors such as cultural factors (soft issues), organizational factors and macro/micro environmental factors play an important role and therefore it is imperative for any organization to explore these aspects during the decision making process. The aspects of with whom the alliances should be formed with may not be covered sufficiently well, therefore it may warrant further research for the organisation.

## **1.9 Smiths Manufacturing (Pty) Ltd**

Smiths Manufacturing Pty Ltd, a local first tier manufacturing company, is based in New Germany and produces radiators, evaporators, condensers, pipes/hoses, heaters, ventilation and cooling units, plastic parts as well as air conditioning systems for automobiles. The final products are supplied to both the local Original Equipment Manufacturers (OEM's) such as Toyota, Ford, Nissan, VW, BMW, Delta and export OEM's such as Land Rover [UK] and exported to aftermarket dealers.

## **1.10 Motivation for the Research**

The researcher's expertise is in the field of engineering and the researcher is employed at Smiths Manufacturing Pty Ltd, an automotive components manufacturing company. The MBA programme has enabled the researcher to identify, conceptualise and understand the intricacies and complexities involved in developing various strategies for an organization to ensure its growth and survival, especially in the context of globalization. Knowledge gained through the MBA course has enabled the researcher to identify the strategy used by the company. Certain key opportunities, weaknesses, gaps and threats have been identified which have highlighted the possible direction for the future success of the company, as well as the strategies the company can implement in an environment where changes are happening at an electrifying pace in technology for example, where markets are not just competitive, but rather hypercompetitive. This research may therefore contribute to the growth and survival of the organization as well being mutually beneficial to the various stakeholders who are part and parcel of the corporation.

## **1.11 Value of the Research**

The research will provide an in depth understanding of the current market environments as well as the trends in the industry which will provide valuable information to Smiths. The study will show the levels of competition in the industry and enable the company to capitalise on trends, exploit first mover advantages and gain market share through economies of scale. With increasing globalization of economic transactions, firms have to be internationally competitive even in their domestic market. As the progressive lowering of trade barriers eases the flow of goods worldwide; business survival increasingly hinges on a company's ability to compete globally – in external and/or internal markets.

Competitors from overseas are targeting previously secure domestic markets, while domestic competitors are increasingly looking overseas not only for new markets, but also for new sources of supply. Their procurement objectives are many and varied, but high on the list of priorities are issues of cost reduction, product and service innovation, technology acquisition and risk spreading. Mere loyalty to existing markets and suppliers is no longer sufficient to ensure that a firm continues to expand, let alone to achieve the growth and profitability it needs to remain competitive.

The resource alignment of the organization together with its capabilities and core competencies will be analysed to identify necessary gaps to be filled. Therefore it is hoped that the study will highlight the necessary strategies to be implemented to help the company to become a global competitor.

Many experts believe that despite the relatively small size and production abilities of the local industry, South Africa is well situated to provide competitive advantages to international concerns (Internet 2). The local industry has a world beating cost ability on short or low-volume runs, competitive tooling costs and a high degree of manufacturing flexibility. South African industry boasts several unique competencies, such as differential locks for off-road vehicles, aluminium welding technology for radiators, and the ability to design components such as air cleaners and air conditioners that are able to cope with the higher temperatures and dust levels in Africa. These factors can be used by local component manufacturers as levers to exploit opportunities.

This first chapter introduced the aims and objectives of the research together with some background information serving as a point of departure. The following chapter is devoted to literature review where appropriate theoretical encompassed.

# CHAPTER 2

## LITERATURE RESEARCH

### 2.1 Introduction

“As the twenty-first century unfolds before us, all systems and institutions are in the process of transition. The shift is away from the old ways of operating in the past decades of the Industrial Age to the new approaches of the post-industrial or Information Age. Thus, a profound transformation is under way not only in societies worldwide, but also in the cultures of corporations, associations, and agencies,” Harris (2002:416).

Tay (2003:26) states that intense global competition has forced many firms to examine their core business processes and to devise plans to respond to an increasingly competitive market place. Various factors have contributed to this trend. It is argued that foremost amongst these have been the shortening of product life cycles and rapidly changing demand patterns throughout the world. These forces have forced various companies to critically assess their key competencies and to develop strategies to compete effectively in a global economy. At the forefront of these efforts have been attempts to improve flexibility and quality via Total Quality Management (TQM), stimulate innovation, and reduce lead times, while simultaneously keeping costs down.

As the saying goes, effective implementation of an average strategy beats mediocre implementation of a great strategy every time (Sterling, 2003:27). Yet companies nonetheless often fail to operationalise their strategies in ways that improve the likelihood that they will be implemented effectively. Occasionally, it is possible for various firms to stumble upon a spectacular jackpot without really knowing what they are doing or having any regimented idea on how to achieve long-term success in their industry. The past and current experiences clearly demonstrate that the path can be rocky and can have exaggerated expectations therefore firms must realise that the understanding can never be perfect since the operating environment is dynamic and never static. This emphatically demonstrates the point that the thinking process must not be too far divorced from acting. Strategy formulation and strategy implementation must always be closely interwoven to ensure success for any firm. Sterling (2003:27) adds that the real reasons that strategies fail are varied. He argues that, fortunately, the causes can often be anticipated and pitfalls can be avoided. Failure to plan can lead to disaster.

## **2.2 What Strategy Is**

The concept of strategy is discussed at length in various well known texts. Johnson and Scholes (1999:10) state that “strategy is the direction and scope of an organization over the long term: which achieves advantages for the organization through its configuration of resources within a changing environment, to meet the needs of the market and to fulfil stakeholder expectations”.

Prahalad and Hamel (1990:108) believe that strategy making is a process interwoven with all that it takes to manage an organization. It is claimed that strategic management is concerned with the processes through which firms, if possible, on a sustained basis, create value, protect, and appropriate the value they create, and try to capture value created by other firms.

“Without a strategy the organization is like a ship without a rudder”, say Joel Ross and Michael Kami (2005) (Internet 3).

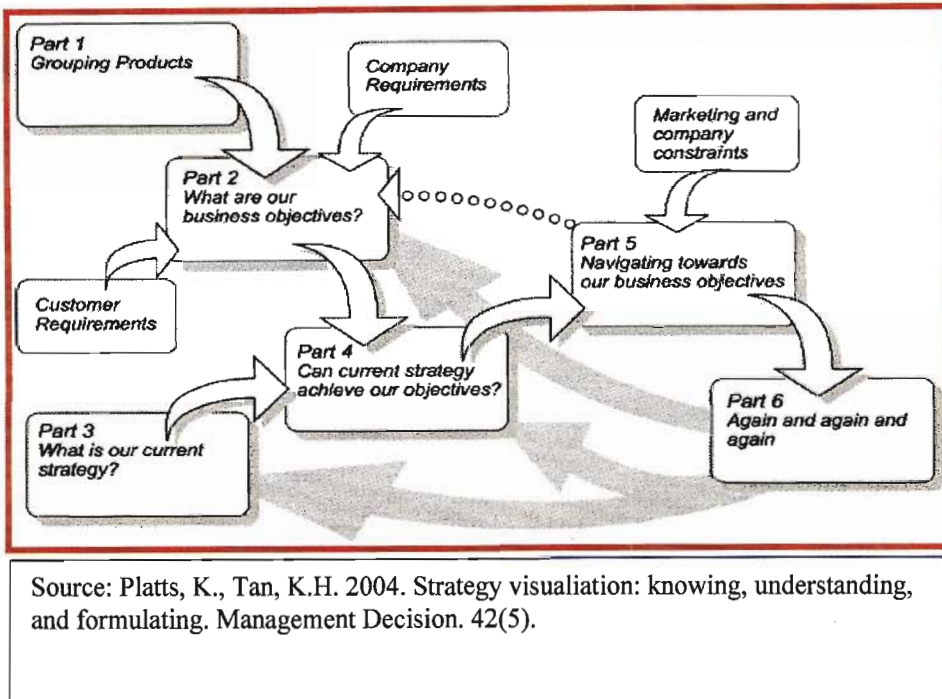
Thompson and Strickland (2003:10) demonstrate that the strategy is both proactive (intended and deliberate) and reactive (adaptive).

## **2.3 The Strategy Formation Process**

A strategy formulation process involves a series of stages from identifying customer product groups to embedding strategy into culture (Mills *et al.*, 2002).

Platts and Tan (2004:667) observe that there is perceived to be a lack of robust, straightforward methods for mapping and representing the complex, multi-dimensional issues involved in the formulation of strategy. They propose the stages of strategy formation diagrammatically as illustrated below in figure 2.1:

**Figure 2.1: Strategy Formation Processes**



A frequent theme in the strategic management literature during the 1990s was the challenge to manage the balance between stability and flexibility (Lindgren, 2002).

Strategy formulation is a multi-stage process, which involves the understanding of complex and multi-dimensional issues ranging from product identification to delivering customer satisfaction. The strategy should be able to allow for change when environmental or internal conditions change and it should also permit enough discretion for employees to be innovative and improvise whilst still moving towards the same goal, following the same codes of conduct (Rylander and Peppard, 2003:312). The common underlying notion of the field of strategic management is that managers can make choices to generate sustainable competitive advantage, thereby achieving superior performance outcomes for their organizations.

Strategy formation is an outcome of planning, albeit in an acute sense. Rylander and Peppard, (2003:318) argue quite convincingly that the field of strategic management is dominated by models and theories that hold little relevance for practitioners in guiding action in knowledge-intensive companies competing in turbulent environments. In addition, the assumptions which underpin many of the traditional tools of strategy do not hold true, making them at best irrelevant, but at worst leading to the development of strategies that can put the success of a company in jeopardy (Courtney *et al.*, 1997:66-79).

The traditional militaristic view of strategy that has dominated thinking in the field of strategic management, and indeed framed the view of strategy held by management in various high profile companies (Rylander and Peppard, (2003:317). It is normal for any formulated strategies to be suitably adjusted to cater for the rapidly changing overall market conditions. Over the last two decades, the world economy has seen dramatic transformations. They argue that global deregulation in many industries is opening markets to the entry of new competitors. Their assertion is that the business environment is characterised by increasing complexity, uncertainty and discontinuity hence the difficulty for any manager to successfully predict and plan the full strategy for the company.

The ability of the firm to adopt a new strategy will be bound by the context of the firm, including the external environment, and the quality of internal attributes such as leadership skills and human resources (Pettigrew and Whipp, 1991).

As cited by Kaplan and Beinhocker (2003), Henry Mintzberg, a leading management thinker, notes that real strategy is made informally, in hallway conversations, in working groups, and in quiet moments of reflection on long plane flights and rarely in the panelled conference rooms where formal planning meetings are held. Their assertion is that the few truly strategic decisions were made in the context of a formal process and that when approached with the right goal in mind, formal planning need not be a waste of time and can, in fact, be a real source of competitive advantage.

The strategy formation process is done within a context of internal as well as the external environments. There are a plethora of tools and techniques available to perform a thorough analysis which then enables one to make an educated (strategic) choice for the organization concerned.

## **2.4 The External Environment**

All organizations operate within a microenvironment consisting of various aspects such as the economy, demographics, governmental policies, and technological factors. Adding to these are the company's industry and the competitive environment. The inevitable interaction of all these factors plays a pivotal role in determining ultimately the success or the failure of a company.



Thompson and Strickland (2003:73) also affirm the notion that these macro environmental influences are relevant in the sense that they are important enough to have a bearing on the decisions a company ultimately makes about its business model and strategy. Macro-environmental factors are also important. Srinivas (1995:40) asserts that in Third World countries the business environment is highly politicized with much government involvement. The dominant thinking in many developing countries is that business and industry are too important to be left solely in the hands of businessmen. He claims that many industries are nationalized and private businesses are required to conform to guidelines and restrictions with many strategic decisions requiring specific approval from the Government. In many of the developing countries, government-constituted development corporations control local enterprises in a bureaucratic fashion. Thus, managerial actions and decisions are influenced very much by the macro-environment (Srinivas, 1995:40).

## **2.4.1 The Remote Environment-Using PESTEL**

*“Awareness of the environment is not a special project to be undertaken only when warning of change becomes deafening” Kenneth R. Andrews (Internet 41).*

The landscape of the business environment has been dramatically transformed world over. What was once previously considered a national market is somewhat parochialistic in today's terms since today's organizations are trying to survive by competing in the global arena against global competitors who are trying to capitalise on cost, quality and speed. The analysis of the remote environment is usually referred to as PESTEL where political, economic, social, technological, ecological, and legal factors and their influences on the company are evaluated (Thompson and Strickland, 2003:74). Inevitably these industry and environmental changes have had impacts on all organizations at all levels therefore firms have had to create and access knowledge to improve their continuous learning process (Vale, 2004:125).

### **2.4.1.1 Political Environment**

The South African political climate has come through waves of changes in the 1990's and particularly since 1994. The transition from the apartheid regime into a democratised society has been welcomed by the international community (Internet 7). Many would argue

that there are pros and cons to the previously oppressive regime but nonetheless, the newly democratised society's benefits far outweigh the negligible disadvantages.

Upon the abolition of apartheid largely due to economic pressures, major international trade sanctions that were previously in place were lifted. The African National Congress (ANC) came into power in 1994, with its image of socio-economic upliftment rooted in the Reconstruction and Development Programme (RDP) which evolved to Growth, Employment and Redistribution (GEAR). In essence, GEAR's outlook was that the sustained growth requires a transformation towards a competitive outward oriented economy (Internet 8). It also emphasizes the need for market led growth, fiscal and monetary discipline and investor confidence (Luiz, 2002:4). Other programmes such as the Employment Equity Act have also been institutionalised by the government to have a more demographically representative population at all employment sectors though it's difficult to proclaim that this program has achieved its intended objectives. Luiz (2002:8) argues that the South African state is weak due to its lack of capacity and the lack of political will on the government's part to implement policies. He believes that part of the problem lies in the South African government itself due to its fragmentation which represents many different constituencies and ethnic groups thus he claims that the political will is fragmented.

Approaches to institution build in South Africa have tended to be premised on the need for varying degrees of state intervention coupled with progress towards upgrading skills for economic growth imperatives (Horwitz *et al.*, 1996:134-151) The pace of black participation in skilled and managerial work may be described as incremental but inadequate for meeting rising expectations created by the rapidly changing political climate. It is also inadequate in the context of stimulating the required level of economic growth. President Mbeki's government has committed itself to rooting out corruption, more emphasis on improving service delivery and enhancing safety and security (Internet 9).

#### **2.4.1.2 Economic**

South Africa is the economic powerhouse of Africa, with a gross domestic product (GDP) four times that of its southern African neighbours and comprising around 25% of the entire continent's GDP (Internet 2). The reality is that the South African economy has an element of duality, with a sophisticated financial and industrial economy having developed

alongside an underdeveloped informal economy (Internet 2). The International Monetary Fund (IMF), in its 2005 annual country assessment, commends South Africa's authorities for the remarkable economic progress achieved since democracy in 1994 (Internet 2). Luiz, (2000:227-43) argues that the nature and capacity of the state, to a large extent, determines the efficacy of economic policy. He also asserts that state-led development will have disastrous consequences where the state does not possess the capacity to formulate and execute a developmental vision.

Twenty-three quarters of uninterrupted economic expansion have translated into more jobs in South Africa's formal sector, with Statistics SA's latest Labour Force Survey showing that the unemployment rate in the country has dropped steadily since 2003. South Africa's economy has been in an upward phase of the business cycle since September 1999 - the longest period of economic expansion in the country's recorded history (Refer to table below). During this upswing - from September 1999 through to June 2005 - the annual economic growth rate averaged 3.5%. In the decade prior to 1994, economic growth averaged less than 1% a year (Internet 2).

**Figure 2.2: South African Economic Indicators, 2001-2005**

<b>SA: SELECTED ECONOMIC INDICATORS</b>					
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Real GDP	2.7%	3.6%	2.8%	3.7%	4.3%
CPI	5.7%	9.2%	5.8%	1.4%	3.9%
CPIX	6.6%	9.3%	6.8%	4.3%	4.3%
Unemployment	29.5%	30.5%	28.2%	26.2%	25.3%
National debt (%GDP)	41.4%	37.1%	35.7%	35.8%	35.1%
External current account balance (% GDP)	0.1%	0.7%	-1.5%	-3.2%	-3.7%
External debt (% GDP)	26%	29.5%	22.4%	19.8%	19.1%
Gross reserves (in months of total imports)	2.9	2.8	2.2	3.1	3.7
Int. liquidity of SARB (in US\$-billion)	-4.8	-1.6	4.8	11.4	19.8
US\$ exchange rate (in rands)	12.13	8.64	6.64	5.64	...

Source: IMF country report 2005

Source:

[http://www.southafrica.info/doing\\_business/economy/econoverview.htm](http://www.southafrica.info/doing_business/economy/econoverview.htm)

(accessed on 09/03/2006)

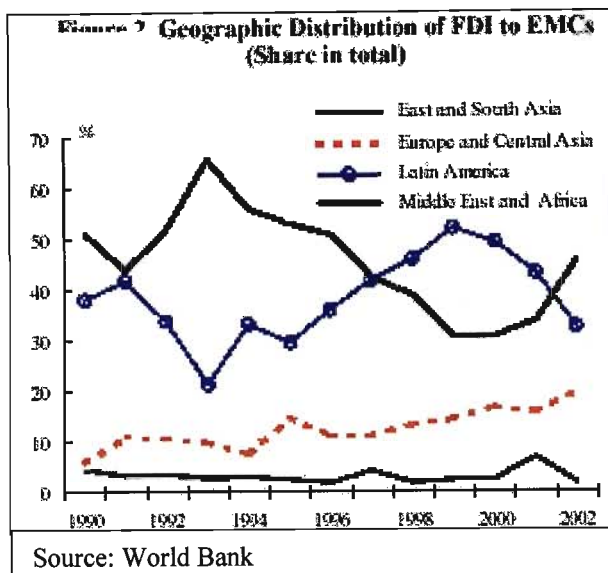
According to the South African Reserve Bank, there is no sign of this period of expansion coming to an end. Gross domestic product (GDP) growth was running at an annualised 4.8% in the second quarter of 2005 (compared to 3.7% in 2004 and 2.8% in 2003). Consumer inflation has been on a downward trend since 2002, when consumer prices increased to an average 9.3% following the September 11<sup>th</sup> tragedy in New York. Consumer inflation averaged 6.8% in 2003 and 4.3% in 2004 - compared to 9.8% in 1994 (Internet 2).

IMF's directors noted that serious economic challenges still persist in the form of high unemployment, poverty, large wealth disparities and a high incidence of HIV/Aids. Therefore they recommend instituting policies aimed at raising economic growth in a stable economic environment and initiatives to reduce unemployment and improve social conditions. The IMF also said that this strategy could be bolstered by labour market reforms and further trade liberalisation. Many academics also support the notion that the key to overcoming the challenges identified by the IMF will be the economic integration of South Africa's previously disadvantaged majority (Internet 2).

According to The South African Reserve Bank (SARB), as a result of the lower inflation outcomes as well as the changes in some of the determinants of the inflation outlook, CPIX inflation is now forecast to run at a level somewhat below the previous forecast and reach a level of around 5 per cent by the end of 2007 (Internet 10).

**Definition of Foreign Direct Investment (FDI):** Long term investment of a “parent” enterprise from the “home” economy into a subsidiary, affiliate, or branch enterprise in a foreign “host” economy. FDI flows include assets, property (e.g. parent company technology, branding, skills) and/or capital investment (greater than 10% of total shares in a company), reinvested earnings (retained profits in an affiliate, or intra company loan/debt transaction (long term borrowing/ lending) between firm and affiliate enterprises. FDI stocks are the value of capital and reserves (including retained profit) attributable to a parent enterprise. Other types of foreign investment: portfolio investment (shareholder investment in less than 10% of a company’s capital) and bonds/loans are obtained from foreign banks (Internet 11).

**Figure 2.3: FDI Distribution Geographically**



The FDI into the South African economy has also seen improvements in the past few years where \$5.5billion was injected in 2003 compared to \$3.8billion in 2002, (Pingo, 2004).

The FDI for Africa is shown in the figure on the left which illustrates the sharp contrast between the different regions.

Although net FDI shows sizeable fluctuations from year to year, gross

inflows of FDI indicate some improvement in South Africa’s ability to attract this type of investment. Nevertheless, FDI is dwarfed by portfolio and other types of foreign investment, which are much more susceptible to short-term shifts in capital flows (Stryker *et al.*, 2000:11).

Masson (2001) emphasises the potential of capital inflows to contribute to growth by stimulating investment and promoting financial development. However, he points out that the capital flows to developing countries have been subject to volatility and these volatile financial markets seem to bring volatility in economic activity as well. Anwar (2002) suggests that, in addition to spurring financial crises, the liberalisation of the domestic and international financial system has caused an increase in income inequality much greater than that caused by other policy changes such as trade and labour-market liberalisation and privatisation.

Stryker *et al.*, (2000:16) add that the vulnerability of the South African economy to short-term capital outflows is especially acute because of the choice made by the government to finance its borrowing needs through the issuance of domestic bills and bonds rather than through external borrowing. They also assert that on the other hand, it has had the disadvantage that it made the economy more vulnerable to the vagaries of short-term capital movements prompted either by exogenous forces or by uncertainties regarding the future pace of depreciation of the rand.

South Africa's aim is to become an automotive investment destination of choice. Modernisation and upgrading of key elements in the automotive industry are required to keep pace to achieve international competitiveness (Internet 12).

Fink and Kenny (2003:15-24) point out that in many developing countries, people faced far more critical challenges – namely lack of access to water, food, medical treatment and education – than the lack of internet access.

HIV/AIDS is having an impact on economic growth and development. The Zimbabwe situation also currently poses a big threat to the economy. As with many critics, Stryker *et al.*, (2000:16) argue that for South Africa to achieve its economic goals, the following outlined factors need to be addressed:

- Low labour productivity
- Inflexible labour laws
- Lack of highly skilled, educated source of labour
- Industrial relations

#### **2.4.1.3 Social**

South Africa is experiencing an exciting transition requiring integrated development at the societal organizational and individual levels. The country is still plagued by numerous socio-economic problems. The main components of SA's socio-economic crises are low economic growth, poor labour and capital productivity, an under skilled work-force and high unemployment. In addition, SA's workforce is comparatively overpaid in relation to productivity and pay levels of other newly emerging industrial nations (Horwitz *et al.*, 1996:5). As the nation moves into the 21st century, however, its economy is stagnant, unemployment approaches 30% of the economically active population, and there are enormous racial, gender, and location-specific disparities in levels of income and wealth (Stryker *et al.*, 2000:3).

One of the salient features of the South African society is that it has a uniquely diversified cultural society, henceforth it has been referred to as the "Rainbow Nation." It can be argued that the synergy arising from a multicultural society such as this has unfortunately not yet been fully harnessed. With a population of 47 million people, the black ethnic



population accounts for about 75%, 12% being the white population, 9 % coloureds and the balance 3% constituting of Indians and Asians (Horwitz *et al.*, 1996:11). Therefore, it is a noteworthy fact that managing such a vastly diverse cultural workforce under one organization to achieve a common goal is indeed a challenging task.

#### **2.4.1.4 Technological**

The era of the digital age has arrived. The internet has revolutionised the world in an unprecedented manner. The concept of the information superhighway, E-Commerce (electronic commerce), M-Commerce (mobile commerce) and Electronic Data Interchange (EDI) have radically changed the way in which business is conducted. The whole business world has been entirely transformed. South Africa has the largest and most advanced telecommunications network in Africa and since the dismantling of apartheid has attracted large-scale international investment. Former President of South Africa, Nelson Mandela, was quoted during the South African Network Skills Abroad seminar in July 2002 to have expressed concern about this brain-drain saying that “to this day we continue to lose the best among ourselves because the lights in the developed world shine brighter” (Mutula, 2004:5). South Africa’s government sees telecommunications as an essential component of the country’s economic expansion.

Research has shown that Sub-Saharan Africa generally suffers from a shortage of scientists and engineers in research and development. For example in 2000, Botswana, South Africa and Namibia had respectively 0.07, 0.99 and 0.46 scientists and engineers in research and development per 1,000 inhabitants whereas Estonia and Canada had 2.13 and 2.98 scientists and engineers per 1,000 inhabitants respectively (Dutta *et al.*, 2004). This critical shortage of expertise stifles the potential growth of technical knowledge and therefore reliance is on imported technical know-how.

#### **2.4.1.5 Ecological**

The human population is still growing fiercely. At the turn of the century the population reached 6 Billion in number (Internet 13). The whole world is awakening to a period of a changing environment. Changes in world climates, weather patterns and abnormal seasons are impacting every sphere of the human livelihood. The global warming concept as a

result of ozone layer depletion is a huge threat to the human kind. Increasingly, people are conscious of environmental concerns related to our society's energy use. It is now possible to live comfortably and still choose natural and clean sources of energy rather than oil, coal, or nuclear sources. The Kyoto Protocol initiated in Montreal by world leaders to commit themselves to a process of gradual reduction of harmful pollutant emissions is instituted (Internet 14). Move towards more sustainable sources of energy other than the rapidly depleting reserves of fossil fuels is becoming the norm rather than the exception.

Recently, the environmental impact of refrigerant emissions has come under global scrutiny. Cleaner burning and more efficient fuels and ozone friendly products are being promoted in the market (Internet 15).

#### **2.4.1.6 Legal**

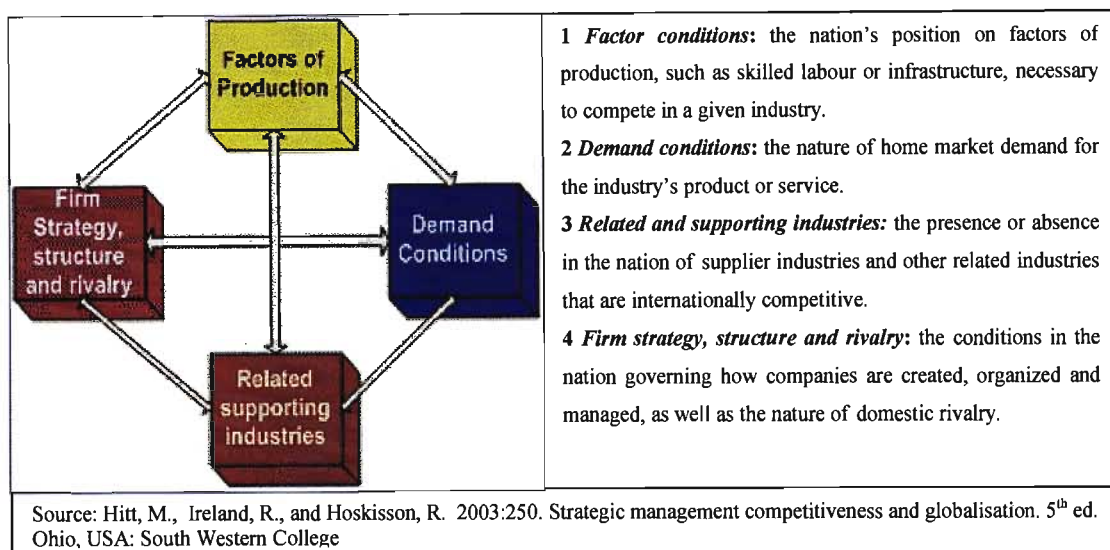
The automotive sector is subject to a wide range of legislation and regulation. Many of the automotive manufacturers around the world have their own standards and quality to which the first tier and second tier manufacturers are expected to conform. These regulations form a critical portion of the safety and quality aspects of the product being supplied to the OEMs. A number of new studies show significant consumer savings from regulations requiring automobile manufacturers to use more advanced technologies, many of which are already available and in commercial use (Internet 16). These technologies include components like continuously variable transmissions, electric power steering, hybrid power, variable valve timing/lift, and cylinder cut-out and more efficient air conditioners (Internet 17). It is important that the costs associated with these are minimised and that action does not undermine the competitiveness of those companies operating in the industry environment.

#### **2.4.2 External Environment Using Porter's Diamond**

Hitt *et al.*,(2002:249) state that Micheal Porter's model known as Porter's Diamond describes the factors contributing to the advantage of firms in a dominant global industry and associated with a specific country or regional environment. Porter sees four broad attributes as the attributes of the nation that is home to the internationally successful industry. They comprise of factors shown in the figure below:



**Figure 2.4: Porter's Diamond**



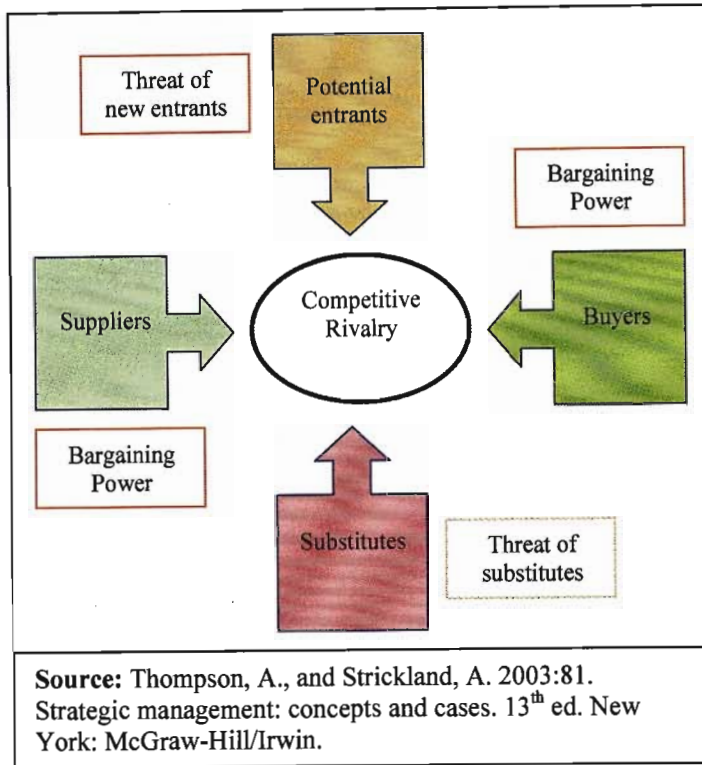
O'Shaughnessy (1996) criticises Porter's Diamond whereby he argues that Porter's thesis is incomplete and the claim is that failing to pay attention to matters of culture and the cultural dynamic is Porter's most important omission. According to the model, firms are most likely to succeed in industries where the diamond is most favourable. Porter's arguments are formed almost entirely with reference to developed countries warns O'Shaughnessy (1996).

### 2.4.3 Industry (Competitive) Analysis

An industry is typically a group of firms that market products which are close substitutes for each other. Some industries are more profitable than others. Why? The answer lies in understanding the dynamics of competitive structure in an industry. The most influential analytical model for assessing the nature of competition in an industry is Michael Porter's Five Forces Model, which is described below:

Porter explains that there are five forces that determine industry attractiveness and long-run industry profitability. This analysis contextualises the state of the industry and gives managers an insight into the business activities within the business as well as in the industry.

**Figure 2.5: Porter's Five Forces Model**



Critics of the five forces framework claim that this emphasis underestimates the core competencies of a firm that may serve as its competitive advantage in the long term while focussing on shorter-term market positions. Benefits gained from industry analysis are:

- Understanding the competitive forces in your industry.
- Assessing the attractiveness of, and growth opportunities within, a new industry.
- Developing effective strategies to raise your profitability, power, and competitive position in an industry.

To bridge the gap between measuring environmental changes at an industry level and changes in strategy at the firm level, it has been suggested that researchers either operationalize environmental antecedents in terms of industry analysts' opinions or utilize the judgements of researchers on the basis of their industry knowledge (Rajagopalan and Spreitzer, 1996:48-79).

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 (differentiation, cost leadership, differentiation focus, and cost focus) relate to the extent to which the scope of a business's activities are narrow versus broad and the extent to which a business seeks to differentiate its products.

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.

#### 2.4.4 Competitor Analysis

With the dawning of the new millennium major pressure on established ways of doing business occurred. Some being the trend of globalization, breakdown of Iron Curtain, the break up of the USSR, the opening up of China and the various free trade agreements. These issues have stirred up fierce competition even in industries previously regarded as being free from the onslaught of foreign rivalry.

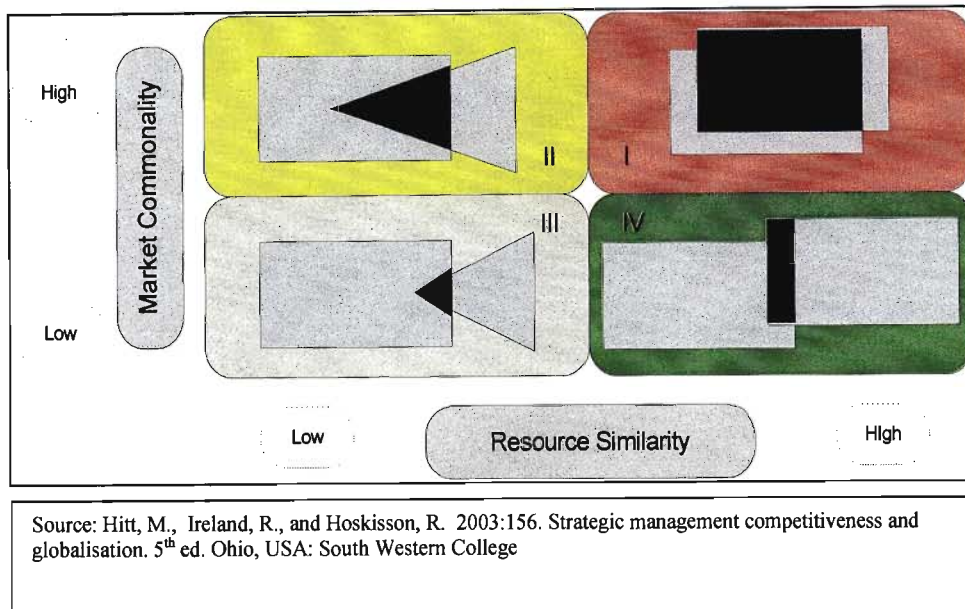
Hitt *et al.*, (2003:149), believe that firms operating in the same market, offering similar products and targeting similar customers are competitors. They also concede that the competitive rivalry is the ongoing set of competitive actions and competitive responses occurring between competitors as they compete against each other for an advantageous market position. Competitive rivalry influences an individual firm's ability to gain and sustain competitive advantages.

The global economy has created a new hypercompetitive landscape, one in which events, competitors, environments, and industries change constantly and unpredictably (D'Aveni, 1999). By its very nature, the hypercompetitive landscape has become precipitously more dynamic, intense, aggressive, and at the same time has become deregulated, technology intensive, and global in scope. Research into the competitive dynamics of a firm's competitive moves and countermoves has dramatized the importance of time as a significant variable in the strategic management frameworks (Mosakowski and Earley, 2000).

The competitive rivalries are not only between intra-industry rivals but also among inter-industry rivals that come from a variety of different countries (Hitt *et al.*, 1998:22-42).

The framework demonstrated by Hitt *et al.*, (2003:56) drafts out the two important aspects in the framework in terms of the number of markets in which firms compete against each other (market commonality) and the similarity in the resources (resource similarity).

**Figure 2.6: Market Commonality vs. Resource Commonality**



As depicted in the figure above, the firm must analyse each of its competitors in terms of market commonality and resource similarity.

### 2.4.5 Industry Drivers of Change

With increasing globalization of economic transactions, firms have to be internationally competitive even in their regional and domestic markets. Over the last decade, the industry has experienced major organisational change. In addition to this, (MacNeill *et al.*, 2002) point out that there have been major changes to manufacturing and vehicle technology. The main drivers are global competition, the growth of the supply industry, legislation and consumer demand. Intense competition requires operations to be carried out with maximum efficiency (European Foundation for the Improvement of Living and Working Conditions, 2004:7). The key is large-scale production to reduce the value of fixed costs per vehicle.

With increasingly sophisticated vehicles and rising investment costs, the optimum economic scale increases (Rees, 1999). Companies have sought to achieve economies by maximising volumes and standardising parts across their model ranges. The outcomes are investment in high capacity, an on-going trend towards mergers and acquisitions, and a rising number of cooperative ventures, for example, sharing research and development (R&D) costs (Internet 4).

## 2.4.6 Current Industry Trends

All facets of the industries are undergoing constant change and each responds by being proactive and or reactive to suit the nature of the changes. Over the last decade, the motor industry has experienced major organisational change (European Foundation for the Improvement of Living and Working Conditions, 2004:6). In addition, there have been major changes to manufacturing processes and vehicle technology (MacNeill *et al.*, 2002). They argue that the main drivers are global competition, the growth of the supply industry, and legislation and consumer demand.

The automotive industry provides a good example of new production organization principles. This is particularly true of the Japanese carmakers, for whom a tight-knit network of suppliers produces a large proportion of components (Vale, 2004:127). It is argued that the externalization of production appears both as a strategy for cost reduction and risk minimization, and as a way to improve firm competitiveness through collaborative partnerships between suppliers and carmakers. Nevertheless, suppliers have different roles in supply chains and are usually divided into tiers. Vale (2004:127) says that most carmakers have increasingly externalized production. Moreover, there is a constant shuffling of supplier networks to improve service, quality, speed and cost.

Vale (2004:127) argues that generally, first-tier suppliers deliver complete functions and are involved in R&D activities with the carmakers. It is also added that in some cases, according to the type of product, delivery operates on a just-in-time (JIT) basis, so suppliers are often located near the assembly plant.

Suppliers have taken increasing responsibility, particularly in areas such as heating ventilation and air conditioning (HVAC) systems and electronics. An outcome has been for whole modules or systems to be pre-assembled by the suppliers and delivered (just in time and just in sequence) to the car factories. This makes assembly quicker and more convenient for the carmakers, and transfers responsibility for quality and logistics to the suppliers. Modular assembly occurs globally, but with local production as far as possible.

Logistics are costly and difficult, especially with expensive transportation bottlenecks in long distances. As modules become more complex, the local aspect of production becomes essential.

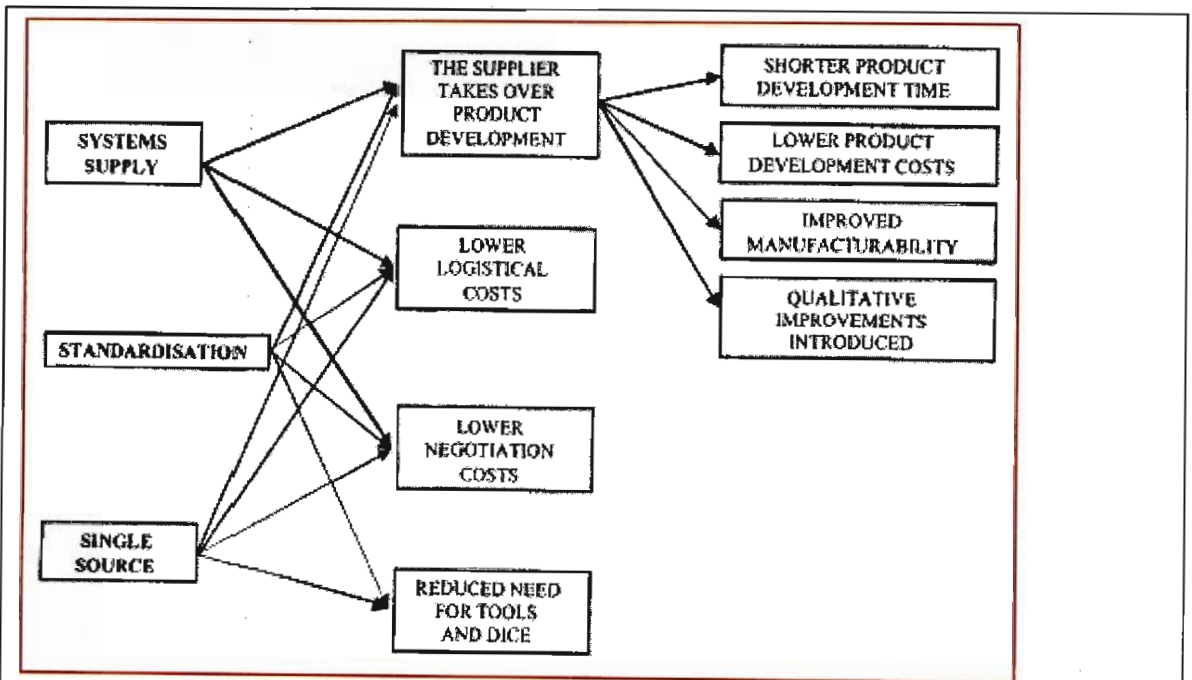


Second-tier suppliers develop and produce components and are encouraged occasionally to set up plants or warehouses in the proximity of first-tier suppliers' plants, especially if components are bulky or heavy (Hudson, 1994:331-45). Third-tier suppliers, on the other hand, deliver parts or small components to be incorporated in functions developed and produced by the other suppliers (Vale, 2004:127).

Figure 2.7 below depicts the changes across various supplier bases which is a global trend that brings about many challenges as well as advantages. It is commonly accepted that automotive manufacturers have chosen fewer suppliers with which they will have direct dealings; that these are *first-tier suppliers*; and that a certain limit on the degree of the assemblers' outsourcing has been reached (Alaez *et al.*, 1999:256). As can be seen from figure 2.7, shorter product development times, lower costs, improved manufacturability and better quality are key factors to be considered in the strategy formation process.

They add that, at this point, the assembler never loses sight of the basic objective – constant cost-cutting for purchases of systems and components. The assembler's final intention is to lower the potential suppliers' prices.

**Figure 2.7 Advantages of Changes in Assemblers' Strategy**



Source: Alaez, R., Bilbao, J., Camino, V., Longas, J.C. 1999. New tendencies in inter-firm relations in the Automotive industry and their impact on European periphery suppliers. *European Urban and Regional Studies*. 6(3):258.

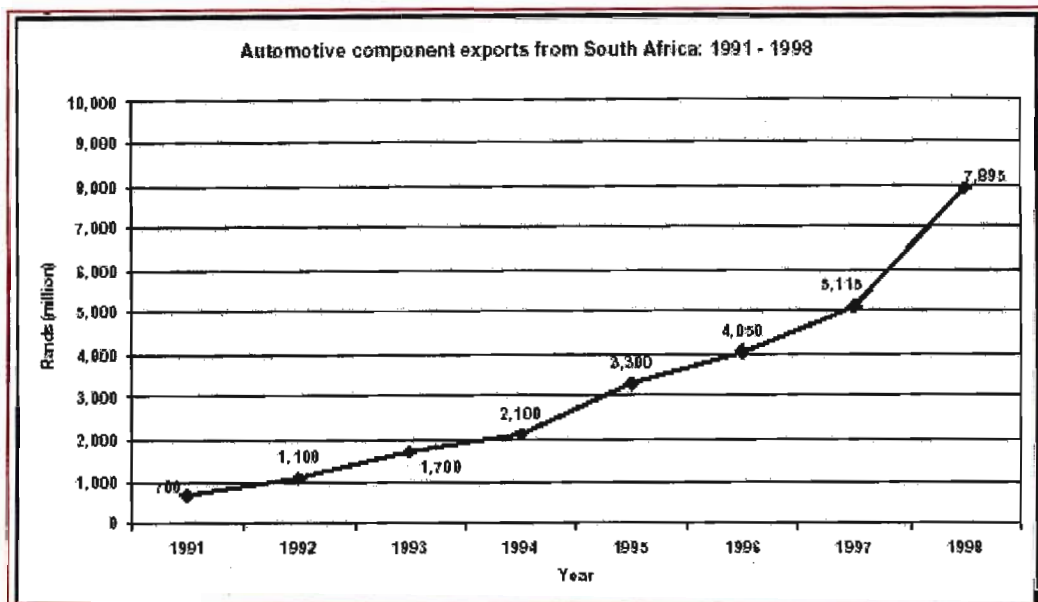
Though the car industry worldwide is replete with so-called national giants, it is probably the most globalized industry in the world with the three triad groups of the USA, Japan and Western Europe (Veloso and Kumar, 2002:2), accounting for almost 90 per cent of total output. The motor industry globally employs around 4 million direct workers with a further 10 million involved in material and component manufacture. When those involved in the selling and maintenance of vehicles are included, the total figure swells to around twenty million (Dicken, 1998:316). In the words of the International Motor Vehicle Project, the auto industry is even more important to us than it appears.

Twice in this century it has changed our fundamental ideas of how things are made and how we make things, dictates not only how we work, but what we buy, how we think and the way we live (Womack *et al.*, 1990:11). The automotive OEMs of late, have adopted a “global platform” strategy to capitalize on the current global market. Under the global platform strategy, vehicles are tailored by local design and engineering off of a common platform for each market. A study by the consulting firm Rollen Berger in PR Newswire, 2002, predicts that by 2010 82% of all car models will share a common platform compared to 65% today. Platform modularisation involves the ability of interchanging of parts like engines, transmissions, chassis and other front or rear end parts between various models to reduce production costs and also allow diversity of models from the same generic origins. The global platform strategy is an interim strategy that firms can and need to capitalise upon to establish their presence.

The South African automotive industry is ranked 19<sup>th</sup> in the world, accounting for 0.7% of global automotive production and 80% of Africa’s automotive production (Internet 2). According to the National Association of Automotive Manufacturers of SA (Naamsa), exports of components amounted to about R22.5-billion in 2002, while exports of motor vehicles amounted to about R18-billion in the same year.

In a Southern African context, the Motor Industry Development Programme (MIDP) incentive programme is a formal governmental incentivised scheme to assist South African manufacturers in the automotive sector (Barnes, 2000:6). The programme forces the industry to be strongly outwardly oriented by reducing tariff protection in the domestic market and by facilitating exports through its Import-Export Complementation (IEC) scheme (Barnes, 2000:6).

**Figure 2.8 Total South African Automotive Exports (1991-1998)**



Barnes, J. 2000. International Customer Perceptions of South African Automotive Component Manufacturer Performance Levels. School of Development Studies Report 32:6. University of Natal.

He argues that the direct result of the programme has been a massive increase in automotive component exports. This is clear in Figure 2.8 with exports having grown by an astounding 376% between 1994 and 1998. As depicted in the figure 2.8, the automotive components exports sector has been on a healthy growth phase. Therefore South African manufacturers can often generate internationally comparative economies of scale for these products.

In 2002, global production of motor vehicles (passenger vehicles plus light and heavy trucks) was just over 59 million units. The main vehicle producing areas are Asia-Pacific, including Japan and Korea (19.3 million), Western Europe (17.4 million) and North America (16.8 million). These areas are also the largest markets with sales figures in the same year of 14.2, 16.7 and 19.9 million respectively (European Foundation for the Improvement of Living and Working Conditions, 2004).

This major development in the restructuring of the supply industry and the growth of major 'mega-suppliers' certainly provides a window of opportunity to manufacturing companies such as Smiths. As all manufacturing activities at Smiths are done under licensing agreements with multi national corporations (MNC) such as Denso Corporation, Modine



AG amongst others, the abovementioned developments would enable the company to realize its true potential as a world class manufacturer.

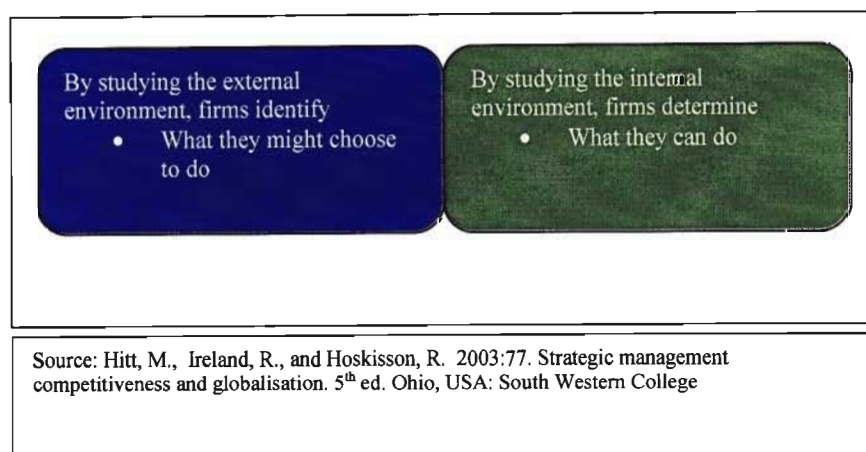
## 2.5 Internal Environment

The previous discussions focussed around the external environment. It was affirmed that the external environment is beyond the control of the firm. Experience shows that the successful firms are the ones that are able to constantly engage in scanning, monitoring, forecasting and assessing. An awareness of these factors enables managers to make informed decisions for the firm's strategy.

### 2.5.1 SWOT Analysis

A SWOT analysis looks into the strengths, weaknesses, opportunities and threats present in the environment a firm operates in (Hitt *et al.*, 2003:77). In contrast to the uncontrollable external environment, the analysis of the internal environment reveals invaluable information about the firm to the strategy creators. As the figure below depicts, the outcomes are different for the external environment as opposed to the internal environment.

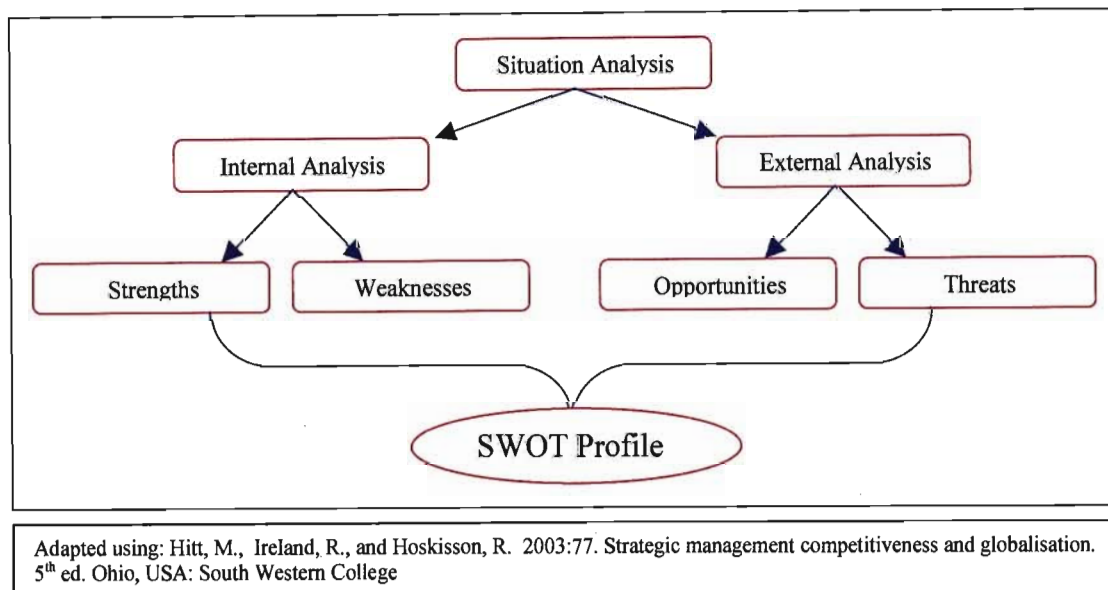
**Figure 2.9: Internal Environment vs. External Environment**



As part of the internal analysis, decision makers need to perform a SWOT analysis. SWOT analysis is a key step in planning and its value is often underestimated despite the simplicity in its creation. SWOT analysis is a simple framework for generating strategic alternatives from a situation analysis. This is usually accomplished by assessing an organization's strengths (what an organization can do) and weaknesses (what an organization cannot do) in addition to opportunities (potential favourable conditions for an organization) and threats (potential unfavourable conditions for an organization).

Ambrosini (1998:122) asserts that this tool has the merits of being straightforward to employ but they also contest that there are problems associated with it, not least in its subjectivity and drawing out any implications from the exercise. As shown in the figure 2.10 below, the role of SWOT analysis is to take the information from the environmental analysis and separate it into internal issues (strengths and weaknesses) and external issues (opportunities and threats).

**Figure 2.10: Steps for Developing SWOT Profile**

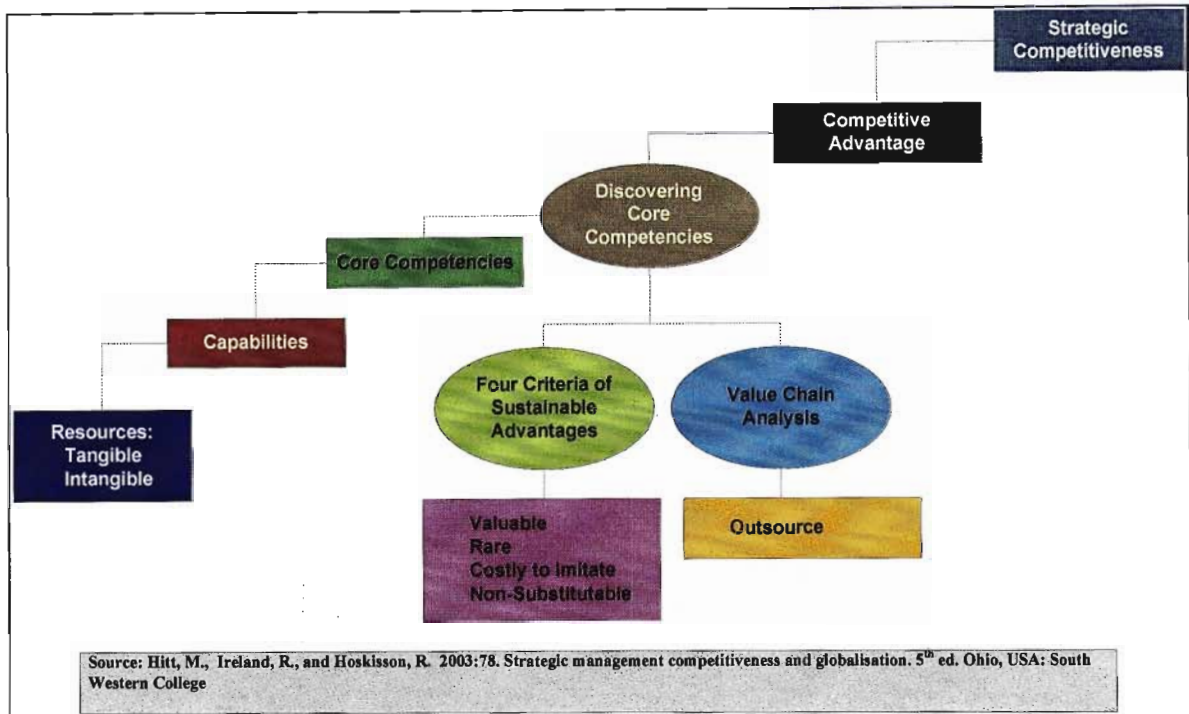


A completed SWOT analysis determines if the information reveals something that will assist the firm in accomplishing its objectives (a strength or opportunity), or if it indicates an obstacle (a weakness or threat) that must be overcome or minimized to achieve the desired end results.

Swot analysis should be used more effectively than is often the case by demonstrating how it can integrate and enhance other frameworks of strategic analysis, and contribute to the evaluation of strategic options (Ambrosini, 1998:122). Other aspects of internal analysis to be taken into consideration are depicted in the diagram below.

The figure 2.11 below illustrates the relationships among resources, capabilities and core competencies and how these could be used by firms to achieve strategic competitiveness. Ambrosini (1998:3) notes that organizations which understand their true strengths are better able to compete successfully in a rapidly expanding and competitive world economy.

**Figure 2.11: Components of Internal Analysis**



Thompson and Strickland (2003:117) suggest that a firm requires perceptive understanding of its resource capabilities and deficiencies, its market opportunities, and the external threats to its future well-being, which are essential to good strategy making. A modern meaning of competitive advantage is an advantage over competitors gained by offering consumers greater value, either by means of lower prices or by providing greater benefits and service that justifies higher prices. Hitt *et al.*, (2003:85) concede that as a source of capabilities, tangible and intangible resources are a critical part of the pathway to the development of competitive advantage.

## 2.5.2 Firm's Resources and Core Competencies

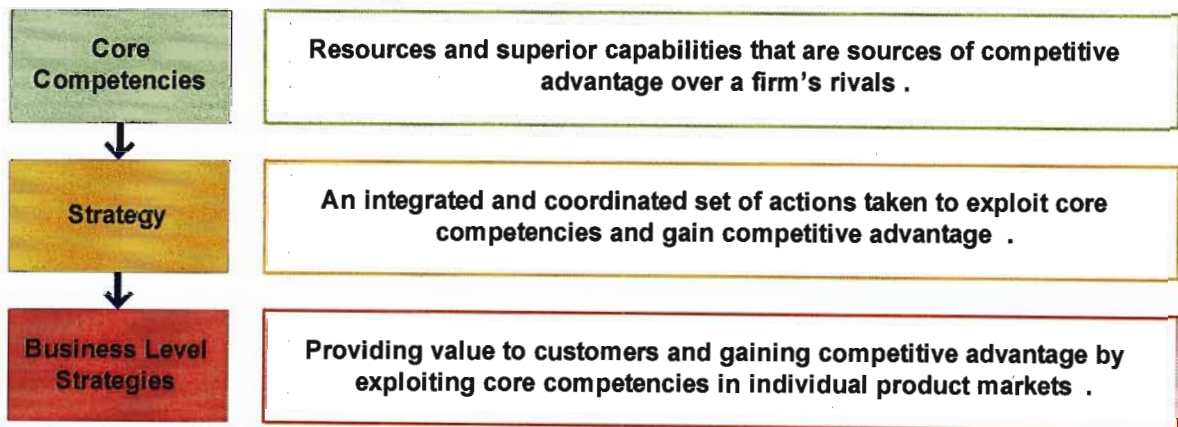
Resources (both tangible and intangible) are defined as those assets, skills, knowledge etc that create and sustain competitive advantage. For idiosyncratic assets to, or become, resources, they must be unique to a firm or rare in an industry, difficult to substitute and imitate, and they must add value to a firm's operations (Barney, 1991:99-120).

The resource based view argues that the key to sustained competitive advantage are those factors available for use in producing goods and services that are valuable and costly to copy. According to Duncan and Ginter (1998:6-17), the organizations with marginal resources break even, those with inferior resources disappear, and those with superior

resources make profits. They also concede that another potential source of sustained competitive advantage is the purposeful coordination of resources. The company's resources define the businesses that make sense for it to own and those that do not.

As cited in Ambrosini (1998:5), the core competences of the organization lie in the collective learning in the organization, especially 'how to coordinate diverse production skills and integrate multiple streams of technologies' core competence is usually referred to as the "enabling culture" of an organisation. The core competences of an organization are considered essential to corporate survival in the short and long term. These invariably are uniquely individual to an organization and are difficult to imitate by competitors. As a mix of skills, resources and processes they confer a capability which is greater than the competence of an individual or operational unit Ambrosini (1998:5). The figure 2.12 below illustrates the linkages between the core competencies, strategy and business level strategy.

**Figure 2.12: Linkage Between Core Competency, Strategy and Business Level Strategy**



Source: Hitt, M., Ireland, R., and Hoskisson, R. 2003. Strategic management competitiveness and globalisation . 5<sup>th</sup> ed. Ohio, USA: South Western College

### 2.5.2 Value Chain Analysis

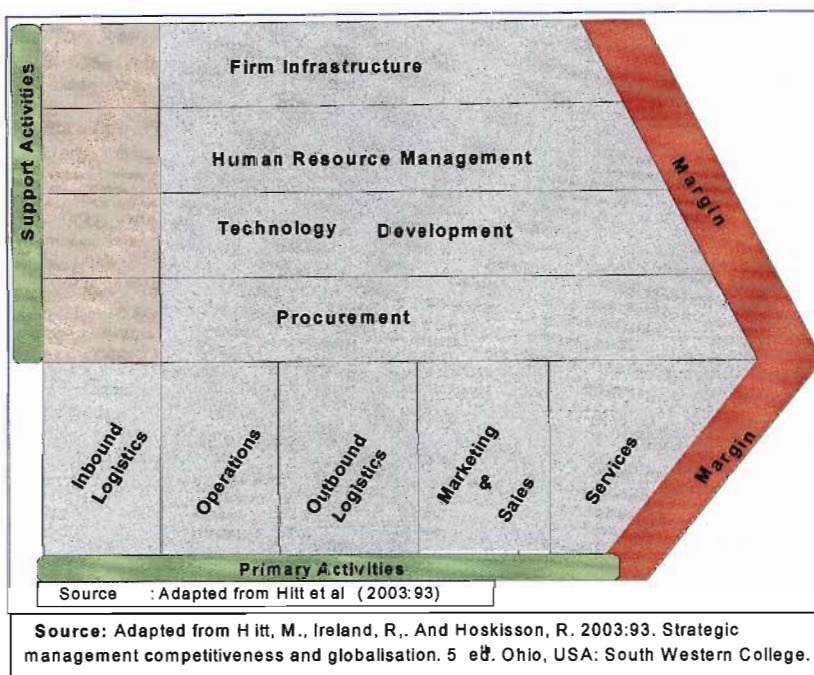
Thompson and Strickland (2003:129) cite that the primary analytical tool of strategic cost analysis is a *value chain* identifying the separate activities, functions, and business processes that are performed in designing, producing, marketing, delivering, and supporting a product or service. A firm's value chain shows the linked set of activities and functions it performs internally. In its basic form, a value chain is meant to identify the



primary activities that create value for customers and the related support activities. The value-chain concept represents the organization as a central link in a chain where upstream links represent their suppliers and downstream links mean their customers (Luchi and Paladino, 2000:349).

The South African automotive industry is to a large extent controlled by the OEMs, where, with a few independent aftermarket exceptions, most automotive component firms in South Africa are reliant on the OEMs for their economic wellbeing, whether it be for OEM or Original Equipment Supply (OES or parts and accessory market) business (Barnes, 2000:402).

**Figure 2.13: Value Chain**



The figure 2.13 above shows the Value Chain model with both primary and secondary activities. Primary activities are involved with a product’s physical creation, its sale and distribution to buyers, and its service after the sale. Secondary activities provide the support necessary for the primary activities to take place. Despite all the unique strengths of value chain analysis (VCA), several weaknesses do become apparent due to the radical changes in the information technology.

Walters and Rainbird (2004:466) assert that the traditional view has been that at the end of the chain is the customer and that the better the chain is at servicing this customer the more value will be created.

A growing school of thought asserts that the traditional VCA oriented around vertical linkages cannot constantly reinvent value at the speed required for successful strategy in this new paradigm, Fleisher and Bensoussan (2002:111). The traditional VCA was developed for physical assets and may not be as appropriate for competition based around intellectual assets. Therefore it is argued that the advent of e-commerce has led to the rewriting of the established laws of economics. Baldwin and Clark (2000) offered a particularly insightful definition of a module; “A module is a unit whose structural elements are powerfully connected among themselves and relatively weakly connected to elements in other units”. Doran (2005:655) indicates that there is a trend towards more modularization of automotive components. He adds that indicative of the modular approach is the transfer from the OEM of a higher percentage of value-creating activities to upstream suppliers. He explains that in reality, what this means to key suppliers within developing modular supply chains (particularly, tier-one, two and three suppliers) is that there will be opportunities to become more involved in activities that would normally be completed by their downstream customers. So, for example, a tier-one supplier may be asked by an OEM customer to undertake activities generally undertaken by the OEM, whilst a tier-one supplier may transfer some of its non-core activities upstream to a tier-two supplier, and so on. Christensen (2004) postulates a law known as “The law of conservation of attractive profit” in which it is claimed that when a product starts to become a commodity, a decommodification process is often triggered somewhere else in the value chain. So managers therefore are able to predict which activities will generate the most attractive profits in the future.

### **2.5.3 Supply Chain Management**

According to Rubesch and Banomyong (2005:67) a strategy that attempts to leverage advantages of global suppliers is “agile” supply chains. They also argue that industries that rely on agile supply chains require the flexibility to meet rapidly changing customer expectations, or to stay ahead of changing technologies, which may quickly become obsolete. They also claim that as supply chain strategies continue to be developed and refined, characteristics of the product itself (size vs. cost) as well as the value of the labour input (quality and efficiency vs. cost) need to be incorporated into global supply chain design and management decision-making framework in order to permit optimum performance. Ratnasingam (2001:265) argues that implementing EDI and electronic trading brings about a number of benefits to the automotive industry.

## **2.5.4 Strategic Entrepreneurship**

Newer entrepreneurial firms are more effective than larger firms in identifying opportunities (Hitt *et al.*, 2003:30). Experts believe that these firms tend to be more innovative as well because of their flexibility and willingness to take risks. Generally larger firms, more often than not, tend to have more resources and capabilities to exploit identified opportunities. Therefore, firms must develop an entrepreneurial mindset among their managers and employees. Hence, the importance of developing the human capital cannot be overemphasized.

## **2.5.5 Cultural Factors and Influences**

According to those who embrace the paradigm of cultural distinctiveness, each culture has its own sense of beauty that has been developed through history and is composed of attitudes, values, and related behaviours (Ball and McCulloch, 1996). Cultures and nations largely function through basic structures such as the family, local groups, circumscribed traditions, etc. As a result, organisational structures (and their functioning) are impacted by distinctive cultural traditions (e.g. Hofstede, 1980:42-63). Shelton *et al.*, (2003:315) show that integrating two independent companies with divergent cultures into one cohesive organization is a daunting and delicate process.

### **2.5.5.1 Societal Culture**

A culture of a society, as stated by Deresky (2003:84), comprises the shared values, understandings, assumptions, and goals that are learned from earlier generations, imposed by present members of a society, and passed on to succeeding generations. Diversity is a business imperative for any firm in today's globalized economy. The goal should be to build a diverse, energetic working environment that recognizes and encourages creativity and excellence. Pett and Dibrell (2001:353) state that national culture is a macro level concept; consequently, for national culture to play a role in an organization's decision making process, a linkage must be made between national culture and the organisation. They also assert that the organization is a reflection of the national culture. Diversity should not at all be a mere decorative corporate slogan—it is an important part of the business strategy.

The marketplace is ever changing. New growth opportunities are emerging. As the various nations' minority populations grow, the business case for diversity becomes even stronger.

Experts proclaim that a diverse workforce which includes women and people of colour, increases opportunities to reach new markets, improves recruitment and retention, deepens customer loyalty and strengthens employee commitment and morale. It is no longer just the right way to do business, it is a business imperative.

The employment of a more diverse workforce requires organizations to change practices, behaviours, and attitudes to enhance performance and quality of work life, and many organizations have developed diversity initiatives in response to these pressures. Diversity initiatives in successful organizations include a variety of practices ranging from training seminars and orientation sessions to affinity groups, aggressive recruiting and retention efforts, management accountability, executive diversity councils, and work-life programs. A key global trend is enhancing the relative status of historically excluded groups to reduce inter-group inequality in organizations. Similarly, South Africa has also had a reawakening of the idea of encouraging a more cross cultural workforce which nurtures creativity and innovation (Denton and Vloeberghs, 2003:84-95).

#### **2.5.5.2 Organizational Culture**

Culture is viewed as a set of broad and tacitly understood rules and procedures that inform organizational members on what, and how, to do under a variety of undefined situations. According to Schein (1985), corporate culture is a set of basic assumptions invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems.

Corporate culture is sometimes also viewed as a system. Organizations are but one small aspect of the society as a whole, thus it has been said that it is possible for organizations to have a paradoxical quality of culture in that they are part of and apart from the society. A change of culture must mean changing the corporate ethos, the images and values that inform action. This new way of understanding organizational life, the signs and symbols that the organization is recognized by, must be brought into the management process. Organizational culture seems to be a critical factor in the success of any organization. Syrett and Lammiman (1997:48-54) observe that successful organizations have the



capacity to absorb innovation into the organizational and management processes. Organizational culture affects the extent to which creative solutions are encouraged, supported and implemented. A culture supportive of creativity encourages innovative ways of representing problems and finding solutions.

### **2.5.6 Leadership**

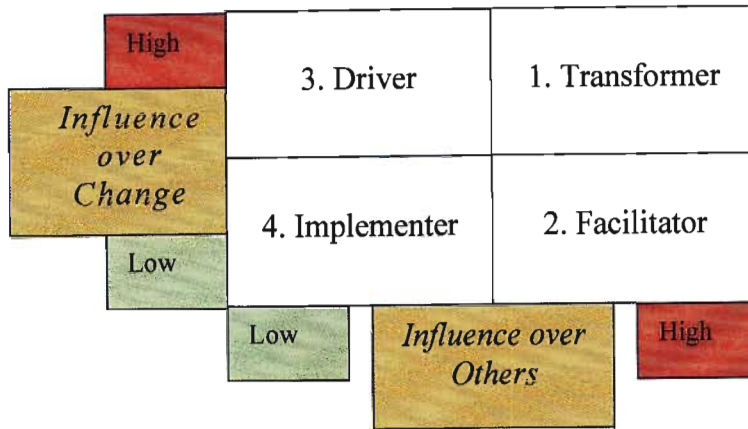
Deresky (2003:84) states that the task of helping employees realize their potential in the workplace is the essence of leadership. The goal of every leader should be to achieve the organizational objectives whilst also achieving those of each employee.

Interest in the importance of leader characteristics to organisation effectiveness has increased due to growing interest in transformational leadership and organisation change. Numerous leadership types have been identified; some of which include transformational, strategic, charismatic and transactional. Unfortunately, experts agree that there is little agreement as to the exact definition and measurement of these typologies. In fact it has been opined that these leadership types are not necessarily mutually exclusive.

Effective leadership requires that leaders provide a clear and compelling sense of direction to subordinates and indeed the organization. This is particularly important in times of rapid change for organisations. However, not all situations where this kind of leadership is needed are identical. This therefore warrants a leader to adapt to the requirements of these different types of situations.

Manning and Robertson (2002:137-143) have categorised the essential and desirable leadership facets in different situations in the following figure.

**Figure 2.14: Types of Leadership Situation**



Source: Manning, T., and Robertson, B. 2002. The dynamic leader –leadership development beyond the visionary leader. *Industrial and Commercial Training*. 34 (4):142

As the figure 2.14 suggests, for example, leaders who are in the role of “transformer” should have all facets well-developed, although vision, source and macro characteristics are essential. Those in the other leadership situations would emphasise other characteristics in order to be effective. Coad and Berry (1998:167) express that these different roles of leaderships are not mutually exclusive.

**2.5.6.1 Strategic Leadership and Organizational Change**

Leadership is stated to be at the heart of any change process. Therefore all organizations need strong leadership in order to affect significant and sustainable changes. To maintain and improve productivity and profitability, and hence competitiveness in the long run, organizations must go beyond short-term remedies to solve their immediate problems (Graetz, 2000:551).

Downsizing, restructuring, re-engineering, virtual corporation, virtual workers, strategic alliances, process management, pay for performance, cost cutting, and the like, exemplify the efforts of most companies in their attempts to maintain their competitiveness (Business Week, 1994:79-94).

Organizations which are successful in maintaining their competitiveness have learned to view change not as a one time event, but an ongoing process necessary to remain on the cutting edge in meeting customer needs (Kaufman, R.S., 1992:88-93).

According to Rothschild (1996), three factors are the key to successful strategic leadership, viz:

- Just as strategies must change, so must leadership
- Each strategic differentiator requires a different leader and implementation team
- Leader and life-cycle phase must be matched

For organizations to succeed, the above factors need to be bonded mutually. Successful organizations today have a clear understanding of the factors influencing their effectiveness and efficiency and have developed a capability for adjusting these factors continuously to maintain their competitiveness. They have built an organizational climate that fosters creativity, harmony and teamwork, where continuous improvement (kaizen) has become a way of life.

The failed corporations of the twenty first century stand out as examples of the failure of the traditional approach to organizational change. The success lies in the ability to involve people in the common vision and belief of the organization. Leaders also need to understand that the human side of the organization offers a good opportunity for lasting change and sustained positive growth.

All organisations encounter many different forces of change. These forces come from external sources outside the organization and from internal sources within. Awareness of these forces can help managers determine when they should consider implementing an organizational change; and doing so in a successfully sustainable manner with the pertinent input of all necessary stakeholders. Many of the modern organizations are applying the new philosophy of Organizational Development (OD) to change its culture, structure and operating procedures to create an environment where proactive behaviour towards change is the norm.

Rylander and Peppard (2003:325) argue that, increasingly, the actions and statements of top managers simultaneously affect organizational identity and image, partly due to the increasing levels of interaction between organizational members and suppliers, customers, regulators and other environmental factors, as well as the multiple roles of organizational members who act both as “insiders” (i.e. as employees) and “outsiders” (e.g. as customers, community members and/or members of special interest groups). Research by Dutton *et al.*,

(1994:239-63) has shown that a person's wellbeing and behaviour are affected by how both organizational members and outsiders view the organization. They claim that when members believe that outsiders see the organization in a positive light, they "bask in the reflected glory" of the organization, which may translate into desirable outcomes such as greater co-operation and citizenship behaviours. Conversely they note that perceived negative views by outsiders, on the other hand, may lead members to experience negative personal outcomes such as depression and stress, which in turn could lead to increased competition among members and reduced effort in the long term. Slywotzki and Nadler (2004) propose that traditionally, strategy has dictated structure but if one lets strategy and organizational change evolve in parallel and influence each other, the organization will have a better chance of keeping up with its markets.

### **2.5.7 Benchmarking**

Benchmarking has established its position as a tool to improve an organisation's performance and competitiveness by identifying and adopting the best practices from others and, recently, also by developing the best practices with others (Kyro, 2004:52). Simply put, benchmarking means improving an organization by learning from others. According to Xerox Corporation, "Benchmarking is the continuous process of measuring products, services and practices against the toughest competitors or those companies recognised as industry leaders (best in class)."

Benchmarking has gained popularity as a tool for making comparisons in performance and cost against rivals improving to meet the standards.

Thompson and Strickland (2003:136) point out that the toughest part of benchmarking is not whether or how to do it but rather gaining access to information about other companies' practices and costs. Quite often, the concept of benchmarking is misunderstood to be an act of copying or imitating. But, as stated by Thompson and Cox (1997:40-3), quite contrarily, in reality, this proves to be a concept that helps in innovation rather than imitation.

### **2.5.8 Scenario Planning**

When a firm is exposed to a change in the environment within which it operates, it must ascertain how the impact of change processes affect the strategy selection, its related resource deployment and the nature of its competitive advantage within that environment. The evolution of market variables arising from environmental change within a market may

require a change in a firm's strategies in order to respond to the potential opportunities created by these variables. What these new strategies will be is related to that firm's evaluation of those opportunities. Once a firm has created new strategies to deal with the opportunities presented by a changed marketplace, certain alterations may be required within their organization to satisfy the critical success factors identified by the firm for achieving a competitive advantage.

One of the pitfalls in most analytical techniques in strategy development is their approach to strategy in that they are all heavily influenced by historic data Fleisher and Bensoussan (2003:284). Scenario planning is an interactive, group oriented supplementary technique which addresses the strategic developmental process to discover & develop new forms of competitiveness and sources of strategic advantage. It's a creative approach that imagines many possible futures of environmental change; reduces these many scenarios to a manageable number of possibilities from which decision makers can extract vital information pertaining to strategy selection. As with all other techniques, impending weaknesses do exist in scenario planning in the form of inherent bias and group consensus difficulties.

## **2.6 Globalisation of Automotive Industry**

In 1983, marketing Professor Theodore Levitt wrote a landmark article in the *Harvard Business Review*, entitled 'The Globalization of Markets'. Since Levitt's article, many corporations have embraced globalisation strategies with gusto. On the other hand, some critics believe that the fruits of globalization have not been fairly shared.

Much exhaustive debates about the merits and evils of globalisation have been explored by many individuals. Globalization, like all strategies, is essentially amoral, concentrating on economic objectives; however, moral objectives and corporate social responsibility can become an inherent part of a globalization strategy if these social goods also satisfy corporate economic aims (Internet 5).

Globalization is based on the belief that the world is becoming more homogenous and more inter-dependant; the way in which national economies are becoming increasingly interconnected with one another (Liard-Muriente, 2005). Distinctions between national

markets are fading. As a consequence of globalization, firms are able to capitalize on the blending of national markets by penetrating these markets with lower cost products through economies of scale. Firms are also able to capitalize on the disparities of production costs between nations through locating their production facilities in the low cost markets, (Veloso and Kumar, 2002:41).

Transnational business has increased by leaps and bounds and global competition and globalized business is now the new order. Although good for consumers, globalization is introducing seasoned foreign competitors into the hitherto sheltered markets of the Third World ( Srinivas, 1995:26).

Aláez *et al.*, (1999:255) had described how automotive assemblers have modified relationships with their suppliers in a constant attempt to lower costs where they summarized these changes as a tendency to buy standardized systems from a single source. They add that the main aim of this strategy was to create economies of scale in the systems suppliers. Implications are that in the automotive industry, globalization can have tremendous cost benefits. The automotive Original Equipment Manufacturer's (OEM's) have traditionally taken a multinational strategy in formulating a global strategy. For example, the OEMs have traditionally operated separate entities in North America, Europe, Asia, and South America that for the most part have acted independently with little if any synergies across organizations (Doh, 1999:474). This strategy has resulted in substantial inefficiencies in product development costs and to a lesser extent production costs. In 2002, global production of motor vehicles (passenger vehicles plus light and heavy trucks) was just over 59 million units.

The main vehicle producing areas are Asia-Pacific, including Japan and Korea (19.3 million), Western Europe (17.4 million) and North America (16.8 million). These areas are also the largest markets with sales figures in the same year of 14.2, 16.7 and 19.9 million respectively (European Foundation for the Improvement of Living and Working Conditions, 2004:2).

The industry is organised globally, with production dominated by large firms and groupings (European Foundation for the Improvement of Living and Working Conditions, 2004:2). It also added that the largest 10 companies and groupings account for almost 83%

of global car production, and the six major groups – General Motors, Ford, Toyota, DaimlerChrysler, Volkswagen and Renault-Nissan – account for two thirds of it.

Throughout its history, the automobile industry has undergone mergers and acquisitions (M&As). Recent examples include the control of Chrysler (1998) and Mitsubishi (2000) by Daimler-Benz. Manufacturers have also used M&As to enter expanding markets such as Korea, for example Renault's purchase of Samsung (2000), General Motor's purchase of Daewoo (2003), and DaimlerChrysler's 20% stake in Hyundai; amidst all this plethora of developments, some analysts however do predict that only six global producers will survive: two in Europe, two in Japan and two in the US (European Foundation for the Improvement of Living and Working Conditions, 2004:7).

The European Foundation report supports this notion in Japan and the US with the only exception being Europe where there are six auto manufacturers. Ealey and Troyano-Bermudez (2000) note that the global automotive industry has reached a plateau in most developed countries. Many emerging market economies (EMEs) perceive this automotive manufacturing sector as an engine of economic growth. With this primary benefit, there are also secondary benefits such as technological spill-overs from the developed economies.

Government trade, safety, and environmental regulations establish incentives and requirements for modernization and change in design or production. Veloso and Kumar, (2002:7) argue that a flat demand is aggravated by increased competition in the product market. As industries mature and competition becomes more global, government regulation and promotion and other non-economic factors come into play (Doh, 1999:13).

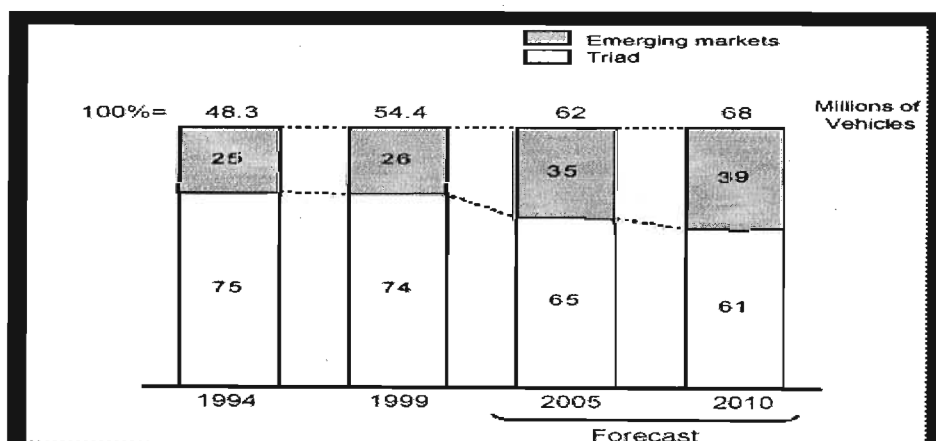
The past two decades have seen most OEMs investing heavily in plants outside their home base to better reach local consumers. This invariably has resulted in market shares of incumbent players narrowing (Veloso and Kumar, 2002:2). It is claimed that in the US, domestic automakers have lost more than 20 percent market share to Japanese and Korean automakers in the past two decades. Europe has experienced a similar trend, although ameliorated by the stricter regulations on the participation of Japanese OEMs that were in place until recently (Veloso and Kumar 2002:2). Evidence suggests that sales growth is now predominantly coming from developing regions, with South America, India, People's Republic of China (PRC), and Eastern Europe leading this trend (Veloso, 2000:4).

Not surprisingly, the governments of emerging markets are welcoming this inflow of foreign capital from developed nations; and along with it technological knowledge. Technological progress is more easily achieved when long-term contracts are established (Vale, 2004:4). This trend is evident in India, for an example, where their economic policies pre 1992 were mostly inward looking but post 1992, the economy has been more open to attract foreign direct investment (FDI). China and India have witnessed significant jumps in their growth rates as they opened up their economies to international trade and foreign investment (Panagariya, 2004:147). These developing economies are characterised by steady and consistent economic growth which is proving to be a lucrative factor for developed country auto giants looking to expand their growth, examples of these markets would include China and India amongst others.

## 2.7 Major Trends and Drivers in the Automotive Industry

Unprecedented changes have occurred in the automotive industry globally. As with any other industry, consumer preferences dictate the current styles, reliability, and performance standards of vehicles. All automakers are constantly under relentless pressure to identify ever evolving consumer preferences and new market segments where they can sell vehicles and gain market share (Velooso and Kumar, 2002:2). Their future success in the industry depends on their ability to be flexible enough to quickly respond and adapt to all these pressures; the rippling effects of these factors are seemingly streamed along the supply chain of the automakers, Velooso (2000). The figure below shows the growth comparison between the emerging markets and the triad. It can be observed that sales of vehicles in emerging markets are on the increase.

**Figure 2.15: New Vehicle Sale Indicators (Triad vs. Rest of the World)**



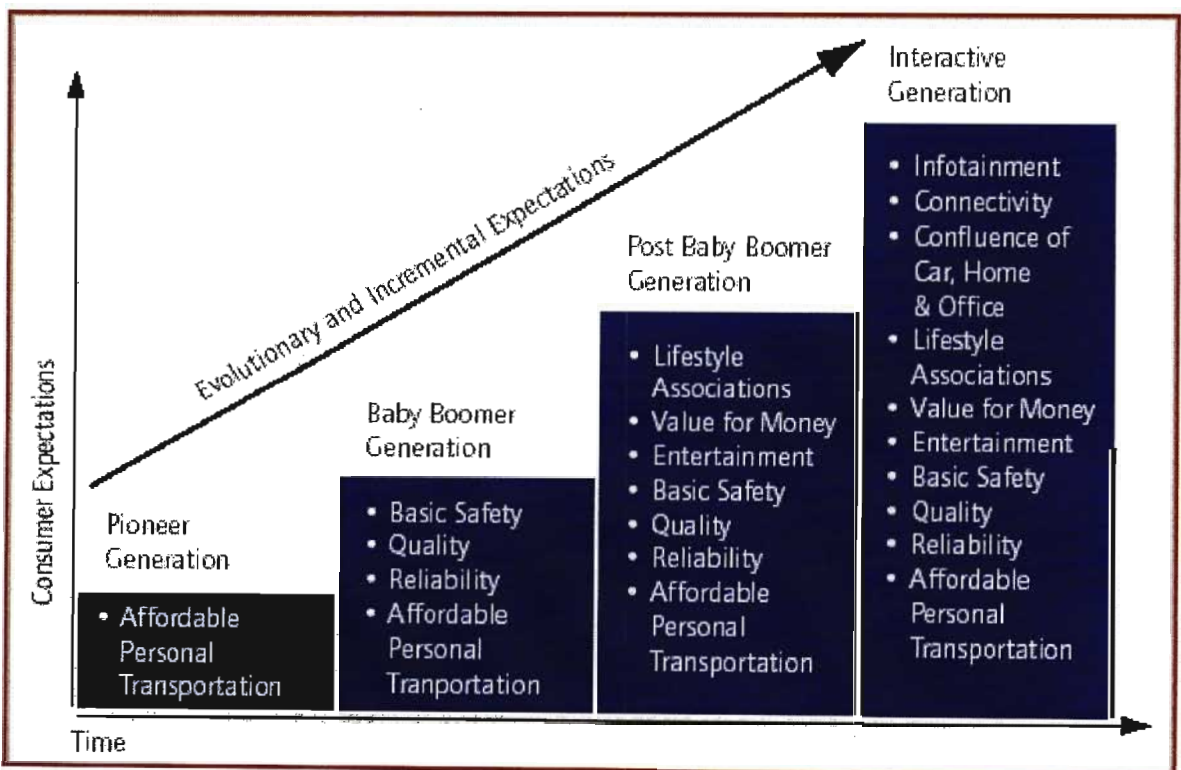
Source: Velooso, F. 2000. The automotive supply chain: Global trends and Asian perspectives. Massachusetts Institute of Technology:3.



Most original equipment manufacturers (OEMs) have been facing a mature market for the past 10 years, with stagnant demand, product proliferation, and stiff price competition with local and global markets (Veloso and Kumar, 2002:2). Evidence suggests that the demand for new cars has been growing on average less than one percent a year during the past 10 years and this trend is forecast to continue. This growth has led to more diversified needs from the already varying customer segments, (Veloso, 2000).

Today’s demanding consumers, be it through necessity or preference, have developed particular expectations in vehicle features, performance, or safety aspects, hence the myriad of multiplicity in models. On the market, customer preferences together with governmental regulations are shaping the industry. The pressure to reduce emissions and improve fuel consumption is driving vehicle weight reductions through material changes such as increased use of aluminium, magnesium plastics and composites. Advancements in technology and changes in the use of materials will also facilitate cheaper modes of assembly, enhanced occupant and pedestrian safety, and recycling (Veloso, 2000). The figure below shows the changing trends in customer expectations.

**Figure 2.16: Progression in Mature Markets’ Consumer Expectations**



Source: Blake, D., Cucuzza, T., Rishi, S. 2003. Now or never: the automotive collaboration imperative. *Strategy and Leadership*. 31(4):13

Automotive-industry systems suppliers have been characterized by specialization and internationalization in recent years (Sadler, 1999). These two tendencies are related: a supplier specialized in one specific system will expand its scale to the world market.

The automobile industry provides a good example of new production organization principles where the externalization of production appears both as a strategy for cost reduction and risk minimization, and as a way to improve firm competitiveness through collaborative partnerships between suppliers and carmakers (Vale, 2004:127). This is particularly true of the Japanese carmakers, for whom a tight-knit network of suppliers produces a large proportion of components (Grabher, 1993:1-31). New ideas stemming out of Japan usually get adopted and adapted by most other carmakers. The supplier networks have been somewhat reorganized to meet the various demands and flexibilities within the production environment.

First tier suppliers generally deliver complete functional systems and are also involved in collaborative R&D activities with the carmakers. Depending on the product type, in most cases the delivery operates on a just-in-time (JIT) basis, so suppliers are often located near the assembly plant for logistical reasons. Second-tier suppliers are usually involved with developing and producing components and are encouraged occasionally to set up plants or warehouses in the proximity of first tier suppliers' plants, especially if components are bulky or heavy (Hudson, 1994:331-45).

Finally, third-tier suppliers deliver smaller parts to be incorporated in functional systems developed and produced by the other suppliers. To become a member of a supply chain, especially for third-tier suppliers, price rather than quality and development capability is seemingly often the key factor. The ongoing interaction between firms can be seen both in small organizations and in large corporations that combine scale and scope economies (Vale, 2004:126).

In products of this nature, the most important drivers for changes are the ever decreasing product life cycles and increasing product customisation along with wider variety. Shorter product life-cycles demand cost reductions, reduced development time and faster production ramp-ups (Almgren, 1999:79-86). Yet the heart of the problem is that the product customisation concept affects the cost efficiency since the volume per each product

variant is reduced. The manufacturers have somewhat overcome this problem by using a single global platform for several product models where the product volumes may be increased at the same time as product variants can be created by modifying modules.

Veloso and Kumar (2002:2-5) note that the move toward modules within the automotive sector has been influenced by a number of factors including declining profit per vehicle, shorter product life cycles and the increasingly sophisticated demands of consumers in global markets. This view is echoed by Christensen (2001:74-81) who demonstrates that in order to compete in such markets and under such conditions manufacturers and their suppliers must design and produce modular products.

Doran (2005:655) observes that within the automotive sector the most visible example of the trend toward modularisation is the “Smart” car collaboration between Mercedes-Benz and the watchmakers Swatch. He adds that whilst a typical car manufacturer would deal with around 200-300 suppliers, the smart car collaboration uses 25 suppliers who are equipped to supply modular assemblies.

For the manufacture and assembly of products, the use of modules for product customisation will have far reaching implications. It becomes a costly exercise to keep stock of these expensive modules of different variants thus to circumvent this problem, just-in-time sequenced delivery was introduced. Short delivery time then becomes an important criterion which, in turn, demands that suppliers are located close to the customers’ assembly plants (Millington *et al.*, 1998). There, product modules are customised and then delivered just-in-sequence to the car manufacturer’s assembly line therefore this demand on proximity in module supply is another important factor behind the globalisation of suppliers’ production activities (Helper *et al.*, 1999).

The newly revised European Union’s policy for new car distributions due to be implemented by 2010 will have inevitable negative impact for car part manufacturers (Creamer-Kuhn and Junghans (2004). They say this is expected to drain out ten billion Euros in annual operating profits from the auto parts industry and leaving a mere three to four billion Euros to be shared annually amongst the three major market players being the OEM suppliers, the OEM car manufacturers and the copy manufacturers. This, they claim, is mainly driven the broader re-definition of the original spare parts that which is sold

under the banner of the car manufacturers and this also goes to include parts produced and branded by any manufacturer that match a car manufacturer's specifications. This new scenario will attract more competition for the after market sector due to the lucrative profit margins that becomes available. Moreover, the previously traditional high flying OEM parts manufacturers would face stronger competition from new entrants to the market.

According to Humphrey (2003:121-141), the changes in the governance of the auto industry have had major consequences for the structure of the components industry in emerging market economies such as India and Brazil.

A new trend of organizational learning is emerging. This is evidenced in different forms of interaction which range from outsourcing to strategic alliances and joint ventures. (Hudson, 1999:59-72) states that the relations between companies and institutions are based on trust, cooperation and the sharing of knowledge for mutual benefit. This is the case in the supply chains of major Japanese carmakers as well as other major international automobile manufacturers. For maximum efficiency, the whole supply system needs to be lean.

Doran (2005:661) argues that the move toward modularisation by OEMs is likely to require first, second and third-tier suppliers (and possibly suppliers further upstream) to review their strategic positioning within modular supply chains. His notion is that order-winners and qualifiers are likely to change within such an environment and the issue of buyer/supplier relationships is likely to shift to the first-tier stage from the key area of the OEM/first-tier supplier stage. He therefore concludes that in order to succeed within a modular context, it would be necessary for operations to drive change and to determine which strategies are likely to result in the successful, profitable move toward supplying on a modular basis.

## **2.8 Consolidation and Collaboration Within the Automobile Industry**

Restructuring and change have characterised the automotive industry during the past decade. Factors such as overcapacity, demanding customer requirements, combined with evolving stringent environmental legislations and rapid technological advancements have proven to be major drivers behind this development (Veloso and Kumar 2002:2).

As automotive manufacturers seek to cut costs, they outsource more and more to the supply industry. It's argued that this externalises a proportion of fixed (overheads) and variable (materials) costs, and shares the risk for new developments (European Foundation for the Improvement of Living and Working Conditions, 2004:7-8). Outsourcing is believed to allow greater economies of specialisation and scale, since suppliers are more experienced in certain functions and can supply several carmakers. The claims are also that manufacturers have sold off their in-house component companies in order to concentrate resources and raise funds e.g. General Motors and Ford's two component arms became Delphi and Visteon, respectively (European Foundation for the Improvement of Living and Working Conditions, 2004:7).

Suppliers that have specialized in a certain process do not carry out product development as their innovation is focused on improving the production process. They will be expected to have the capacity to maintain constant price cuts and to fulfil quality and delivery requirements. Thus, the proper size is closely related to economies of scale at plant (Aláez, *et al.*, 1999:4).

Helper (1993:141-60) provides a good discussion of 'exit' and 'voice' strategies in supplier relations. When a customer firm has problems with a supplier, it can choose another supplier (exit) or it can work with the supplier until the problem is solved (voice) (Vale, 2004:127). Helper (1993:141-60) shows that for a carmaker an exit strategy requires many potential suppliers who have the ability to compete for each part. The selected supplier has only a short-term contract, and if there are problems the carmaker has the flexibility of quickly changing to another supplier. The exit strategy demands complex in-house engineering and R&D activity for the carmaker. But on the other hand, the voice strategy requires a good communication system with suppliers in order to resolve all the problems that may arise.

Many analysts believe that under cost pressure from the automakers, the trend of supplier consolidation is likely to go further. Knowledge is a key strategic resource and learning is the most important process for innovation. Vale (2004:126) states that the interaction between firms can be seen both in small flexible firms and in large corporations that combine scale and scope economies. It is added that a new model of firms' learning is emerging, evidenced in different forms of interaction which range from outsourcing to

strategic alliances and joint ventures. The relations between companies and institutions are said to be based on trust, cooperation and the sharing of knowledge for mutual benefit (Hudson, 1999:59-72). This is the case in the supply chains of major Japanese carmakers as well as other major international automobile manufacturers.

The counter arguments are that in the case of the automotive industry, collaboration between firms does not mean symmetrical power relations, as collaboration in the suppliers network is quite often not based on trust but on a cost-reducing coercive strategy (Vale, 2004:4).

In their attempts to reduce costs, car makers have begun to build a larger model variety on to fewer vehicle platforms (Lorentzen and Barnes, 2004:7). They also add that outsourcing and long-term co-operation for components that require relationship-specific investments have increasingly replaced the high degree of vertical integration and arm's length contracts that traditionally characterised the industry.

In spite of the number of mergers and collaborative agreements within this industry in recent years, it is too soon to predict them as a success or a failure.

Many industry experts believe that over the next decade the challenge is to remove inventory and move to customer order driven stockless supply. The consensus seems to be that the mass customization has long been the strength of the automotive industry, but build to order makes possible a supply chain more responsive to the day-to-day behaviour of the market place and mass customisation. Quite analogous to this would be the Compaq computer group in North America where they build computers to order and deliver within days. The push system takes full benefit from economies of scale in production and input acquisition by producing optimal output size and then distributing to wholesalers and retailers, and, intelligent versions of the traditional push system are employed, for instance, by Compaq, IBM, and Hewlett-Packard (Papadakis, 2003:1-4).

The internationalisation of the market means that the manufacturers have to guard against lack of market growth since the bad effect transcends from one market place to another quite rapidly. As all manufacturers are jockeying for market share, even the slightest signs of market share losses spells imminent catastrophe for the firm concerned. General Motors

Corp., which is planning big job cuts and plant closures as it fights to avoid bankruptcy, showed it had lost \$4.8 billion in the fourth quarter and \$8.6 billion in all of 2005, dragged down by losses in its North American division. It was the fifth-straight quarterly loss for the world's largest automaker and the worst annual loss since 1992 (Internet 6). GM's results came shortly after Ford announced a profit of \$2 billion for 2005. But Ford also struggled in its home market, losing \$1.6 billion in North America, and announced a plan to cut 30,000 jobs and close 14 facilities by 2012 (Internet 6).

## **2.9 The South African Automotive Sector**

Although marginal by the standards of emerging markets with significant regional or global roles such as Mexico or Brazil, automotive production is an important industry in South Africa which comprises seven producers of light vehicles, a number of specialist medium and heavy commercial vehicle makers, and some 250 dedicated component manufacturers, many of whom are subsidiaries of multinational firms (Lorentzen and Barnes, 2004:9).

Generally positive developments have taken place in the South African vehicle industry for the past few years. This is in sharp contrast to the early 1990s where vehicle import duties were spiking to more than 100%. The automotive market locally placed emphasis on high local content requirements which was inward oriented towards the domestic economy. Despite being the largest manufacturing sector in SA (nearly 30% of total value added), only 0.7% of global vehicle production is located in SA (ranked 19th globally in 2003) (Barnes and Deghaye, 2005:1-7). The Motor Industry Development Programme (MIDP) was instituted in 1995. The MIDP allows manufacturers to use credits earned on vehicles or components exported to rebate import duties.

It consisted of a package combining a series of incentives with substantial import liberalisation – for example immediately cutting the import tariff on completely built up vehicles (CBUs) from 115 per cent to 65 per cent. Two reviews, in 1999 and in 2002, extended the programme to 2007 and 2012, respectively. Import tariffs are scheduled to reach 25 per cent for CBUs and 20 per cent for completely knocked down components (CKD) by 2012 (Lorentzen and Barnes, 2004:9). Next to gradual tariff reductions and the abolition of local content provisions, the most important feature of the MIDP is the Import-Export Complementation Scheme (IEC) (Barnes, 2000:6). Under this scheme vehicle

assemblers and component suppliers can earn Import Rebate Credit Certificates (IRCCs) from exporting. Based on the value of local raw materials and value added in the exported product, these duty credits are tradable and can be used to offset import duties on vehicles or components. In turn, this allows vehicle manufacturers to buy credits from component exporters to finance the import of completely assembled vehicles not produced locally, or of components they prefer to source abroad (Milazi, 2004).

Trade & Investment South Africa (Tisa) automotive promotion manager Norman Lamprecht, as cited by Abdul Milazi in Financial Mail, 26 March 2004, says that more opportunities are opening up for the component sector as a result of several new export programmes announced by Ford, VW, and Nissan. He also adds that manufacturers such as Daimler Chrysler, VW, Delta, Ford, BMW, Nissan and Toyota use the rebates to import other components. Consensus in the market is that the automotive sector was overprotected and an inefficient sector.

The SA government is also seemingly playing an active role in the automotive sector through the creation of automotive supplier parks (ASPs) in the vicinity of local giant car manufacturers such as BMW and Nissan (Milazi, 2004). All the major car manufacturing subsidiaries are being incorporated into their main head quarters.

States David Furlonger in his article Financial Mail, 04/01/2002, "Last rites are being administered to SA's motor industry as an independent entity." Toyota SA is restructured to reflect Japanese control; Delta Motor Corporation has returned to the General Motors fold. Upon completion of these takeovers, the industry's last claim to independence will be gone and all the country's vehicle assemblers will be foreign owned as shown in the figure below.

The figure shows South African OEMs and the gradual change of ownerships into their corporate head offices.



**Fig 2.17: The Changing Ownership Structure of the South African Based OEMs**

South African OEM	Ownership: 1990	Ownership: 1998	Ownership: 2000	Ownership status: 1990 to 2000
Toyota	100% local (listed on Johannesburg Stock Exchange)	72.2% local (JSE listed), 27.8% Toyota (Japan)	72.2% (JSE listed), Toyota (Japan): 27.8%	<i>South African to Joint Venture</i>
Volkswagen	Volkswagen AG: 100%	Volkswagen AG: 100%	Volkswagen AG: 100%	<i>MNC -- no change</i>
BMW	BMW AG: 100%	BMW AG: 100%	BMW AG: 100%	<i>MNC -- no change</i>
DaimlerChrysler	DaimlerChrysler (Mercedes Benz): 50%, Local 50%	DaimlerChrysler (Mercedes Benz): 100%	DaimlerChrysler	<i>Joint Venture to MNC</i>
Samcor (Ford)	100% local (Anglo American)	Anglo American: 45%, Ford: 45%, Employees trust: 10%	Ford: 90%, Employees trust 10%	<i>South African to MNC</i>
Automakers	87% local, Nissan Diesel (Japan): 4.3%, Mitsui & Co. (Japan): 8.7%	Sankorp (local): 37%, Nissan (Japan): 50%, Nissan Diesel: 4.3%, Mitsui: 8.7%	Nissan (Japan): 87%, Nissan Diesel: 4.3%, Mitsui & Co.: 8.7%	<i>Primarily South African to MNC</i>
Delta	100% local (management)	Local managers: 51%, General Motors: 49%	Local managers: 51%, General Motors: 49%	<i>South African to Joint Venture</i>

Source: Barnes, J. 2000:12. Domestic market pressures facing the South African automotive components industry. Research Report No. 33. School of Development Studies. University of Natal:Durban

A similar trend seems to be unfolding in the componentry sector. According to Furlonger (2002), the international industry is suffering from over capacity thus the SA companies can no longer afford to go it alone nor can they survive on the crumbs of a stagnating local market; they do need exports. He also points out that there's a downside to this loss of independence as well where it makes it easier for multinational owners to close down the SA operations for when global overcapacity persists and SA companies cannot match the global quality & pricing standards.

Sales of new cars in South Africa have reached all-time highs, boosted by an emerging black middle class, once under apartheid's thumb and now playing an increasingly important role in the economy (Internet 18). The National Automobile Association of South Africa (NAAMSA) — which represents all major motor manufacturers — announced that car sales figures for the first time shot past the half-a-million-mark in 2005. The industry sold 565 018 new units in 2004, up 25.7 percent from the previous year, with a quarter more South Africans fleshing out money for new private cars last year compared to 2004. Nico Vermeulen, NAAMSA's director, attributes the surge in sales to a boom in the country's economy, which grew at an estimated five percent last year, low interest rates and the emergence of the new black middle class.

Vehicle exports were heading for a record year with Naamsa's forecast at 145500 units. This is significantly higher than 2003's 111253 units and the previous export record of 126661 achieved in 2003. Naamsa expects exports to increase to 205500 a year by 2007 (Lourens, 2005).

Volkswagen SA MD Andreas Tostmann has called for government and the country's car manufacturing industry to develop a post-2012 Motor Industry Development Programme strategy (Njobeni, 2005). SA's automotive sector should not rely on MIDP alone to break out of its small production mould, warns industry analyst Tony Twine of Econometrix. Many analysts do agree that the vehicle industry in South Africa has made significant progress but they also remark that further challenges lie ahead.

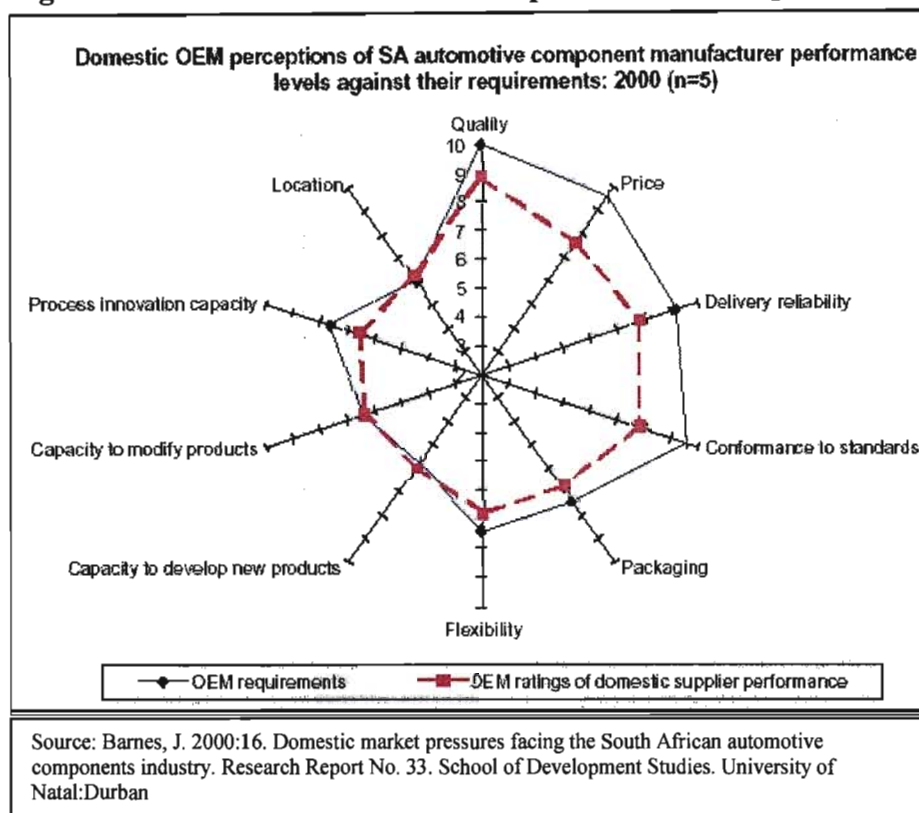
## **2.10 The South African Automotive Component Sector**

The changing nature of the ownership patterns of the South African based OEMs is highlighted in figure 2.17. Barnes (2000:12) argues that the reintegration of the domestic OEMs into their global families offers both opportunities and threats to the domestic component manufacturers. At the one level it forces the component manufacturers to comply with internationally set performance standards or lose business, whilst at another level it facilitates exporting opportunities for globally competitive firms. The recent times have seen a positive exports growth within the South African economy. The automotive industry accounts for approximately 6% of GDP. However the growth has not ameliorated the job losses in the industry. Although, the export growth seems to have benefited other industries such as leather, steel, aluminium and platinum group metal suppliers. The phenomenal growth by the seven multinational car makers operating in South Africa has been underpinned by incentives under the state's MIDP. The car component industry that initially started as a small supplier to the domestic after market has grown into SA's leading manufacturing sector in the wake of the boom. According to Trade & Investment SA (Tisa) automotive export manager Norman Lamprecht, more opportunities are opening up for the component sector as a result of several new export programmes announced by Ford, VW, and Nissan (Milazi, 2004).

Barnes and Black argue in the Business Day (2002) first edition that the motor industry development programme has played an important role in the transition towards a more competitive industry.

They also add that the key policy components have been tariff reductions coupled with import-export complementation. In the face of reduced protection and a more open market, the industry has shown an ability to adapt and compete. Moreover they state that increased import competition has placed immense pressure on component suppliers. Barnes (2000:16) illustrates in the figure below of the local OEM's perception of their suppliers.

**Figure 2.18: SA Domestic OEM Perceptions of SA Component Manufacturers**



The figure 2.18 above illustrates that the supplier performance is below the expectations of the local OEM's. Barnes (2000:17) argues that whilst the South African automotive component manufacturers continue to receive lower ratings than their international counterparts in terms of all the key performance requirements explored, the gaps are not overwhelming. He also notes that the significant difference relates rather to new product development capacity where the international suppliers are seen to have a huge – and growing - advantage over their South African counterparts.

General consensus is that even in the face of reduced protection and a more open market, the industry seems to have shown an ability to adapt and compete. The increased import competition has undoubtedly placed significant pressure on the local component suppliers.

The challenge for SA, however, is to boost the parts industry without falling foul of international trade rules.

Paulo Fernandes, MD of the Gauteng government’s Automotive Industry Development Centre, says that the local parts industry could grow only by investing in technology (Claasen, 2005). He also adds that if done properly, the proportion of local parts in cars could rise as high as 70% from the current 51%. National Association of Automotive Component and Allied Manufacturers director Clive Williams adds that South African vehicle makers are also concerned about the inability of local suppliers to meet all their component needs to take on orders for new parts specifications as the manufacturers would struggle to meet the standards demanded.

**Figure 2.19: SA’s Most Important Automotive Exports**

Product	Value (1998)	% of Component exports (1998)
Stitched leather seat covers	R1,854m	23.5
Catalytic converters	R1,520m	19.3
Tyres	R498m	6.3
Silencers/exhaust pipes	R493m	6.2
Road wheels and parts thereof	R446m	5.6
Total exports	R7,895m	100

Source: Barnes, J. 2000. International customer perceptions of South African automotive component manufacturer performance levels. School of Development Studies: University of Natal. 32:7.

The figure above shows the South Africa’s five most important automotive component exports and their respective destination. Plant closures are unthinkable for the South African companies (Furlonger, 2002). Naamsa director Nico Vermeulen, as cited by Furlonger (2002), states that the global mergers and not local conditions will dictate possible closures. He also adds that internationally, mergers, acquisitions and consolidation will dictate events in South Africa and that the SA market is tied to conditions in global markets and international business. He believes that if an SA assembler has to disappear, then it would be as a result of consolidation.

Barnes’ study, (2000:21) concluded the following:

Domestic OEMs are still largely dissatisfied with the performance of the local supply base, with the domestic components industry being rapidly restructured as a result. Whilst low

value to weight products are still largely being purchased in South Africa, domestic OEMs now purchase less inputs from South African owned automotive component manufacturers and even less inputs from South African owned companies with local technology. The trend that was envisaged in this regard in 1998 has clearly maintained its momentum over the last two years. Critically, the South African based OEMs viewed the trajectory of the automotive components industry as intractable, and likely to intensify over the next few years, especially as new vehicle models are released into the domestic market (Barnes (2000:20).

## **2.11 The Outlook for the SA's Automotive and Component Industry**

There is an increasing concern of the stronger Rand on the export performance of the automotive sector currently. Industry analysts opine that some growth may be expected in the industry, this could be constrained by a strong rand and overcapacity in the global markets (Fraser, 2004). The sharp appreciation of the rand has not affected the climate for foreign direct investment (FDI) into SA. While the stronger exchange rate plagued the local exporters, it can be argued that it is a reflection of improved confidence in the South African economy. Naacam's chief executive, Clive Williams warns that there are number of new vehicle models which are up for renewal by the large global players, and South African component companies would be in the bidding to supply components for these (Fraser, 2004). All major manufacturers are encouraged to specialise in a narrower range of products of higher volumes and in so doing they have managed to reduce unit costs as a result of economies of scale. An example of this is that auto giants such as BMW, Daimler Chrysler, Toyota, and Volkswagen have discontinued with the local production of low volume vehicles and expanded on the production of fast selling models. The trend of fund injection into the local plants from their parent companies is continuing which indicates positive sentiments.

Blake et *al.*, (2003:10) argue that while companies will continue to seek competitive advantage by maintaining tight control on costs throughout the supply chain, the industry will have entered a new era in which success will depend on three factors:

- Customer responsiveness- understanding changing market demands to create products and services that meet and exceed customer expectations.

- Faster speed to market - using integrated/collaborative design and development capabilities to bring new products and services to market faster than competitors
- Innovation- rapidly assimilating new technology into vehicular systems

Their contention is that to compete and win on these fronts, leading manufacturers will need to embrace a new model which takes the form of a race between closely integrated collaborative communities of manufacturers and suppliers.

According to a report by the automotive component association Naacam, as cited by Fraser (2003), the Australian market could be worth billions of rands to South African vehicle component exporters.

Nacaam also adds that while there is huge potential for SA to supply the automotive component market in Australia, the challenge would be to win over the Australian component makers from a defensive stance to an open and co-operative one. SA vehicle and component manufacturers are in constant export competition with other low-cost countries such as China, India, Mexico and some other Eastern European countries.

Arnheiter and Harren (2005:700) show that in the computer industry, Compaq was one of the first companies to capitalize on the modular architecture of the IBM PC when it created the IBM AT clone in the early 1980s.

Barnes (2000:33) illustrates the ranking of performance criteria according to the importance ratings given to them by customers in the different market categories in figure 2.20. As can be seen, the difference performance criteria are given different levels of priority by the various customers.



**Figure 2.20: Ranking of Performance Criteria (OES-Original Equipment Supply; IAM-Independent Aftermarket component suppliers)**

Ranking position	OEM customers	OES/IAM customers	Auto component customers
1	Quality	Quality	Quality
2	Conformance to standards	Delivery reliability	Price
3	Delivery reliability	Conformance to standards	Delivery reliability
4	Price	Price	Conformance to standards
5	Packaging	Packaging	Financial stability
6	Flexibility	Financial stability	Flexibility
7	Capacity to develop new products	Capacity to modify products	Capacity to modify products
8	Process innovation capacity	Flexibility	Process innovation capacity
9	Financial stability	Process innovation capacity	Capacity to develop new products
10	Capacity to modify products	Capacity to develop new products	Packaging
11	Offering of credit facilities	Offering of credit facilities	Offering of credit facilities
12	Location	Location	Location

Source: Barnes, J. 2000. Domestic pressures facing the South African automotive components industry. School of development studies: University of Natal 33:33.

In April 2004 VWSA had announced a R12bn six year contract to supply engines to VW in Germany. Between then and 2010, it expects to have exported 440 000 engines to the group's Hanover plant for use in VW panel vans. VWSA has invested R240m in the project which could be extended to produce petrol engines for China (Furlonger, 2004). VWSA human resources director Brian Smith, as cited by (Furlonger, 2004) warns that the company's Uitenhage plant will be the only one in the world to produce these engines and if a failure to deliver results from strikes or similar actions would halt worldwide production, which in turn would have catastrophic consequences for future prospective opportunities of such nature.

## 2.12 Strategic Analysis & Evaluation

Strategy evaluation is an integral part of an organization's processes of planning, review and control. Sterling (2003:33) asserts that effective implementation requires continual monitoring of progress in implementing the plan, of the competitive environment, of customers' satisfaction, and of the financial returns generated by the strategy.

He argues that monitoring is meaningless if it is not accompanied by accountability – and change when change is warranted. But in some cases it is done merely as an abstract analytical task. The selection of a specific strategy depends on a desired performance level.

Usually both profitability (return on assets) and sales growth are used because they have been widely accepted in the current literatures. For many executives, strategy evaluation becomes a simple appraisal of how well the business is performing.

Many academics and management thinkers do agree that even creative strategists can go wrong. They assert that having an insight is one thing; developing the numbers that show whether it is worth pursuing is quite another. They support the notion that all good strategists work hard to develop reasonable projections based on valid assumptions. According to Johnson and Scholes (1999:18), strategy assessment, whether be it by formal or informal processes, there are three types of evaluation criterion which can be used:

- Suitability

Suitability is a broad assessment of whether the strategy addresses the circumstances in which the organization is operating, i.e. the extent to which new strategies would fit with the future trends and changes in the environment; or how the strategy might exploit the core competences of the organization.

- Acceptability

Acceptability is concerned with the expected performance outcomes such as risk or return if the strategy were implemented, and the extent to which these would be in line with the expectations of the stakeholders.

- Feasibility

Feasibility is concerned with whether the strategy could be made to work in practice. Assessing the feasibility of a strategy requires an emphasis on more detailed – often quantitative – assessment of the practicalities of resourcing and strategic capability (Johnson and Scholes, 1999:18).

## **2.13 Strategic Options**

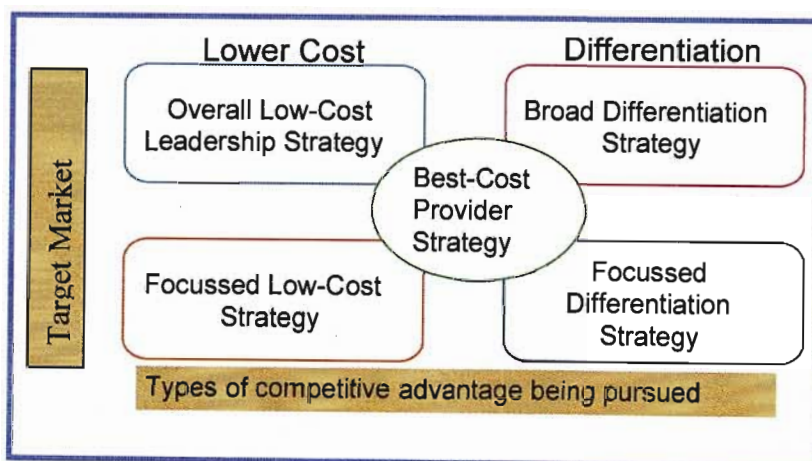
Presently, strategy seems to be under attack from uncertainty Rylander and Peppard (2003:318). It is argued that for many of the organizations, the competitive environment they face is radically different from that assumed by many models of strategy, which are based on a microeconomic model of industry. They also claim that there seems to be no single new theory or model emerging that covers all the areas under attack. Changes are



constantly encountered in industry and the environment. Therefore it is necessary for the firms to understand the influences of the environment to ensure appropriate strategies are tailored timeously. According to Johnson and Scholes (1999:21), strategic choice involves understanding the underlying bases guiding future strategy, generating strategic options for evaluating and selecting from among them. If we are going to progress the field of strategy, we need to revisit these assumptions and explore their implications and relevance in the present environment Rylander and Peppard (2003:318). They argue that the decision makers also need to understand the conditions under which organizations compete and create novel approaches to meet these new demands. It is also claimed that strategy selection may be approached in different ways, not just through a formal, analytical approach.

The practice of strategic decision making has come a long way over the last few decades. In today's competitive environment, firms need a more dynamic approach to strategy selection and development that can focus concurrently on the two different aspects; these being exploiting current market positions whilst exploring for new ones. An organization positions itself by leveraging on its strengths. Michael Porter (1980) has argued that a firm's strength ultimately lies in two categories; viz. cost advantage and differentiation. By applying these strengths in either a broad or narrow scope, three generic strategies result – *cost leadership, differentiation and focus*. They are generic strategies as they are not firm or industry dependent. As shown in the figure 2.21 below, each of the five generic strategies involves different approaches to competing and conducting the business.

**Figure 2.21: The Five Generic Competitive Strategies**



Source: Hitt, M., Ireland, R., and Hoskisson, R. 2003:119. Strategic management competitiveness and globalisation. 5<sup>th</sup> ed. Ohio, USA: South Western College

It is claimed that if the primary determinant of a firm's profitability is the attractiveness of the industry in which it operates, an important secondary determinant is its position within that industry. Even though an industry may have below average profitability, a firm that is optimally positioned can generate superior returns.

Pearce and Robinson (2000:36) state that grand strategies are the basis of coordinated and sustained efforts directed towards achieving long-term objectives. A grand strategy focuses on maximising the strengths and minimising weaknesses.

A life cycle analysis assesses whether a strategy is likely to be appropriate given the stage of the product life cycle (PLC) it is at (Fleisher and Bensoussan, 2003:364). The matrix illustrated in figure 2.22 below consists of two dimensions. It is claimed that the market situation is described in four stages ranging from embryonic to ageing; the competitive position in five positions ranging from weak to dominant. The matrix establishes the appropriateness of various strategies in relation to the two dimensions.

**Figure 2.22: Life Cycle Portfolio Matrix**

		STAGES OF INDUSTRY MATURITY			
		Embryonic	Growth	Mature	Ageing
COMPETITIVE POSITION	Dominant	Fast Grow Start Up	Fast Grow Attain Cost Leadership Renew Defend Position	Defend Position Attain cost leadership Renew Fast Grow	Defend Position Focus Renew Grow with Industry
	Strong	Start Up Differentiate Fast Grow	Fast Grow Attain Cost Leadership Catch Up Differentiate	Attain cost leadership Renew, focus Differentiate Grow in Industry	Find Niche Hold Niche Hang In Grow with Industry Harvest
	Favourable	Start Up Differentiate Focus Fast Grow	Differentiate, Focus Catch Up Grow with Industry	Harvest, Catch Up Find Niche, Hold Niche, Renew, Turnaround Differentiate, focus Grow with Industry	Retrench Turnaround
	Tenable	Start Up Grow with Industry Focus	Harvest, Catch Up Hold Niche, Hang In Find Niche, Turnaround, Focus Grow with Industry	Harvest Turnaround Find Niche Retrench	Divest Retrench
	Weak	Find Niche Catch Up Grow with Industry	Turn Around Retrench	Withdraw Divest	Withdraw

Source: Ambrosini, V. 1998:209. Exploring techniques of analysis and evaluation in strategic management. 1<sup>st</sup> ed. Essex: Prentice Hall.

By means of simple interpolation of the two dimensions, suitable strategies can be selected. As with all tools and techniques, criticisms have been leveled against this technique. (Fleisher and Bensoussan, 2003:364) argue that life-cycle patterns are too variable in their

shape and duration and there are no fixed rules. It is also asserted that marketers can seldom pinpoint what stage the product is in; a product may appear to be mature when actually it has only reached a plateau prior to another upsurge.

Interestingly enough, as summed up by Faulkner (1998:209), in business, as in life generally, the winner is often the competitor who does something different/unusual, rather than the one who applies rigorously a formula known and available to all.

## **2.14 Strategy Implementation**

“Effective implementation of an average strategy, beats mediocre implementation of a great strategy every time” Sterling (2003:27). This phrase has been mentioned many a time and the essence of it cannot be over emphasized. Yet companies often fail to operationalize their strategies in ways that improve the likelihood that they will be implemented effectively. Just mere formation of strategy and analysis does not ensure success for any organization. Pearce and Robinson (2000:61) state that in order to ensure success, strategy must be translated as carefully implemented actions.

Sterling (2003:27) cites that in a 1999 study by Corboy & O’Corrbui, Management Accounting found that nearly 70 percent of strategic plans and strategies are never successfully implemented. Even though the real reasons that strategies fail are varied, fortunately, many strategists contend that the causes can often be anticipated and the pitfalls can be avoided.

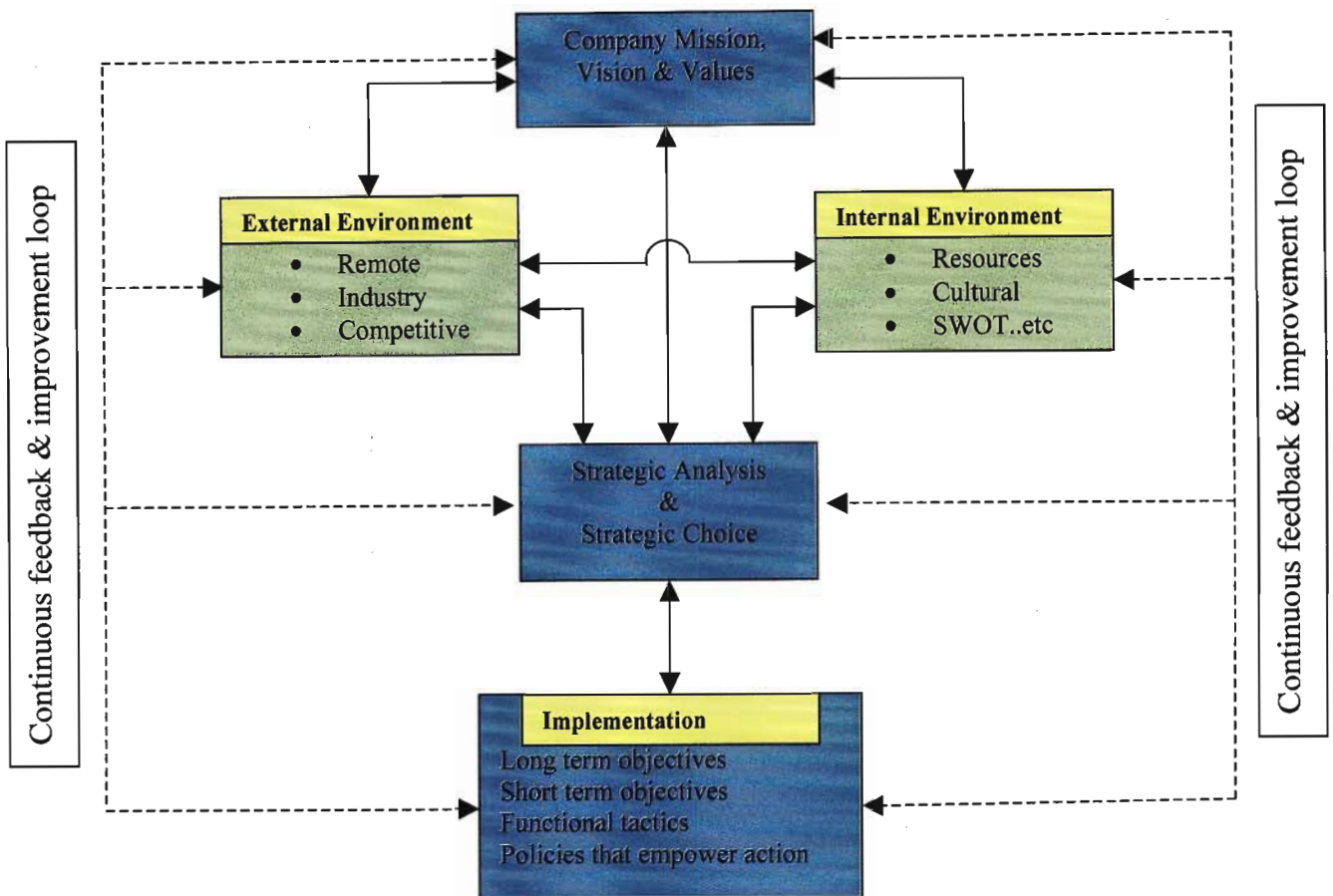
## **2.15 Model of Strategy**

The often heard comment ‘Garbage in; garbage out!’ is appropriate when it comes to developing a strategy. People often think that what makes a model wrong is inaccuracy in the data fed into it. But perhaps something that can also make a model wrong is the structure of the model.

With respect to strategy the organization must ask whether its mission and goals are sound as strategy stems from vision and mission. Another question related to strategy is whether or not the company has the appropriate structure to implement its goals. Strategies become truly successful when they sow the seeds for future success (Fahey, 2002:8). Platts and Tan

(2004:670) believe that an understanding of the past is instrumental in developing strategy. Strategies should be based on real internal competence that customers value enough to pay for and that competitors cannot easily replicate.

**Figure 2.23: Model of Strategy Developed**



Source: Model developed by author from the theoretical discussions in this chapter.

## 2.16 Conclusion

In the last few decades, more and more organizations are coming to realize that to remain competitive in the global environment, they must be transformed into market-driven, innovative, and adaptive systems (Barnevick, 1994). To compete effectively, one must transform the way the organization is managed. Evidence shows that there is no solution which magically will transform a company to a more desirable, ideal organization. Rather, it is believed that management must embrace change, recognizing that there are many issues related to strategy, culture, skills, teamwork, and the reward and recognition system of a company (Sterling, 2003:27-34).

This chapter has illustrated, discussed and critiqued models and techniques to be applied specifically to Smiths Manufacturing Pty Ltd (hereafter referred to as Smiths) in chapter four in order to formulate the necessary strategies within the ambits of the dynamic environments. The following chapter however, focuses on the research methodology and fieldwork.



# CHAPTER 3

## RESEARCH METHODOLOGY AND FIELDWORK

### 3.1 Introduction

During the last decade huge waves of changes to all aspects of business environments were experienced. Organisations have had to become lean and mean to remain competitive. Inevitably these industry and environmental changes have had impacts on all organizations at all levels therefore firms have had to create and access knowledge to improve their continuous learning process (Vale, 2004:125). This research tries to create an understanding of the automotive industry evolution and apply and forecast the future of a local automotive component manufacturer.

The case study presented in this chapter is centred on Smiths Manufacturing Pty Ltd, hereafter referred to as Smiths. The discussions shed light on the environment in which Smiths competes. An overview of the trends in the global automotive industry is explored and the impact thereof on Smiths is analysed.

More specifically, this research aims to identify strategies available to component manufacturers such as Smiths in the South African and global automotive manufacturing environment.

### 3.2 Research Methodology and Data Collection

As this is a qualitative study, it will require secondary data collation, which will be researched. Interest in qualitative research over the last ten to fifteen years has been phenomenal. The range of qualitative techniques being used is wide and varied. There is no one method or one practice which one can call "qualitative research" (Denzin and Lincoln, 1998). One of the major difficulties in the use of qualitative techniques is the limited guidelines available for data analysis (Miles and Huberman, 1994). However, the argument put forward by Mangan *et al.*, (2002), states that the majority of automotive-logistics research is primarily populated by quantitative research viewed through a positivist lens and increasingly, there are calls for these researches to employ qualitative methodologies more frequently.

Underlying the divergent way in which academics have regarded quantitative and qualitative research is the fact that each emanates from different methodological paradigms. Such methodologies each carry a distinct and contrasting set of underlying assumptions and principles about the social world that is being investigated. Many academics have argued that quantitative research has often been portrayed as resting on positivistic and rational assumptions linked to a natural scientific method (Riege, 2003:84). Implicit in this, they argue, is an epistemological assumption that quantitative research can generate an accurate, measurable and verifiable representation of the “real” world. Most qualitative research enables one to identify a rich set of possible events; but there are very few valid inferences which one can make on the basis of such data according to Simon Rae, (SRC) Away-day conference, (2002).

Techniques such as triangulation, inter-coder reliability checks and sampling methods which ensure representation of variables as categories have been evolved to tackle the issue of reliability of qualitative research methods (Simon Rae, SRC Away-day Conference 2002).

For purposes of this qualitative research, the data sources through which the research is to be conducted are going to be the websites, business reports, newsletters/magazines (e.g. Society of Automotive Engineers), Internet searches, various strategy based as well as other books, personal communications, and newspaper articles, EBSCO Host journals (peer reviewed), and interviews with the key decision makers in the company & within the industry locally, and from overseas. This study will also will use relevant data available (within the ambits of code of ethics) from all rival competitors such as Behr International.

### **3.3 Sampling**

Sampling techniques are many and they vary widely. For the purposes of this study, a convenient sampling technique is to be used. The core data gathering will take place using secondary data available. Stratified random sampling is a modification of random sampling in which you divide the population into two or more relevant and significant strata based on one or a number of attributes (Saunders *et al.*, 2003:165) and the researcher was unable to use this because Smiths Manufacturing was being researched and there are only few people with the required information needed for this study therefore specific people were targeted.

Dividing the population into a series of relevant strata means that the sample is more likely to be representative, as one can ensure that each of the strata is represented proportionately within the sample. The strata of OEMs and component supplier categories are used. Purposive sampling is also used to obtain pertinent data. Purposive sampling (also known as judgemental sampling) enables the researcher to use his/her judgement to select cases that will best enable him/her to answer the research question(s) and meet his/her objectives (Saunders *et al.*, 2003:175). Neuman (2000) adds that purposive sampling is often used when working with very small samples such as in a case study research and when the researcher wishes to select cases that are particularly informative and this is what the researcher has done in this research.

There is a plethora of tools, techniques and models available to do the necessary evaluations of the company and its strategies. The three main criteria used for evaluation of the strategic choices will be:

- Suitability
- Acceptability
- Feasibility

Some of the more suited techniques include but not restricted to, are Porters Value-chain, Product Life Cycle, Portfolio analysis, Directional policy matrix, Blind-spot analysis and Scenario planning, but to mention a few.

### **3.4 Research Fieldwork**

Good research should focus on diagnosis rather than prescription, which in this field can only reasonably be achieved through asking the right questions (Peters and Howard, 2001:598).

The methodology employed in this study, whilst being qualitative in nature, will also incorporate some quantitative analysis to support and emphasize certain arguments. The approach is one of a case study of the company concerned. Yin (1994:9) states that a case study is useful when a “how or why” question is being asked about a contemporary set of events over which the investigator has little or no control. Typically case study research uses a variety of evidence from different sources, such as documents, artefacts, interviews



and observation, and this goes beyond the range of sources of evidence that might be available in historical study (Rowley, 2002:17).

In chapter one of the dissertation, the reader was introduced to Smiths Manufacturing and the perceived problem and objectives were discussed. In chapter two relevant, related literature was reviewed. The focus of the literature concerned would be in the first tier automotive componentry suppliers, more specifically in the heat exchangers and air-conditioning systems in the local (South African) as well as global markets. With this research being a case study, data was sourced by an extensive literature search of Smiths internal documentation. The second phase of the research being to interview key management people in order to assess and evaluate the company strategy. Available company documentation such as financial records as well as other supporting business related documentation will be used to assist in the evaluation phase of the research.

The researcher was able to draw on and evaluate a range of different types of literature sources comprising of academic and professional journal articles, books, and web-based resources. Web resources were easy to locate through simple searches in standard search engines. There were various internal company documents such as news letters, internal memorandum releases and benchmarking reports that provided pertinent organizational information which was utilised to develop the case study and triangulate some of the findings. Hussey and Hussey (1997:65) describe the case-study approach as an extensive examination of a single instance of a phenomenon of interest. Voss *et al.*, (2002:195-219) note that case research has consistently been one of the most powerful research methods in operations management, particularly in the development of new theory. Informant bias has been a major criticism of qualitative research, but the triangulation of data helps to overcome this problem of bias. Additionally, the use of multiple sources of evidence assists in achieving construct validity in a qualitative research (Yin, 1994).

Unstructured and structured interviews were used to obtain data from key personnel in the organization. Though some good info was obtained from the informal interviews were of little use, but, the value was that they showed that the interview schedule was adequate and that it covered the key issues and had enough depth. Identification of the interviewees was mainly based on two key criteria. The first one being that the individuals had to be in senior managerial positions and the second one being that they should be closely involved in the

strategy formulation process. The unstructured interviews were informal discussions between the researcher and interviewees most taking place face to face though a few were conducted telephonically. These unstructured/informal interviews were part of a pre-research phase to ascertain the aptness of questions.

The structured interviews were conducted using an interview schedule (Appendix 2) where the researcher asked questions and notes were taken by the same whilst the respondents highlighted pertinent issues based on schedule. Saunders et al., (2003:251) cite that an interview will undoubtedly be the most advantageous approach to attempt to obtain data in the following circumstances:

- Where there are a large number of questions to be answered;
- Where the questions are either complex or open-ended
- Where the order and logic of questioning may need to be varied

The pilot phase/initial phase of informal chats enabled researcher to decide on adequate and appropriate questions for the study. This interview schedule was tested by means of a trial run on various individuals to test to clarity of question, checking for ambiguity. The sample size consisted of twelve senior management level employees and ten of them were participants. As this is a qualitative research, it did not require the same amount of thoroughness of statistics as a quantitative study would require.

The schedule consisted of the details of the respondents, interview schedule, ethical considerations and several loosely structured interview questions that served as a means of gently probing for information about the research questions and objectives.

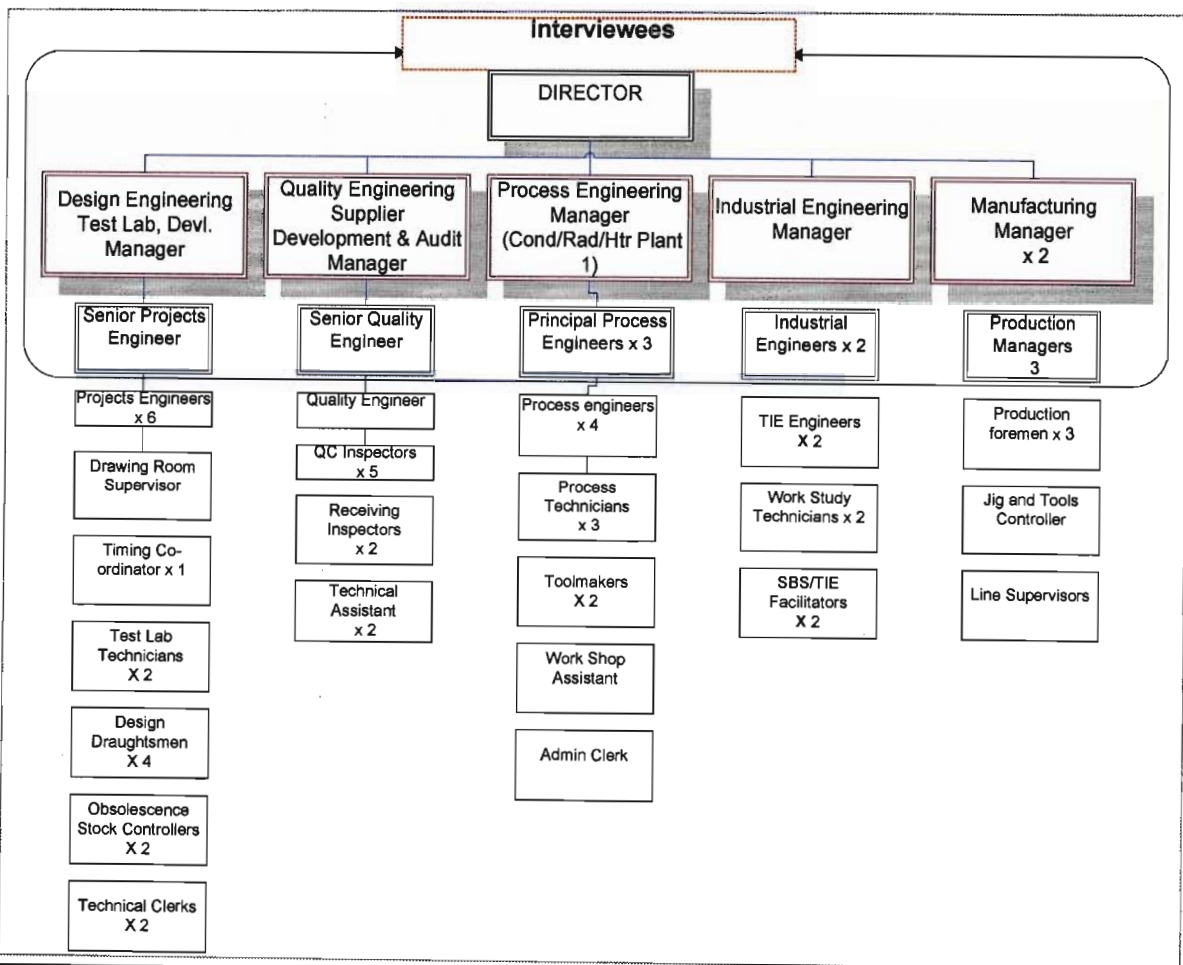
The interviews were predominantly carried out outside of working hours due to the busy work schedules of all concerned. In-depth interviewing is an expensive and time-consuming data collection technique relative to the quantitative methodologies (Tuten and Urban, 2001:149-64). However, the use of in-depth interviews was considered an appropriate methodological vehicle given the goal of obtaining richness in data through a detailed and frank discussion with both the decision makers and role players. As this is a case study where records and internal documents are being used for most information

In particular, elite interviews were the main source of data collection because the purpose of the investigations was to probe the processes used by the managers and decision-makers in developing the strategy for the firm. The term “elite interview” is commonly used to refer to interviews of the managers and decision makers (King, 1994:14-36). The interview format was kept simple because this allowed flexibility and gave respondents scope to delineate their views freely.

Although the structured interviews were conducted using an interview schedule, respondents were allowed to expand, illustrate and digress. The interviewees were allowed to cover in their own words the areas they thought critical and important.

With the schedule serving as a checklist, much of the information was given without prompting. More importantly, this tactic unearthed facets that would have been missing from a predetermined set of questions, giving credence to the methodology.

**Figure 3.1 Simplified Organogram Used for Interviews:**



Source: Adapted from Smiths' internal organogram

All key interviewees have a service record of ten years or more with the organization thus indicating a breadth of experience and surely they are in key positions to know about Smiths strategy etc. The organogram above depicts their positions. Moreover, the director of Heat Exchangers division, Mr Jean Esterhuizen had confirmed that all the management level employees do shape the formulation of the strategy. As an employee of the organization, the researcher had a close working relationship with the interviewees and care was taken to ensure their responses should not be influenced by this in any manner.

Riege (2003:77) contends that researchers and their investigated subjects are linked interactively, with the belief system of the researcher influencing the inquiry, which requires a dialogue between researcher and subject hence no objective or value-neutral knowledge exists, for all claims are relative to the values of the researcher.

Interviewees were advised that the research was for a master's degree and that it focused on company matters in the hope that any weak points and, or threats could be identified in order that the company (and the employer of all respondents) could ward off threats and address weaknesses. Interviewees were made aware of the fact that their comments would be treated confidentially and that they were free to withdraw from the project should they wish to. Interview elicitation proved to be a useful and insightful qualitative methodology and complemented the few quantitative methodologies employed elsewhere in the research. In some cases, email proved to be an easy tool to gather information from key individuals in many instances. Emails afforded the interviewee time to respond when convenient.

Even though the researcher is an employee at the organization, there was no pressure from management to manipulate or adjust the findings of this research. As could be expected, competitors would not divulge any sensitive information out of fear that it might jeopardise and or compromise their market position and in the light of this they were excluded from the study. Information about competitors could have been obtained through known third party sources but from an ethical point of view, the researcher did not pursue such a course of action as that would have undermined the ethical position necessary for this work.

The use of multiple sources of evidence assists in achieving construct validity in a qualitative research (Yin, 1994). Therefore, during the research and interview process, all kinds of documents and records related to the firm's product or service developments were

accessed whenever possible. Such documents and archival records included letters, memoranda, minutes of meetings, proposals, progress reports, newsletters etc.

### **3.5 Validity of Data**

A discussion as to how the chosen research methodology can achieve validity and reliability forms an integral part of any rigorous research effort (Riege, 2003:76). However, few scientific techniques have been developed to address the scientific worth and rigour of qualitative research, in particular case study research (De Ruyter and Scholl, 1998). Rust and Cooil (1994) presented a comparative analysis of reliability approaches for both quantitative and qualitative data, and introduced a new approach to measure reliability by expressing reliability as the proportion of expected loss that is avoided when the data are used to make decisions. Whilst the literature offers some suggestions as to what techniques can enhance the validity and reliability of qualitative research, there is only little indication as to what techniques should be used to enhance validity and reliability in case study research (Riege, 2003:76).

The validity and reliability of case study research is a key issue for both research practitioners and academics (Riege, 2003:84). Riege argues that a high degree of validity and reliability provides not only confidence in the data collected but, most significantly, trust in the successful application and use of the results to managerial decision-making. It is suggested by academics that the four common design tests of construct validity, internal validity, external validity and reliability are commonly applied to the theoretical paradigm of positivism (Riege, 2003:80). One practical way to think about the issue of validity is to focus on error and bias. Research whether quantitative or qualitative, experimental or naturalistic, is a human activity subject to the same kinds of failings as other human activities. Researchers are fallible. They make mistakes and get things wrong. Many academics believe that there is no paradigm solution to the elimination of error and bias.

It is also believed that different forms of research may be prone to different sources of error, but clearly none are immune. Validity enhancing practices however do not ensure that research is accurate, correct, certain, trustworthy, objective or any of the other surrogates we use for truth (Norris, 1997).

Chapter three discussed the research methodology and fieldwork, however, the following chapter focuses on the case study of Smiths, the subject of this research.

# CHAPTER 4

## BACKGROUND INFORMATION AND CASE STUDY SMITHS MANUFACTURING (Pty) Ltd

### 4.1 Background-Smiths Manufacturing Pty Ltd



Smiths Manufacturing Pty Ltd, hereafter referred to as Smiths is a local manufacturing concern based in New Germany, KwaZulu-Natal. It is involved in the automotive components manufacturing for both Original Equipment Manufacturers (OEM), and after market. The firm's operation is streamlined for the manufacture of Heating Ventilation and Air Conditioning systems (HVAC) for the automotive industry. The various divisions are the heat exchanger manufacturing division, the fluid exchanger manufacturing division, plastics injection moulding and chroming, and the motor manufacturing and assembly divisions. Smiths is the largest automotive air conditioner company in South Africa (News Release, 2005). The main focus of the study centres on the heat exchanger manufacturing division.

The firm was originally founded in 1966 in England, and was known then as Smiths Industries. The concern was subsequently acquired by Metair Investments (Pty) Ltd (hereafter referred to as Metair) in Southern Africa in 1985 (Smiths' Corporate internal booklet). Metair group was a local automotive componentry manufacturing specialist. The group has a portfolio of other automotive product related companies. Prior to the acquisition, Smiths manufactured various commodities from wiper motors to clocks and spark plugs. Since the acquisition, it has re-orientated its focus to primarily automotive HVAC systems (Esterhuizen, 2006). Smiths is one of the two prominent automotive air-conditioning manufacturers in South Africa, the other being the German based BEHR group also based in Durban. According to Constant (2006) Smiths finds itself in a market where there is a saturation of users that are reliant on repeat customers in a somewhat maturing market.

Smiths is in an advantageously unique position compared to competitor Behr, whereby they are able to produce under license from various global automotive market players due to the formation of strategic alliances (Smiths' internal corporate profile brochure). The major

local customers include are Toyota, BMW, Nissan, Ford and one of the export OEM customers is the Landrover based in UK. The end of 2005 also saw the acquisition of new business from Mercedes Benz. This came after press release that Daimler-Chrysler, SA's biggest luxury car maker, and its suppliers, will invest R2bn — double the initial estimation — in expanding and retooling production facilities in preparation for the start of production of the next Mercedes-Benz C-Class in 2007 (Lourens, 2005).

#### **4.1.1 Smiths' Purpose (as per the company's corporate profile)**

- To meet our customer's quality and value needs
- To be a major supplier of up-to-date, reliable air conditioning and heat exchanger products in line with the South African Motor Industries Development Program.
- To keep abreast of world technology through licensing agreements and other economically viable partnerships
- To provide our shareholders with a satisfactory return on investment and to finance growth out of profits.
- To create an environment for all our people to grow to their maximum potential and to assist them in their development through education and training.
- To foster a uniform approach to the company purpose and to encourage people to maximize their creativity within well defined controls, without stifling initiative.

(Smiths' Internal Corporate Profile booklet)

Metair is dedicated to the automotive industry and through partnerships and technical relationships, brings a South African focus to a global industry. Ongoing investments in facilities and people ensure that subsidiary companies meet the challenge of continuous quality and efficiency improvements and maintain competitiveness despite increasing requirements from customers to reduce costs, Metair website (Internet 19).

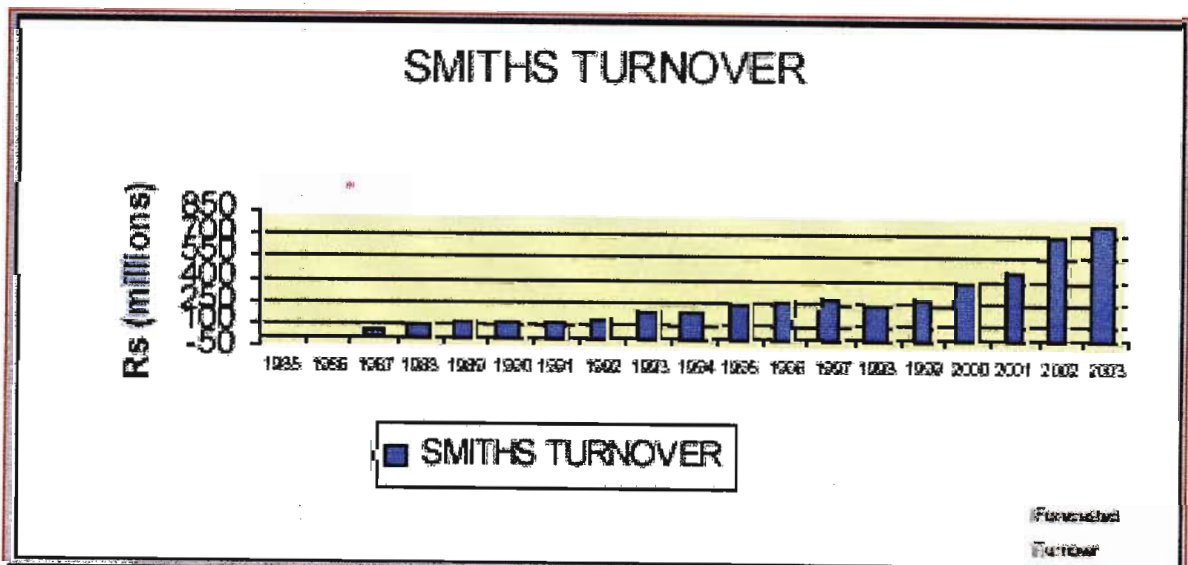
One of Smiths' licensors being Denso, has entered into a joint venture partnership by acquisition of 25% share into Smiths (Coetzee, 2005). He claims that Denso is a key supplier to Toyota in many countries and with the 75% acquisition of Toyota South Africa (TSAM) by Toyota Motor Corporation Japan (TMC), TMC have requested their key suppliers to fully support TSAM manufacture in SA with localised components. Coetzee also asserts that with Denso's acquisition, there would be no change at Smiths other than improved communications with Denso, more of Denso's assistance in process



improvements and better business prospects for the future. He also adds that Denso products are used by many South African motor plants with the result that investment will strengthen Smiths Manufacturing's position and promote a secure future. He is confident that security and opportunity for growth created will mean more employment is created and more skills will be imparted to employees in Smiths.

Denso Corporation, headquartered in Kariya, Aichi prefecture, Japan, is a leading global supplier of advanced technology, systems and components. Its customers include all the world's major carmakers. Worldwide, the company employs 95000 people in 31 countries and regions, including Japan. Consolidated global sales for the fiscal year ended March 2004 totalled US \$24.2 billion (Internet 20). Due to the nature of the automotive market; i.e. the drive for increasing quality, reduced costs and extreme competition from abroad, particularly the Japanese, who have automated capital intensive facilities due to their high volumes; Smiths operates in a unique market. It has a disproportionate multiplicity of manufactured car models, with resultant volumes per model parts and restricted growth due to the increasing numbers of imported vehicles. The figure below indicates the history and levels of growth of Smiths. The pie chart reveals the different segments of sales, local as well as international. The growth over the past decade has been good but it has been even more phenomenal from 1999 up to the present. The two figures 4.1 and 4.2 below show the increase in turnover and fixed assets from 1985 to 2003.

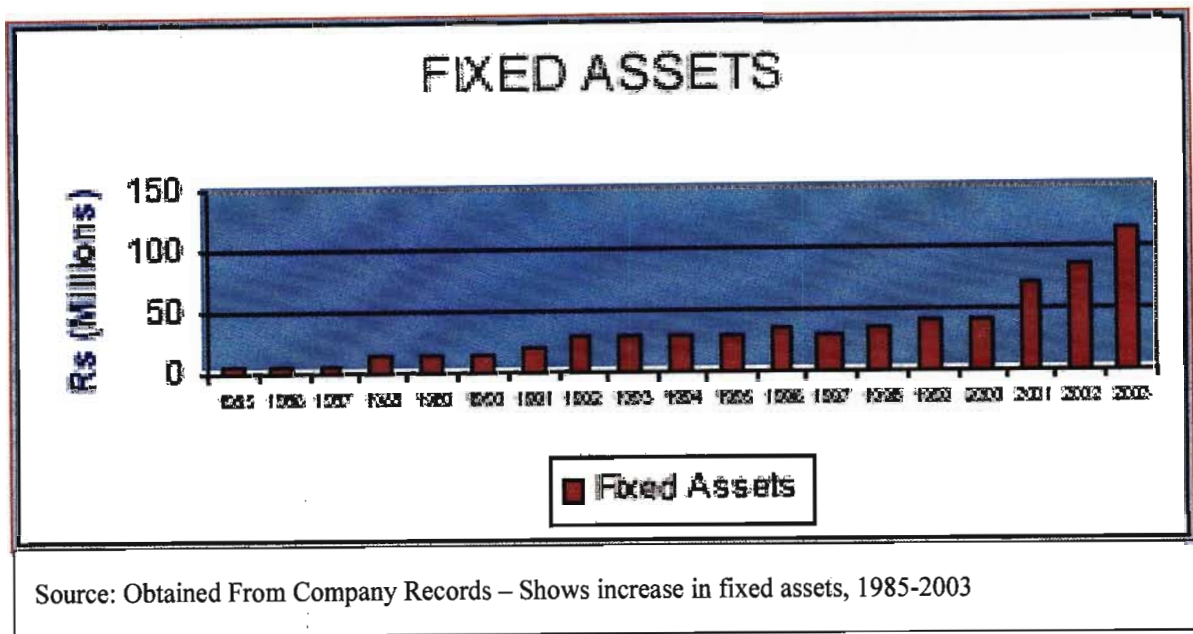
**Figure 4.1: Smiths' Turnover**



Source: Obtained From Company Records – Shows turnover, 1985-2003



**Figure 4.2: Smiths' Fixed Assets Growth**



The different market segments as well as the growth and size of each. The overall performance of the company is good but the challenge is to sustain this phenomenal growth in an ever increasingly competitive environment (Appendix 1).

### 4.1.2 Management

Smiths typically was a bureaucratically controlled organization whose roots were entrenched in high power distances between workers and management and the style of management was autocratic, as anonymously remarked by a manager. He adds that the centralized form of decision making served as an impediment to any notion of a participative management style, though, most managers do agree that a paradigm shift for the betterment is taking place. All workers were expected conform to rules and give a good impression. Most senior level managers have a reasonably long service record and a good understanding of the systems in place. Smiths heat exchangers (HE's) management turnover has remained at zero over the past two years. Of the remaining comparators, Firm CE (international firm competitor based in Central Europe) has the lowest average management turnover rate, while the heat transfer sub-sector also performs well ahead of the Club average (Barnes and Degahye, 2005:87).

### **4.1.3 Introduction of Small Business Units (SBU)**

In 1995 Smiths had undergone a complete restructuring under the banner of small business units (SBU's), as follows:

- Heat and Fluid Exchangers Plants, specializing in heat exchangers (condensers, evaporators, heaters and radiators), and fluid exchangers (pipes and hoses) for the heat exchanger systems.
- Plastics Plant specializing in component injection moulding and chroming
- Climate Control, being the assembly plant (heating, ventilation and cooling (HVAC) module assembly) for Original Equipment Manufacturers (OEMs)
- Dunair Parts and Accessories (P & A) aftermarket kits for dealerships

In 2003, the plastics division was strategically split from Smiths to become a direct subsidiary under Metair holdings. According to the 2003 annual Metair report, 2003, Smiths Plastics was originally developed as an internal supplier of plastic components for radiators, airconditioners and heaters. In due course, with a substantial increase in demands from the local motor manufacturers, the unit not only caters for the needs of the other internal divisions, but it also caters for the local car manufacturers directly (Naidoo, 2006).

Each SBU consists of its own Director where his immediate subordinates are senior managers comprised of the following teams:

- Design Engineering
- Industrial Engineering
- Process Engineering
- Quality Engineering
- Manufacturing Operations
- Logistics/Planning (Inbound/Outbound)
- Maintenance and facilities

Each of the above has teams has its own manager and under him the respective personnel to fulfill the various functions. All these are supported by common HR, Finance, Marketing, Overseas Purchasing and IT departments (refer to appendix 2). The fundamental reason for this major restructure was to better address the market requirements and customer needs, in terms of speed to market products, cost effectiveness/value added, quality and flexibility. Consequentially the SBU's created a flatter structure, with more

individualised units (SBU's), the senior managers of each unit reporting directly to the MD (Smiths' organogram).

All of Smiths' sites are in close proximity to one another to aid logistics amongst them. With an employee force of about one thousand workers, the plants are geared towards a high variety low volume product mix which also has fairly labour intensive process. Evidently of late, there has been a move towards a higher degree of automation together with an upkeep of the technologies available worldwide (Lakhan, 2006).

High levels of absenteeism and a highly unionized workforce that wields substantial collective power has had major negative impact on production schedules as well as delivery times to the customers (Ramkawal, 2006).

Having a reasonably high dependency on its work force and having to support the automotive industry that is sworn into philosophies such as just in time (JIT) etc is proving to be a delicate balance to be achieved without causing any major upsets along the system. According to an interview with Constant (2006), the business systems were important facets to the motor manufacturers and Smiths alike.

#### **4.1.4 Encapsulating Smiths' Business Model**

Smiths serve the South African based subsidiaries of major vehicle manufacturers with OEM systems and components. A substantial portion of the products are exported to Visteon Climate Control Systems (VCCS) based in USA and it also exports a smaller portion to Europe. The automotive air-conditioning and climate control systems market is a very dynamic and specialized market with a limited amount of customer possibilities and long standing well established relationships in place. There seems to be a growing trend among customers in mature economies for specialized or customized products. Given the globalization of markets and increasing world-wide competition from large multi-nationals, many smaller firms may have no choice but to specialize in the supplying of products that occupy a somewhat a niche market segment (Preston, 2006).

According to Lakhan (2006), most of Smiths' products are manufactured under license or supply agreements with suppliers to the parent companies of the South African based

subsidiaries. The licenses include Denso (formerly Nippon Denso), Modine, Siemens, Calsonic and Valeo. He also adds that Smiths have had to adapt and recognize the importance and flexibility these license agreements provide Smiths in terms of developing close collaborative relationships with the international giants. This however does come at a cost in the form of royalties being paid to the licensors but nonetheless this has also resulted in technological spillovers from the developed countries like Germany and Japan. Smiths has had to develop a progressive policy on the development of products in conjunction with its licensors and the development of facilities and systems to meet the unique requirements of the low volume production requirements of the South African market (Smiths' internal corporate profile brochure).

It can be noted that the closely forged relationship between the various divisions enables a co-operative and a collaborative effort in ensuring superior customer service. An example of such a relationship is that between the heat exchanger manufacturing division and the climate control/assembly division which fosters a synergistically symbiotic relationship that is centered on superior customer service and all this is backed by a common support services such as marketing & sales, finance, HR and logistics.

According to some long standing senior management level employees, Smiths does not have selling and distribution outlets/channels, rather they focus purely on the core business of manufacturing and process technological activities. Just like any other business, this industry has been brought onto a highly competitive landscape where new business acquisition depends on cost, quality and speed (Veloso and Kumar, 2002:10). Even in the case of follow source design, if the given target prices are not met by Smiths, the business is quite easily awarded to other manufacturers (Naidoo, 2006).

The sudden awakening of the world to the preservation of the environment, corporate social responsibility, ethics, improved commitment to quality etc has seen the implementation of various systems and mechanisms to assure compliance. In keeping with the stringent standards of all the Metair subsidiaries, an immense amount of importance is given to various accreditations for Smiths. Some of these include the following:

- ISO 14001 (environmental accreditation)
- VDA 6 (European quality accreditation)
- TS16949 (international quality)

Most quality standards provide a quality management system that focuses on continuous improvement, defect prevention, reduction of variation and reduction of waste in the supply chain thus increasing customer satisfaction and reducing quality cost (Bennet and O’Kane, 2006:15). In today’s automotive industry a first tier supplier will struggle to win business unless their system is certified to QS 9000, for an example, (Bramorski et al., 2000:275-83).

Govindsamy (2006) asserts that these accreditations play a pivotal role in new business acquisition, more especially in the OEM markets. He also admits that all these accreditations are frequently audited and re-validated provided the necessary stringent requirements are met with.

Whilst this same level of stringency is not ‘emphasized’ for aftermarket products, Smiths inherently applies the one quality system across the whole organization by default (i.e. for both OEM products and after market products). Interestingly, Chetty (2003:73-84) argues that in spite of consistent growth of the after market segment, a process of stagnation is imminent and moreover it is said to experience viability for another four years after which the viability would cease.

Like all automotive manufacturers, Smiths has had to focus on many philosophies such as Total Quality Management (TQM), Just in Time (JIT), Kaizen (continuous improvement) and the most recent introduction being Smiths Business Systems (SBS) adds (Lakhan, 2006). Of noteworthy importance was the introduction of Mission Directed work Teams (MDWT) in 1998. According to the directive of the Smiths’ MDWT manual:

*“MDWT philosophy is to drive continuous improvement within the firm. Modules implemented include goal alignment where measurements against cost, quality and speed and morale are monitored; team coaching to promote skills development”. The corporate newsletter pamphlet states “we believe in continuous improvement in all aspects of production and therefore encourage and train our people to seek and suggest innovative ideas”, (Smiths’ MDWT Manual).*

Continuous improvement teams run by line operators have resulted in significant improvements in the rearrangement of work stations, in operating methods and overall

quality. All continuous improvement (Kaizen) ideas are driven through a monthly forum or a presentation where the winning teams are rewarded by way of monetary vouchers for their efforts (Smiths Weekly news, 2006b).

Chetty (2003:84) highlights the fact that Smiths does have a planning process in place which has been evolving over the past number of years. She also notes that the strategic planning which takes place at the executive level does incorporate the PEST analysis, Porters five force analysis and indeed SWOT analysis.

Esterhuizen (2006) briefly outlines the main objectives of Smiths as follows:

- Target of >25% on return on assets
- Growth with profit
- Improve relationship with licensors
- Better staff retention and recruitment and employee development
- Supplier development
- Supply Chain management improvement and development
- Better stock management (first in first out-fifo, last in first out-lifo, etc) & effective forecasting
- Compete without protection & improve quality
- Commitment to Safety, Health and Environment (SHE)
- Forge closer ties with customers

He asserts that above factors play a pivotal role in the survival of the firm and that all stakeholders need to be satisfied with the objectives and performance of the firm.

#### **4.1.5 Market Segment**

The market segment Smiths Manufacturing (Pty) Ltd, is active in supplying is the car manufacturing plants located in South Africa, prime examples of which are Toyota and BMW. Smiths also has a small segment of the exports market which caters for after-market products. It is clear that Smiths Manufacturing is over reliant on just a few car manufacturers in the domestic markets. Due to the easing of trade barriers and high degree of economic integration, more untapped markets become accessible world over. A silent revolution of all sorts has been taking place in Europe and North America (Doh, 1999:477).



He argues that while the attention has often been focused on important strategic developments in the former Soviet Union, Eastern Europe, the Middle East and Asia, the European and North American continents continue to move toward closer economic and political integration. He also adds that in addition to formal governmental initiatives that have promoted and codified economic and political integration within Europe and North America, there have been a range of co-operative arrangements between government regulatory agencies, nongovernmental organizations and private sector firms that have preceded, accompanied, and followed the more established integration pursued by governments. Examples include mergers, acquisitions and strategic alliances between business firms.

In a Southern African context, one can point out the Motor Industry Development Programme (MIDP) incentive programme as a formal governmental incentivised scheme to assist South African manufacturers in the automotive sector (Barnes, 2000:6).

#### **4.1.6 Benchmarking Report on Smiths**

Smiths is currently affiliated to the Durban Automotive Cluster Benchmarking Initiative, involved in studying best practices companies with the aim of improving the firm's performance. The benchmarking exercise, according to Barnes and Deghaye (2005:2), is generally kept exclusive to the members of the South African Automotive Benchmarking Club (SAABC).

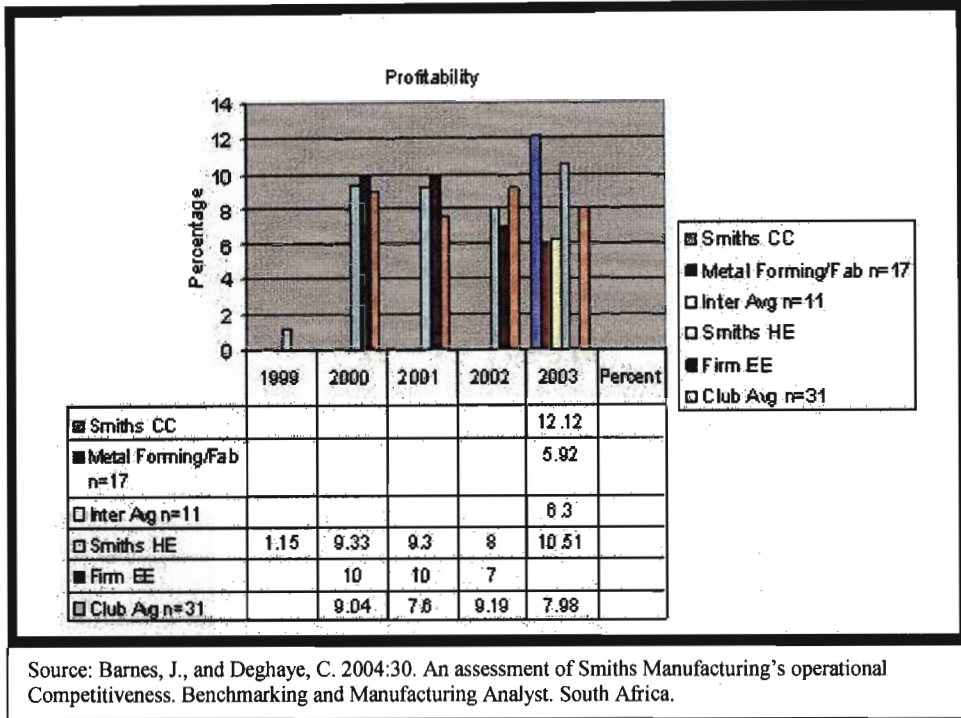
##### **4.1.6.1 Financial Performance**

Smiths' recent financial performance has been quite impressive especially in terms of the areas of turnover growth, profitability and return on investments according to Barnes & Deghaye (2004:12). However they also go on to add that the capital expenditure had stagnated over the past few years. Accordingly they observe that the turnover performance at Smiths HE has been very good, increasing by 124.5% from 2000 with 104.5% growth from 2001 to 2003 being particularly striking.

As a whole, the Smiths' turnover levels increased by 60.1% between 2000 and 2003. Smiths' profit levels, they say, have been impressive where the profit for the HE before

income tax deductions was 10.5% and Smiths CC was 12.1% as shown in the following figure. Comparatively, they state that the international averages were only in the region of 6.3% and interestingly the local club member averages were around 5.9%.

**Figure 4.3: Profitability of Smiths and Comparative Firms**



**4.1.6.2 Operational Competitiveness**

The inventory holding has improved for the heat exchangers division from being 53 days in 2001 to 35 in 2003. A similar trend is noticeable in the raw material inventory holding from 42 days in 2001 to 28 days in 2003. This generally denotes an overall improvement for the firm. Bennett and O’Kane, (2006:12-22) note that to survive in today’s severe global market competition, enterprises need to constantly improve quality and reduce cost. The investment in product research and development is viewed as a strategic weapon capable of accomplishing this objective and thus ensuring market share (Wei et al., 2000:225-33).

**4.1.6.3 Cost of Sales**

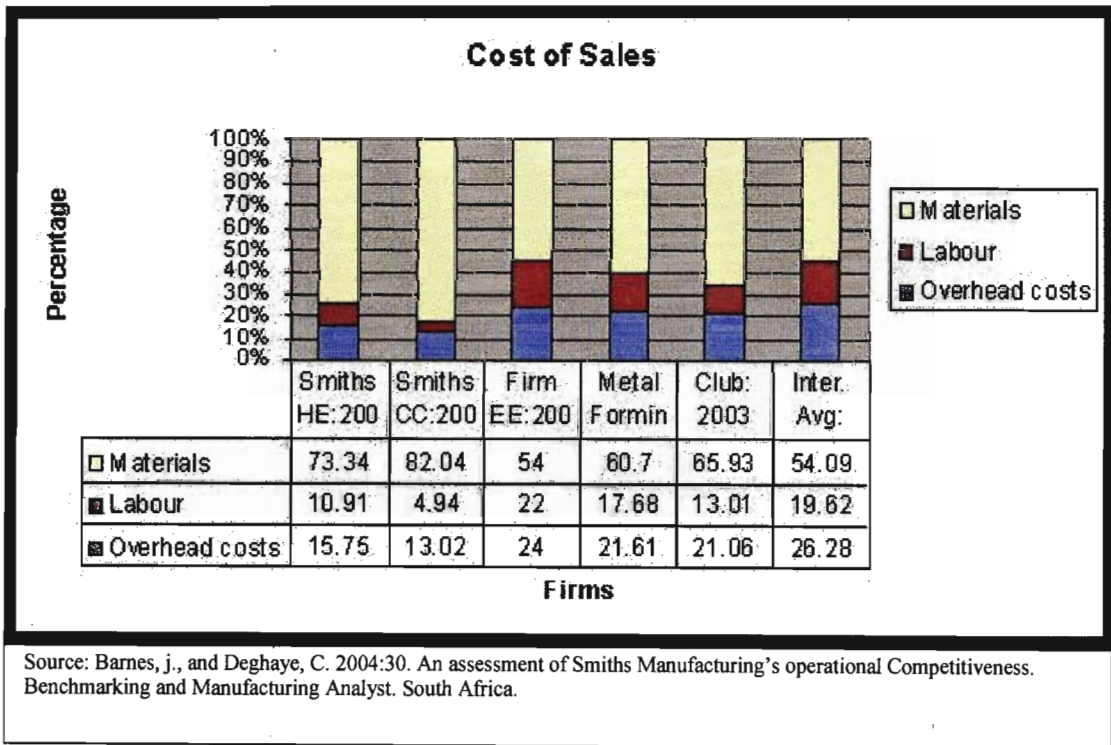
Smiths’ cost of sales breakdown differs markedly from the comparable averages, with materials constituting a significant proportion of cost of sales and by contrast materials compromise only 54% of cost of sales at the club firms (Barnes & Deghaye, 2004:14). They add that the nature of the business is such that the firm is dependant on significant



portion of imported materials which accounts for the higher averages. They have also noted that the labour and overheads reflect a much smaller proportion of the cost of sales than the comparable benchmarking club averages. This is illustrated in the figure 4.4 below.

It is also of noteworthiness that all aluminium used for processing OEM products is imported which seems to be serving as an impediment. At the same time Smiths has developed local suppliers to cater for the after market products.

**Figure 4.4: Cost of Sales Breakdown Comparison**



**4.1.6.4 Employee / Human Resource Development**

Comparatively low levels of literacy & numeracy are evident at Smiths HE - at only 82% for both there is certainly scope for improvement. Firm CE & the international average perform very well, with numeracy & literacy levels ranging between 96.5% & 100% as per table below (Barnes and Deghaye, 2005:75).

**Figure 4.5: Literacy and Numeracy Levels Comparison**

<b>Firms</b>	<b>Numeracy</b>	<b>Literacy</b>
Smiths HE	82.00%	82.00%
Firm CE	100.00%	100.00%
Heat Transfer	93.75%	95.18%
Club	80.28%	86.63%
Inter. avg.	96.98%	98.08%

Source: Barnes, J., and Deghaye, C. 2005:75. An assessment of Smiths heat exchange's value chain competitiveness. Benchmarking and Manufacturing Analyst. South Africa.

To strengthen their position in this regard, Smiths has undertaken to employ Adult Based Education Training (ABET) to train unskilled employees. According to Naidoo (2006), Smiths emphasizes multiskilling its staff force to improve the skills of its workforce. Smiths HE's levels of training expenditure as a % of remuneration & the allocation of formal off-line training suggests that the firm is taking skills development seriously he adds. (Barnes and Deghaye, 2005:78) state that this was recognised by labour who noted the firm's training, as well as the management team's apparent commitment to upskilling Smiths HE's policy of multi-skilling was also noted by both labour & management as positive for the firm overall. Smiths HE's skills development focus is impressive & well ahead of most other SAABC members – although it lags that of Firm CE, which is investing significantly in its people. This is apparently being driven by that firm's capital investments & growth (Barnes and Deghaye, 2005:78). The efficient use of human resources has seen the integration of quality control and maintenance into the assembly process. This has meant the removal of a number of separate job functions and the introduction of flexible working. Esterhuizen (2006) exuberantly asserts that their investment was not in fixed capital but in the training of workers and the increased control over and involvement with the suppliers. Efficiency gains have enabled a reduction in the time to produce a car from 37 hours in 1990 to around 24 hours today (Nelissen, 2002). This implies that the productivity of the staff forces needs to be on a constant improvement path.

## 4.2 Conclusion

Integration of the regional market into the global arena continues to gain momentum. Global vehicle sales have been relatively stable over last 4 years – only 2.8% growth from 2002 to 2003. Continued slow growth is expected over next few years. This is expected to intensify competition world over. In the ever evolving just-in-time world of today's auto industry, that is expected to become even more so with the advent of the Internet, while logistics capabilities are a major concern. There are a number of issues that OEMs value in terms of quality, logistics etc and it is not uncommon for suppliers to face dozens of questions regarding their quality standards, accreditations, and logistics systems.

Veloso and Kumar, (2002:36) argue that manufacturing companies compete on aspects that are well understood and characterized in business and industrial engineering literature. They also add that some of the critical ones are cost, quality, flexibility, speed and innovation. They say that depending on the positioning strategy toward their customers, firms will place more or less emphasis on each of these capabilities, and organize their internal structure and infrastructure to better respond to the chosen strategy. Firms that previously operated independently are now being incorporated into the main corporate entities which have evolved into multinationals. Mergers, acquisitions, joint ventures and hostile take-overs are prevalent in the market place within the auto industry.

The MIDP which served as the backbone in the SA automotive exports sector is on course to be gradually reduced. The weaker Rand was also instrumental in acquiring various export business but the recent times have seen improvement in the Rand together with stiffer international competition, especially from the Asian counterparts. This then implies that the local firms have to be able to compete on higher levels of productivity and at lower cost with improved quality. Smiths has shown positive growth for the past couple of years. The trend for the future growth seems to have potential, provided that Smiths focuses on crucial factors such as cost, quality, speed and flexibility and the ease of adaptability to rapidly changing market needs and conditions. Good economic growth occurs to open global economies but what will happen when we have a global recession; no one dares to predict!

The following chapter focuses on the strategic analysis and evaluation of Smiths.

# CHAPTER 5

## FINDINGS

### 5.1 Introduction

“Fundamentally, strategy is about out-performing the competition – but a strategy can be foiled by a highly effective response by a key competitor. By understanding what factors have the greatest impact on your strategy’s success, you can respond more quickly if they change” (Sterling, 2003:29).

The analysis incorporates formalised analytical steps derived by the application of analytical techniques applied for both external and internal environments, which in turn encompasses the remote environment analysis using PESTEL (Hitt *et al.*, 2003:41), the industry environment analysis using Porters Five Forces model and indeed the internal environment using SWOT (Thompson and Strickland, 2003:117). In chapter two, these analytical techniques were discussed for both the external and the internal environment. As both internal and external environments are interwoven, the analyses cannot be divorced from one another. The idea is to match the company’s strategy to both its external market environment and to its internal resources and core competencies.

The strategic fit between the firm’s resources and the industry environment highlights the suitability of the chosen strategy. Evaluation of the strategy would be the outcome from ascertaining the firm’s competitive market position in relation to its strengths and weaknesses and the remote environment (Hitt *et al.*, 2003:42).

From the development of strategic options, the appropriate strategy would be determined in terms of the suitability, feasibility and acceptability criteria. By understanding the factors that have the greatest impact on a firm’s strategy’s success, it can respond more quickly if they change. Different levels of strategies such as generic strategies, grand strategies, and corporate strategies are also discussed. On completion of this evaluation, the final chapter concludes the options and the outcomes chosen.

## 5.2 Strategy Analysis

### 5.2.1 PESTEL Model Analysis

The environment contains facets (e.g. political, economic, social, technological, ecological and legal), all of which have an impact on the firm and its strategy being pursued (Hitt, *et al.*, 2003:45). It has been stated that the political climate in South Africa has come through a process of change and transition from an era of an oppressive apartheid regime to a democratic society. The South African political climate has come a long way since the advent of democratic rule in 1994 which replaced a discriminatory socio-economic system. It was also argued that the pace of black participation in skilled and managerial work may be described as incremental but inadequate for meeting rising expectations created by a rapidly changing political climate. Policies such as affirmative action and employment equity have been set up to bring in the previously disenfranchised black community onto the landscape (Internet 21).

Economically, South Africa was and remains the economic powerhouse on the African continent (Internet 2). The African Growth and Opportunity Act (AGOA) is the cornerstone of the Bush Administration's trade and investment policy toward sub-Saharan Africa, which is promoting free markets, expanding U.S.-African trade and investment, stimulating economic growth, and facilitating sub-Saharan Africa's integration into the global economy (Internet 22). AGOA has helped to bolster U.S.-sub-Saharan trade and investment. Total trade between the U.S. and sub-Saharan Africa was just under \$33 billion in 2003, with U.S. exports of almost \$7 billion and imports of \$25.6 billion. In spite of notable progress made in terms of economic growth and stifling the inflationary pressures, there are many challenges. The United States and the five member countries of the Southern African Customs Union (SACU)-Botswana, Lesotho, Namibia, South Africa and Swaziland- launched negotiations toward a free trade agreement (FTA) in Pretoria, South Africa on June 2, 2003. This historic initiative represents an exciting new beginning in the growing trade and investment partnership between the United States and Southern Africa and a tremendous opportunity for all Parties. The one agreement is with the South African Development Community (SADC), and the other is with the European Union (EU), named the SA-EU Trade Development Co-operation Agreement (Internet 23).

South Africa has also turned its attention to pursuing agreements for greater South-South co-operation. This has resulted in the move to establish trade relations with The Southern

Common Market (Mercosur) via a free trade agreement with Brazil, and also with India, which are top of the government's export-oriented trade agenda (Internet 23). The Mercosur was created by Argentina, Brazil, Paraguay and Uruguay in March 1991, with the ambitious goal of creating a common market/customs union between the participating countries on the basis of various forms of economic co-operation (Internet 24). This will facilitate greater trade with South America and the East. Fraser (2003d) states that the European Union (EU) has hinted that South African vehicle manufacturers may not have to wait until 2010 to gain duty free access to their markets, as was originally envisaged.

South Africa has the highest number of people living with HIV/Aids in the world, with more than one in ten of the population of 45 million infected and the study estimates that 6.29 million South Africans were living with HIV at the end of 2004, including 3.3 million women and 104,863 babies (Internet 25). Ramkawal (2006) claims that at Smiths, HIV/Aids has reduced labour productivity and/or increased absenteeism, and raised the cost of employee benefits. He believes that whilst most South African firms have so far failed to respond to the epidemic, Smiths have had good Aids policies via initiatives such as Khomonani (caring together), Aids peer educators etc, as also clearly evidenced by Smiths' internal weekly newsletter, (Vol 1, issue 4, 03/02/2006). These initiatives, he adds, have helped to raise awareness amongst the employees.

Technologically, the field is ever changing and ever evolving and the importance of keeping up with this trend is suggested by the finding that early adopters of new technology often achieve higher market shares and earn higher returns (Hitt *et al.*, 2003:52). Naidoo (2006) asserts that Smiths has been versatile in facilitating an upgrade in the information technology (IT) aspect to handle communications (Internet, emails etc), enterprise resource systems (ERP), materials resource planning (MRP), and state of the art computer aided draughting (CAD). He also states that a similar trend is noticeable in terms of the capital equipment outlay such as cutting edge technological machinery. However, he goes on to remark that Smiths can still improve by implementing e-commerce facilities with its customers and suppliers alike. Moodley (2002:559) argues that the Internet's potential to create seamless, collaborative supply networks could provide the local automotive industry with a distinctive competitive advantage in its pursuit of an 'outward orientation' and 'global connectedness' after a lengthy period of trade isolation and government protection.

The environmental protection and preservation is gaining priority on the agenda for all companies. Smiths already has instituted environmental quality accreditations such as ISO 14001 which shows commitment to the preservation of resources, protecting the ecological environment, conservation of energy and so on (Internet 26).

Most OEM's view quality as an important facet and many quality assurance accreditations are viewed as an imperative. The quality aspect is even more stringent when it encompasses safety critical items as these incur gargantuan legal implications. Smiths, by virtue of many quality accreditations, places significant emphasis on the quality of their products by monitoring defects and scrap on a continual basis. As Barnes and Deghaye (2005:47) have shown, Smiths also closely monitor the parts per million (ppm) as a percentage of warranty claims from its customers. They also observe that Smiths' heat exchangers division, at only 21 ppm in 2004, outperforms all the benchmark comparators by a significant margin.

### **5.2.2 Analysis Using Porter's Diamond**

There may be specific factor conditions which help explain the basis of advantage on a national level. Porter suggests that the national home base of an organization plays 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 which organizations are able to build on and extend to provide such advantage (J. O'Shaughnessy, 1996:12).

- **Factor Conditions:** South Africa's large, well-developed metals industry, with vast natural resources and a supportive infrastructure, represents roughly a third of all South Africa's manufacturing (Internet 27). South Africa's non-ferrous metal industries comprise aluminium and other metals (including copper, brass, lead, zinc and tin). Aluminium is the largest sector but, as SA has no commercially exploitable deposits, feedstock is imported. South Africa is ranked eighth in world production of aluminium. Key players include Billiton (with two smelters in Richards Bay) and Hulets Aluminium who have an aluminium mill in Pietermaritzburg (Internet 27). The European Aluminium Association (EAA) indicate in their report that automotive manufacturers face intense global competition and a growing environmental concern that they are committed to producing less polluting and easier to recycle cars, without compromising safety



and comfort, while maintaining efficient production and reducing running costs (Internet 28). Concomitantly, they also suggest assertively that the aluminium applications are on an exponential increase in automotive applications.

According to Organisation Internationale des Constructeurs D'automobiles (International organization of motor vehicle manufacturers), known as OICA, 2004 was the third consecutive year of a strong increase (by 5.8%) of the world motor vehicle production, following the increases of 3% in 2003 and 5% in 2002) (Internet 29). They also add that in 2004, this growth was largely attributable to emerging countries in which demand is developing.

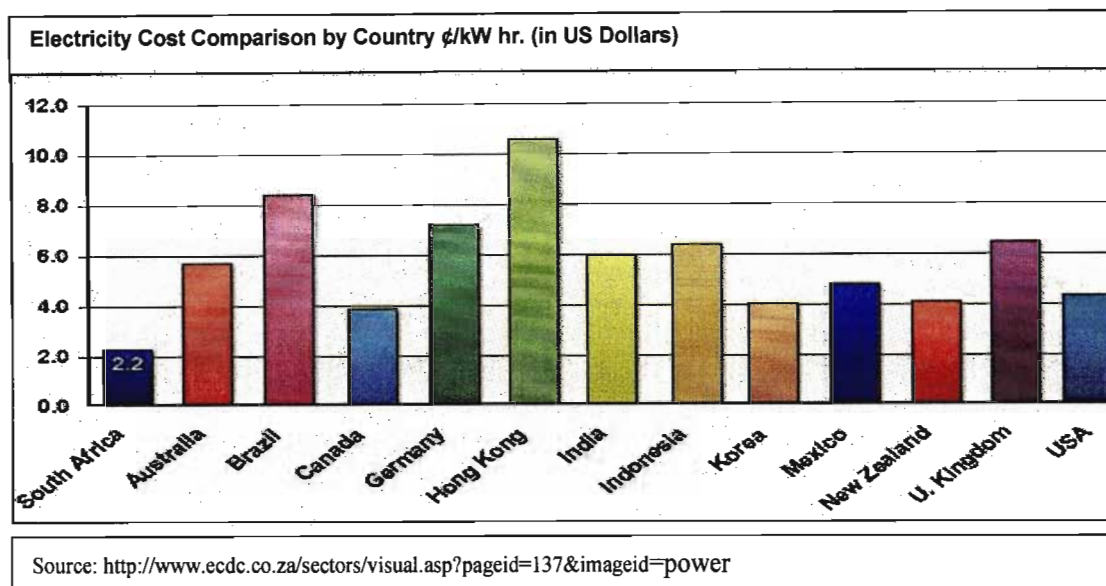
An OICA report shows in their stats that the South African automotive production has been increasing by 4% from 2002 to 2003 with an 8% increase from 2003 to 2004 (Internet 30).

Smiths' core product is aluminium and their supplier base is strategically located in close proximity to Smiths' manufacturing operations (Naidoo, 2006). This has contributed to lower levels of stock holding as indicated in the previous chapter.

Smiths utilises continuous atmosphere brazing (CAB) furnaces which consume the bulk of the electricity. Considering that South Africa is blessed with the cheapest electricity in the world, Smiths have an advantage (Internet 31).

The figure 5.1 below shows graphically comparative costs of electricity in other parts of the world.

**Figure 5.1: World Electricity Cost Comparison**



- Demand Conditions:** The MIDP incentives have helped promote the export market tremendously; and the rebates granted towards imported materials give Smiths a cost advantage. According to WesBank which is a subsidiary of FirstRand bank, specialising in vehicle finance, as cited in I-Net bridge: 15/03/2006, the country's total number of new vehicles sold is likely to rise by 17 percent from last year's 618 011 to 725 000 this year. The article also adds that the industry projects a ten percent growth while McCarthy holdings, another motor retailer, anticipates a nine percent rise to a total of 675 000 new vehicles. Furthermore, WesBank expects the figure to reach one million in 2010. The continued strong growth can be attributed to the sustained growth of the South African economy and the continued commitment made by government and the industry to the sector (I-Net bridge: 15/03/2006). Naamsa claims that during 2004, South Africa was one of the best performing markets internationally (Internet 32). They also assert that during 2005, South Africa was probably the best performing market internationally which represented another outstanding and record year for the South African new vehicle manufacturing industry with both domestic sales and production rising to all time highs.

WesBank CEO, Ronnie Watson, claims that the second factor supporting growth is South Africa's open market, allowing for a range of new entrants. He contests that for the first time, derivatives now have exceeded a thousand models and this has continued to increase (I-Net bridge: 15/03/2006).

Turning to the driving factors going ahead, Watson anticipates the local market to be fuelled by the growth of the black middle class, the rising number of female customers as well as the growing youth market.

These strong and positive demand patterns in the industry bode well for Smiths. Naidoo (2006) adds that Smiths' strong and close collaboration with the most car OEMs is indicative of a promising future for enhancing and strengthening Smiths' growth trajectory.

- **Related and Support Industries:** The port of Durban is implementing a series of major capital projects to increase its capacity, improve operations, and maintain its status as Africa's busiest general cargo seaport (Internet 33). Smiths is located only about 23Km from the Durban port which provides a locational advantage and results in minimal logistical costs of getting goods from and to the port. SA ranks 23rd in the world in telecommunications development, with over 4.92 million telephones and 4.3 million exchange lines installed, representing 39% of total installed lines in Africa (Internet 34). Modern highways, trains and airways make travel in SA comfortable and convenient (Internet 35). South Africa has six ports which serve as conduits for trade with South Africa's partners in Africa and the rest of the world (Internet 35).

The Airports Company South Africa's (Acsa) managing director Monhla Hlahla announced a capital expenditure budget of R5.2-billion to be spent over five years to accommodate the 2010 soccer World Cup for all international airports (Cape Town, Durban and Johannesburg) and a further R132 million to be spent on upgrading all the national airports (Internet 36).

- **Firm Strategy, Structure and Rivalry:** South Africa's geographic proximity to its developing neighbours can be seen in a positive light for enhancing growth of the local motor industry. But Barnes and Deghaye (2005:9) show that Africa's total car production is only 1% of the world.

### 5.2.3 Porter's Five Forces Evaluation

According to Porter, the collective strength of the five forces model determines the potential profit of an industry (Porter, 1998). One of the critical comments made on the Five Forces framework is its static nature, whereas the competitive environment is changing turbulently. Michael Porter's arguments about the new economy, as they are presented in "Strategy and the Internet", published in Harvard Business Review (Porter, 2001), provide a useful starting point in the analysis of the environment in a rapidly changing world.

- **Rivalry among existing competitors:** Employment in SA's vehicle assembly industry has returned to levels last seen seven years ago on the back of strong domestic vehicle sales and increasing exports (Lourens, 2005). She also adds that large-scale job cuts occurred in the sector in the past decade as the industry embarked on a drive to become globally competitive. Economist Tony Twine of Econometrix, as cited by Claasen (2005) states that similar to elsewhere in the world, SA was competing with other countries for new vehicle models to manufacture. The Australian government has threatened to challenge the MIDP programme at the World Trade Organisation (Lourens, 2005). SA's car production only accounts for about 0.7% of the global automotive production and (OICA Internet website- Internet 30). South Africa is seen as an emerging market economy (EME) and in chapter three the discussions highlighted that most developed countries, markets are somewhat saturated and therefore they look for growth from EMEs.

Increasingly, customers are not only looking for customization, they also want speed of delivery. The Behr group is currently the biggest competitor to Smiths. Behr being a direct subsidiary of the Behr Germany group of companies, it relies mainly on the support of the parent company. Rivalry is intense in this industry as competitors wish to retain these long term customers. Smiths, by virtue of multiple license agreements, is able to serve a wider market in a more flexible manner (Naidoo, 2006). He believes that the current trend of follow design follow source suits Smiths due to its numerous license agreements.

- **Threat of new entrants:** A business venture of this nature requires significant capital outlay though the products and designs are imitable. The second impediment is that the technological information, specialized know-how of firms and process knowledge in this field is a cumulative one and is not easily gathered. Manufacturing experience, a long standing reputation and a long term relationship built up with its customers are all parts of an invaluable asset in manufacturing industries. Smiths' position in this regard is a well established one due to the already existing license agreements between Smiths and its licensors such as Modine, Denso etc. Smiths have also built up a good, loyal client base based on service, price and delivery/lead times, plus good back up. All these factors generally inhibit the likelihood of new entrants into the market.
- **Bargaining power of buyers:** The process of globalisation has integrated the global economy. Vale (2004:126) states that the interaction between firms can be seen both in small flexible firms and in large corporations that combine scale and scope economies. As discussed in chapter three, most suppliers such as Smiths are normally given short term contracts by OEMs and if there are problems the carmaker can quickly change supplier. Chapter three also highlighted the trend of rapidly developing emerging marketing economies (like the Asian and South American countries) fighting to win businesses to achieve economies of scale. Accordingly, all the major customers of Smiths have significant bargaining power.
- **Threat of Substitutes:** Most OEMs around the world aspire to achieve improved quality of product and performance. By virtue of this, the stringent quality requirements and standards are expected to conform to international benchmarks. The nature of Smiths' products are that they are of a highly technological nature and thus no real substitute is available other than a competitor's product.
- **Bargaining power of suppliers:** Smiths' suppliers supply mainly the componentry required in the manufacturing of the heat exchanger units. Most suppliers have to undergo mandatory audit by Smiths quality assurance team before they can be accepted into the supplier base (Smiths' internal standard operating procedure- 'SOP' document). Programmes such as Supplier Product Tracking Team (SPTT), Supplier Quality Assurance (SQA) and Advanced Product Quality Planning

(APQP) are all in place to evaluate all its suppliers. Govindsamy (2005) opined that the local manufacturing firms had a significant lag in comparison to their international counterparts in terms of innovation, capability and quality aspects but he remarks, though, that most suppliers are advantageously located in close proximity to Smiths which enables quicker response times and lower quantity batch supply at higher frequency which helps with inventory reduction. Barnes and Deghaye (2004:121) outline from their research that the majority of the suppliers view the relationship with Smiths as a long-term one.

Fraser (2004a) adds that raw material suppliers are employing the import parity principle in terms of which they align their prices to global processes and thus exerting pressure on the raw material pricing. Smiths has to tolerate this concept as Smiths uses imported raw materials for the majority of the OEM parts as per the license agreements. Barnes and Deghaye (2005:14) state that the drive towards global competitiveness critical for SA OEMs & component firms, especially as:

- Industry largely excluded from ‘product innovation hubs’ and is thus dependent on manufacturing excellence to secure contracts
- MIDP presently being reviewed – operating environment is likely to get tougher

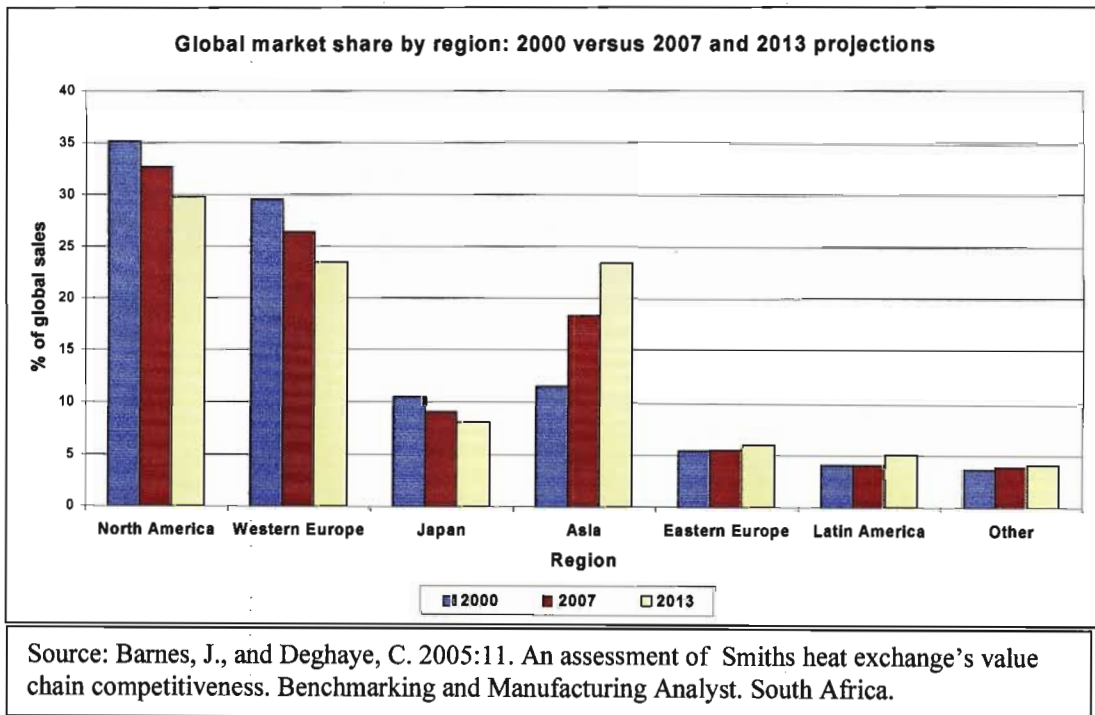
Whilst there may be reasonably strong bargaining power of suppliers, SA based automotive component manufacturers need to be globally competitive. This encompasses cost, quality, flexibility, reliability, adaptability and innovation elements Barnes and Deghaye (2005:16).

#### **5.2.4 Competitive Landscape and Competitor Analysis**

SA’s auto industry is now firmly locked into a global arena. Nominal rates of CBU protection is down from 115% in 1995 to 34% presently & is predicted to be down to 25% by 2012. A nominal rate of Complete Knock Down (CKD) protection is down from approximately 80% in 1995 to 27% presently and should be down to 20% by 2012 (Barnes and Deghaye (2005:5). They also assert that despite being largest manufacturing sector in SA (nearly 30% of total value added), only 0.7% of global vehicle production is located in SA (ranked 19th globally in 2003). The international arena therefore has a direct impact on industry progress, particularly as the MIDP unfolds through to 2012.

Limited growth exacerbates competition while maintaining production over-capacity (25-30%); hence mergers and acquisitions (M&A) activity provides the only growth opportunity (Barnes and Deghaye (2005:7). Esterhuizen (2006) noted that there is 40% overcapacity in the world thus he emphasised the importance of improving our competitiveness in terms of cost, quality and speed. Manufacturers plan capacity to achieve economies of scale (European Foundation for the Improvement of Living and Working Conditions, 2004:7).

**Figure 5.2: Global Sales Market Share by Regions**



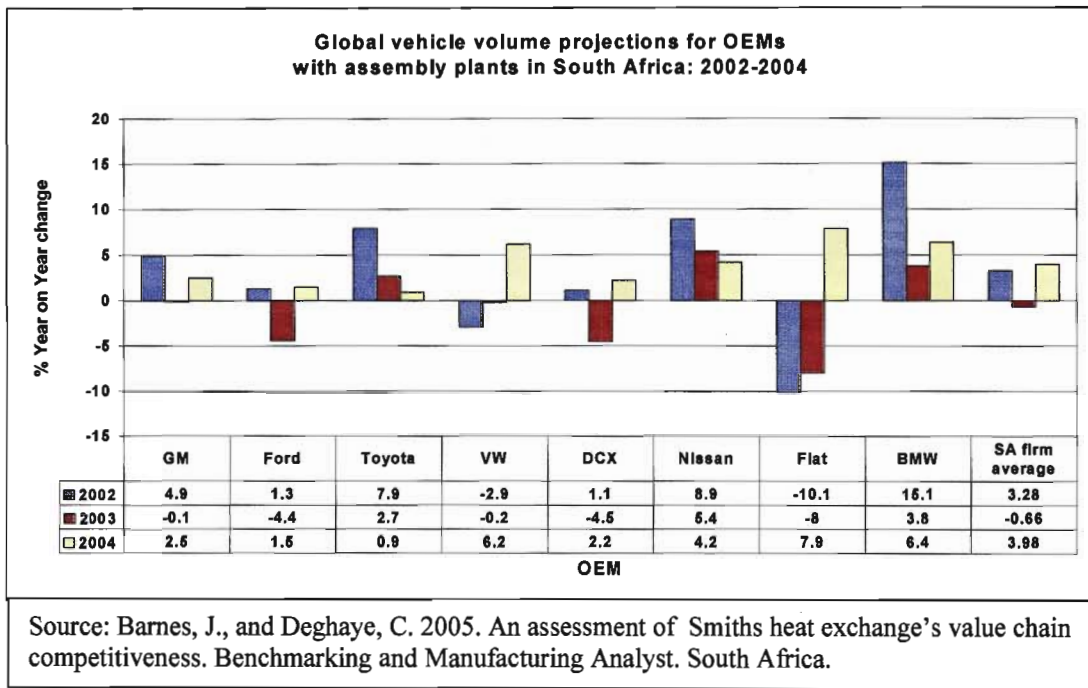
As the figure above illustrates, Asia (excluding Japan) is projected to displace Western Europe as the world's 2nd most important market by 2013.

The general projected trend for SA is positive as illustrated in the figure below since all three of the biggest movers in 2003/4 are located in SA: (1) BMW, (2) Toyota & (3) Nissan, this highlights a good potential for Smiths who have already established business with all three of these OEMs.





**Figure 5.3: Global Vehicle Volume Projections**



The global outlook remains concerning, characterised by limited growth, especially in those markets that SA is supplying into. Barnes and Deghaye (2005:14) warn that Asia is threat on the horizon because they are building substantial capacity and are presently focused on supplying their own demand, however, once their local markets are saturated, they would look to attack other markets worldwide.

In terms of domestic competition Behr is the closest rival to Smiths. Behr Indistrietechnik GmbH & Co, an independent enterprise of the Behr Group since 1990, specializes in the design, manufacture and supply of customized Heat Exchange Systems, Cooling and Air Conditioning equipment for engines, transmissions, crew compartments and electronics in military and civil applications (Internet 37).

Today, Behr Climate Control supplies heating, ventilation and air-conditioning (HVAC) components to all the major original equipment manufacturers (OEM) such as Daimler Chrysler, Delta, VW and Nissan, as well as air-conditioning pipes and hose. Their establishment in SA can be summarised as follows:

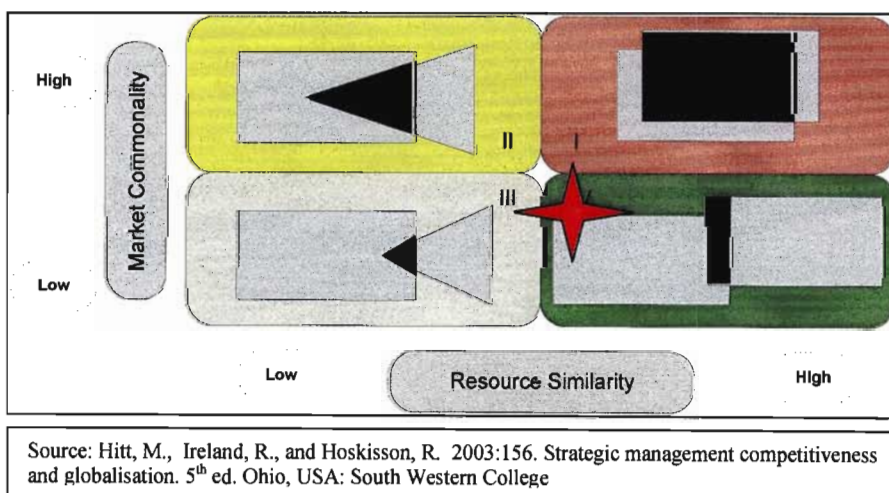
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**Figure 5.4: Behr's Plant Structures in SA**

<p><b>Port Elizabeth</b></p> <ul style="list-style-type: none"> <li>• Production range: Air conditioners, heater cores, fans, evaporators, condensers, compressors, cooling modules</li> <li>• Employees: 206</li> <li>• Production area: 4,700 m<sup>2</sup></li> </ul>	<p><b>Durban (Pinetown)</b></p> <ul style="list-style-type: none"> <li>• Production range: Radiators, heater cores, condensers, evaporators, plastic parts, components</li> <li>• Employees: 324</li> <li>• Production area: 5,739 m<sup>2</sup></li> </ul>
<p><b>Pretoria</b></p> <ul style="list-style-type: none"> <li>• Production range: Radiators, heater cores</li> <li>• Employees: 340</li> <li>• Production area: 16,700 m<sup>2</sup></li> </ul>	<p><b>Johannesburg</b></p> <ul style="list-style-type: none"> <li>• Production range: Radiators and components</li> <li>• Employees: 170</li> <li>• Production area: 4,000 m<sup>2</sup></li> </ul>
<p><b>Source:</b> <a href="http://www.behrgroup.com/upload/magazin/SouthAfrica301e.pdf">http://www.behrgroup.com/upload/magazin/SouthAfrica301e.pdf</a></p>	

Applying the framework of competitor analysis from chapter three, both Smiths and Behr fall mainly into the low market commonality segment which also matches the high resource similarity, i.e. quadrant iv in the figure below. Accordingly Hitt *et al.*, (2003:156) state that the firm and its competitor in this quadrant share few markets thus are not direct and mutually acknowledged competitors.

**Figure 5.5: Competitor Analysis Grid**



## 5.2.5 The Trends and Transformations in the Business Environment

Globally, the automotive industry is transforming itself-from the design studios of Germany to the modular assembly of cars in Brazil to the new relationships with suppliers in Detroit to the factory floors of Japan (Benko and McFarlan, 2003:4-8). They highlight three major trends as follows:

- The manufacturer's changing relationship with its customers
- New partnerships with suppliers; and
- The re-invention of the factory floor

They say that these represent a convergence of progressive thinking from major players around the globe. During this period of uncertainty and discontinuity – in which entirely new ways of doing business are emerging. Other factors that are influencing the industry include:

- Economic integration and regulation
- Stricter Environmental regulations
- The value chain systems
- More internet enabled technologies such as EDI, E-commerce etc
- More modular designs and assemblies
- Rapidly changing consumer preferences
- Continuously improving process technologies
- Improved quality at lower prices
- More common platforms sharing across various models
- Evolution of suppliers from tiers to assemblers and integrators

(Velooso and Kumar, 2002:1-40)

The trends described in the previous paragraphs are determining most of the evolution of the automotive industry. They generate a set of drivers to which all automakers have to be able to respond to remain competitive. Moreover, they are also conditioning the supply chain that is an integral part of the industry, reshaping it in fundamental ways.

## 5.2.6 Critical Success Factors in this Environment

OEM and Tier I customers rely on their suppliers to provide high quality, low cost components and systems on a timely basis in order to maintain their production cycles. These customers place tremendous value on those suppliers that are able to provide consistent quality and meet delivery schedules, rewarding these companies with increased business (Internet 38). They also add that sellers can easily analyze these factors by reviewing customer quality rating reports, which will ultimately also be reviewed by the acquirer during due diligence. They indicate that the cost component is also a key measuring stick, as OEM's and Tier I customers continue to place pricing pressure on their suppliers. Suppliers that are able to control their internal costs are therefore in a better position to remain profitable and support growth. Winning in global competition, more than ever, requires a firm to establish a defensible position (Porter, 1990) and sustain its ownership based competitive advantage, e.g. the global brand reputation of Cartier; to create and improve access to foreign suppliers and distribution channels as well as access to the state-of-the-art or the best of the breed technologies (Chandler, 2001); and to excel in the learning race (Hamel et al., 1989:133-139) and nurture core competence and skills that can be leveraged in the global market place (Prahalad and Hamel, 1990:79-91; Prahalad and Lieberthal, 2003:109-17).

## 5.2.7 Evaluation of the Firm's Resources

Resources, which are the inputs into a firm's production process such as capital equipment, skill of employees, patents and finances, serve as the source of the firm's capabilities which in turn is the capacity for core competence of the firm (Hitt *et al.*, 2003:21).

Ma (2004:911) argues that to achieve any advantage in business, a firm has to look deeply and systematically into what it has, what it knows and does, and what it can get.

Collis *et al.*, (1998) state that an outstanding corporate strategy is not a random collection of individual building blocks but a carefully constructed system of interdependent parts. This, they add, actively directs executives' decisions about resources the corporation would develop and compete in. They add that in a good corporate strategy all of these elements

are aligned with one another where the firm's resources are to be viewed as the unifying thread.

Applying the functional capability and resource analysis model from chapter two, the resources, capabilities and competitiveness can be highlighted. The resources are classified into tangible and intangible assets (Hitt *et al.*, 2003:82).

#### **5.2.7.1 Tangible Assets:**

##### **▪ Financial Resources**

- Metair holding (parent) company has substantial funding power
- Smiths' recent financial performance and growth has been positive

##### **▪ Organizational Resources**

- Highly Qualified Management
- Entrepreneurial leader
- Streamlined product divisions for better focus
- Complex material resource/production planning systems

##### **▪ Physical Resources**

- Good mix of automated and semi-automated manufacturing facilities
- 2 high speed and two low speed continuous atmosphere brazing (CAB) furnaces
- Local raw material manufacturing availability
- Test lab facilities to perform majority of product validation tests
- In house tool and jig manufacturing capability
- Just in Time (JIT) manufacturing capability
- Flexible manufacturing systems

##### **▪ Technological Resources**

- Solid Computing infrastructure for communication and production planning
- Intranet (internal newsletter/information publication tool)
- Internet access to all managers & most engineers
- Computer aided modelling and draughting capability (CAM and CAD)
- Technical License agreements with big corporations such as Denso, Modine etc
- Internationally accredited quality systems in place

-Various in house & external training sessions

### **5.2.7.2 Intangible Resources**

#### **▪ Human Resources**

- Knowledge – Smiths’ management has a wide range of expertise/experience with at least ten years of service with the company
- Nurturing continuous learning among the employees

#### **▪ Reputational Resources**

- Long standing relationship with local OEMs
- Good understanding with its supplier network

### **5.2.8 Organizational Capabilities**

#### **▪ Human Resources**

-All selected employees fit well within the existing culture of openness, trust and respect.

#### **▪ Marketing**

- Effective marketing through the sales and marketing department
- Effective customer service

#### **▪ Core Competencies**

- Loyal customers (communities of buyers and sellers)
- International presence – increased volume

#### **▪ Competitive**

-Evaluating the resources using the value, rarity, inimitability and organization (VRIO) (Fleisher and Bensoussan, 2003:211). Customer service and established license agreements are the competitively valuable resources. These resources give Smiths a competitive advantage, which if enhanced will lead to earning above average returns.

### **5.2.9 SWOT Analysis**

The SWOT analysis reveals a perceptive understanding of the external environment and Smiths’ resource capabilities and deficiencies. The aim therefore is to match likely external environmental changes with internal capabilities, to test these out and challenge how Smiths can capitalize on new opportunities, or defend itself against future threats. This

highlights areas that might need changing to sustain or develop its competitive position (Fleisher and Bensoussan, 2003:95).

The following SWOT matrix reveals Smiths' strengths, weaknesses, opportunities and threats of Smiths.



**Figure 5.6: SWOT Analysis of Smiths**

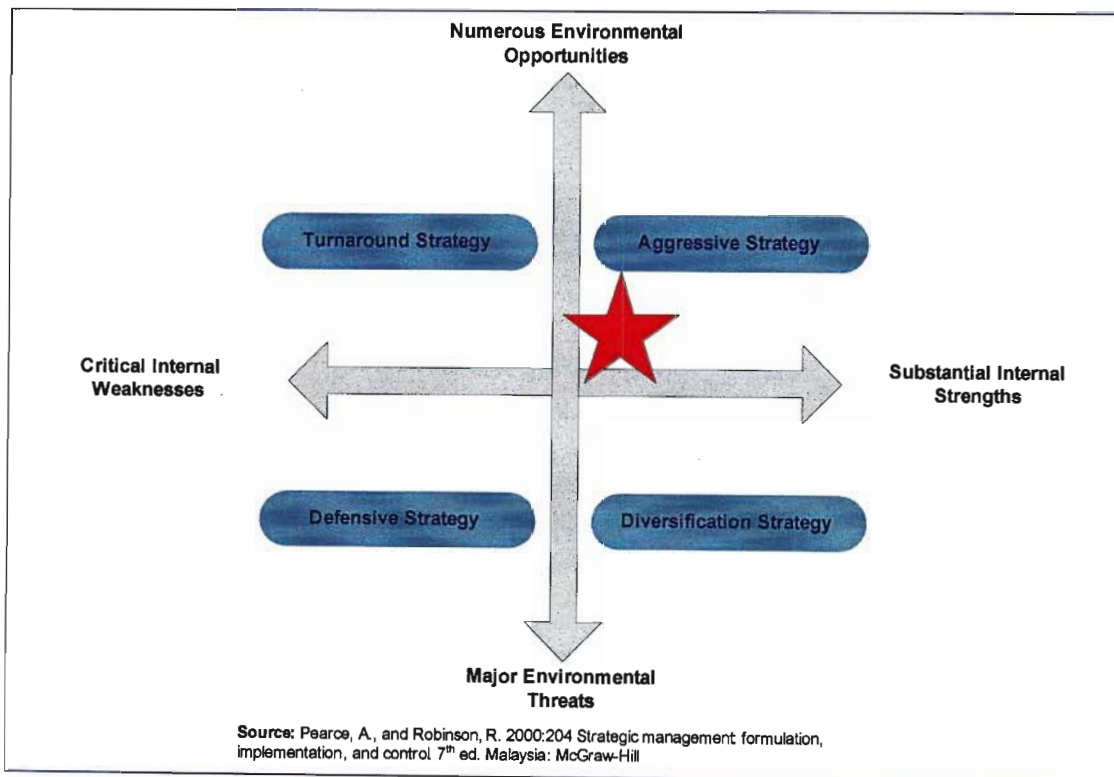
Strengths	Weaknesses
<ul style="list-style-type: none"> <li>▪ Low Electricity cost</li> <li>▪ International license agreements</li> <li>▪ Well established relationship with customers &amp; suppliers</li> <li>▪ Skills and knowledge of human resources</li> <li>▪ High barriers to entry</li> <li>▪ Internationally recognised quality accreditations</li> <li>▪ Good Information Technology infrastructures</li> <li>▪ Established and ever improving manufacturing and production systems</li> <li>▪ In close proximity of most customers, suppliers and the port</li> <li>▪ Ability to manufacture in-house facilities</li> <li>▪ Denso's assistance in technology &amp; improvements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Operator level skills low in relation to international standards</li> <li>▪ High cost of labour with unmatched levels of productivity</li> <li>▪ Certain key suppliers not up to international standards as per Smiths' requirements</li> <li>▪ High inventory of raw materials</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>▪ AGOA allows duty free access to US markets</li> <li>▪ EU also allowing duty free access</li> <li>▪ When rand currency depreciates, more exports are realised</li> <li>▪ MIDP provides a big opportunity</li> <li>▪ New product trials such as step iv condensers etc</li> <li>▪ Smiths' own design of integrated condensers</li> <li>▪ Nurturing of modular assembly supply</li> <li>▪ Enhance the value chain with customers and suppliers via use of internet</li> <li>▪ EU's redefinition of original parts</li> <li>▪ Expanding African markets</li> <li>▪ Better business prospects through Denso</li> </ul>	<ul style="list-style-type: none"> <li>▪ Appreciation of rand undermines competitiveness to an extent</li> <li>▪ High prevalence of AIDS among the workforce</li> <li>▪ High cost of imported material due to suppliers opting for purchase price parity</li> <li>▪ Increasing unionisation of work force</li> <li>▪ Imported machinery/tooling proves to be expensive</li> <li>▪ Excess global capacity in the component industry</li> </ul>
<p>Source: Adapted from Fleisher, C.S., and Bensoussan, B. E., 2003:94. Strategic and competitive analysis. Methods and techniques for analysing business competition. Prentice Hall: New Jersey.</p>	

The SWOT analysis matrix of Smiths above reveals the substantial strengths and numerous opportunities reflected against only a few weaknesses and moderate threats. Smiths' unique advantage of being able to produce under license gives it a competitive advantage in terms of exposure to new world class technology. A major spin off from this orientation is the transference of knowledge and information into the exports product arena. The "follow design" "follow source" strategy has enabled Smiths to become a major player in the market. Given the long standing relationship with the OEM's and the added benefit of international quality accreditations, together with the adoption of modern production systems and practices, the firm stands to benefit further in terms of growth.

According to the literature, a firm with substantial strengths and numerous opportunities whilst having few weaknesses and moderate threats, must undertake growth oriented strategies to further enhance their growth.

Mapping Smiths' position on the SWOT matrix cluster diagram below yields the result of an aggressive strategy to be followed.

**Figure 5.7: SWOT Matrix Cluster**



## 5.2.10 Life Cycle Portfolio Matrix

Smiths' position in the market seems to be strong. As previously stated, Smiths finds itself in a maturing market, where it is also reliant on already existing customers for repeat business. The market is experiencing more and more competitive forces but in spite of this, there was evidence that the OEMs are fortunately undergoing significant expansions perhaps partially due to the growing local and international demands.

As a result of global drive for better quality and more economical cost efficiencies, firms like Smiths are coming under increasing pressure to constantly review the cost factor as well as a concerted effort towards improving quality. Applying the model of life cycle portfolio matrix as shown below, the recommended strategy for shifting from a mature industry stage to the growth phase matched with strong competitive position is, fast grow, catch up, and attain cost leadership and differentiation.

**Figure 5.8: Life Cycle Portfolio Matrix of Smiths**

		STAGES OF INDUSTRY MATURITY			
		Embryonic	Growth	Mature	Ageing
COMPETITIVE POSITION	Dominant	Fast Grow Start Up	Fast Grow Attain Cost Leadership Renew Defend Position	Defend Position Attain cost leadership Renew Fast Grow	Defend Position Focus Renew Grow with Industry
	Strong	Start Up Differentiate Fast Grow	Fast Grow Attain Cost Leadership Catch Up Differentiate	Attain cost leadership Renew, focus Differentiate Grow in Industry	Find Niche Hold Niche Hang In Grow with Industry Harvest
	Favourable	Start Up Differentiate Focus Fast Grow	Differentiate, Focus Catch Up Grow with Industry	Harvest, Catch Up Find Niche, Hold Niche, Renew, Turnaround Differentiate, focus Grow with Industry	Retrench Turnaround
	Tenable	Start Up Grow with Industry Focus	Harvest, Catch Up Hold Niche, Hang In Find Niche, Turnaround, Focus Grow with Industry	Harvest Turnaround Find Niche Retrench	Divest Retrench
	Weak	Find Niche Catch Up Grow with Industry	Turn Around Retrench	Withdraw Divest	Withdraw

Source: Ambrosini, V. 1998:209. Exploring techniques of analysis and evaluation in strategic management. 1<sup>st</sup> ed. Essex: Prentice Hall.

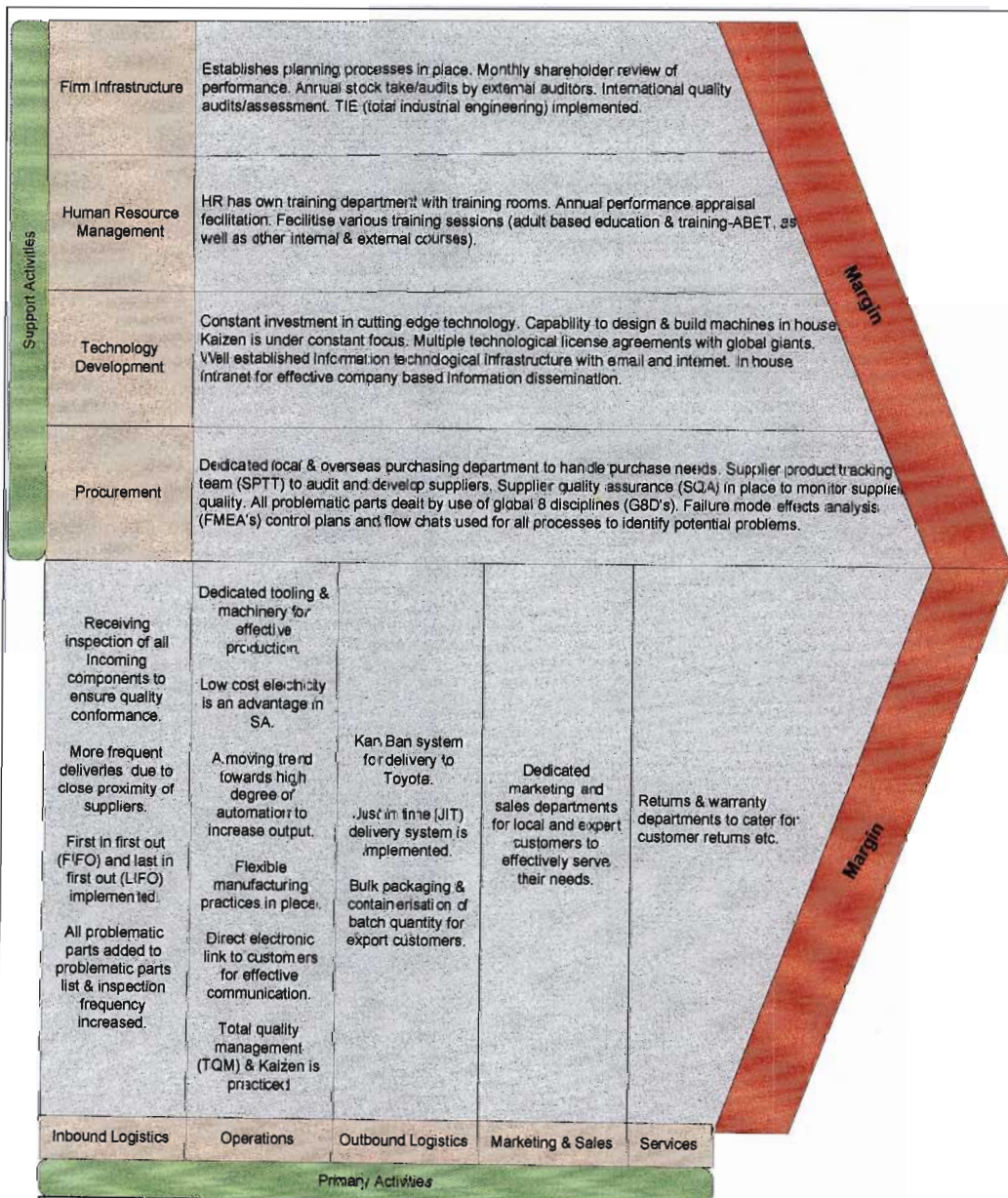
Smiths has formed strategic alliances with global players for product license agreements to supply the local OEM industry and must therefore continue on this trajectory of growth.



## 5.2.11 Smiths' Value Chain Analysis

Businesses in many developing nations have been sheltered from competition through protectionism at home and government intervention in foreign trades. The notion of value chains probably has its origins with Michael Porter, almost 20 years ago (Porter, 1985). Simplistically, Porter proposed the value chain concept as a means of identifying each of the business actions or stages that transformed inputs into outputs. Hitt *et al.*, (2003:93) say that for individual firms, the essential idea of the value chain is to add as much value as possible as cheaply as possible and most important, to capture that value.

**Figure 5.9: Value Chain for Smiths**



Source: Adapted from Hitt et al (2003:93)

Source: Adapted from Hitt, M., Ireland, R., And Hoskisson, R. 2003:93. Strategic management competitiveness and globalisation. 5<sup>th</sup> ed. Ohio, USA: South Western College.

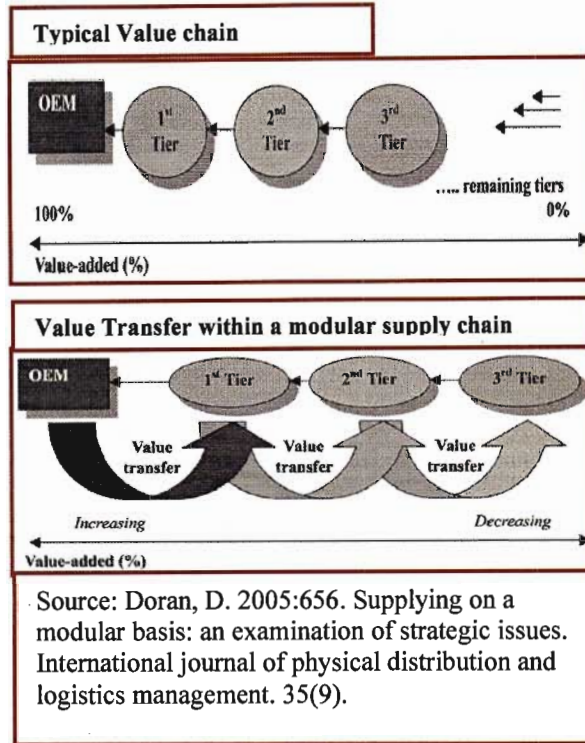
The figure above encapsulates the value chain for Smiths. The primary activities of Smiths' value chain (viz. inbound logistics, operations, out bound logistics) play a vital role in being competitively priced to the OEM plants. Smiths is heavily dependant on suppliers (component manufacturers, raw material suppliers, tooling suppliers, packaging suppliers, consumable suppliers and various service providers to maintain competitive prices. Walters and Rainbird (2004:466) say that the less resources the firm has tied up, the less capital intensive it could be, the more likely it would be to achieve adequate returns on those assets. They also add that firms are increasingly specialising in their competencies and forming alliances or networks or clusters to fill in the other parts of the value chain and amplify their own contribution.

Smiths with its relatively low cost of products and together with the internationally quality accreditations is also able to supply on a JIT basis to the local OEM's. Employee development programmes facilitated by the human resources department enables the intellectual capacity of Smiths to grow. Programmes such as continuous improvements (Kaizen) and TQM are implemented in all facets of the business. These exercises are also driven and facilitated through the MDWT and SBU's.

Walters and Rainbird (2004:466) argue that the new economy is about a series of changes to the economic landscape, driven partially by technology, but also by different expectations of the market participants. They assert that one of the consequences of this "new economy" is that value is no longer necessarily created by simply owning as many of the links in the value chain as possible – the traditional strategy of vertical integration. Instead they argue that what has been termed "virtual" integration assumes a new importance. It is argued that it is no longer an imperative to necessarily own the means the production, but instead simply to have access thereto in an effective manner (Normann, 2001; Hagel, 2002).

In recent years, however, criticism of the lean production model, originally developed by Toyota, has increased, with the primary criticism citing the inability of the lean approach to operate within an environment characterised by non-stable demand conditions (Doran, 2005:657). He illustrates the transformations of the value chain from a typical case to a newly adopted model as below.

**Figure 5.10: Typical Value Chain vs. Contemporary Modular Supply Chain**



Drawing upon elements of the lean model, Duguay *et al.*, (1997:1183-95) suggest that a new model is now emerging, which they refer to as the flexible/agile model. Doran (2005:657) asserts that the flexible/agile organisation would be more efficient than a lean manufacturer within a non-stable demand environment since flexible/agile operations can be quickly reconfigured to reflect such demand conditions, where the flexible/agile model is based upon the ability of an organisation to rapidly adapt to changing demand situations in a coordinated manner.

Smiths already supplies modular assemblies to major OEM's such as Toyota and BMW. Doran (2005:655) argues that indicative of the modular approach is the transfer from the OEM of a higher percentage of value-creating activities to upstream suppliers; at the smart car assembly plant only 20 per cent of value-creating activity is undertaken within the assembly plant.

Walters and Rainbird (2004:474) conclude that an understanding of current and future customer expectations, market characteristics, and of the available response alternatives to meet these through the deployment of operational processes is needed to maintain an efficient value chain.

## **5.2.12 Strategic Corporate Entrepreneurship**

One approach to the field is to regard corporate entrepreneurship as the overall concept, covering everything to do with entrepreneurship in a company (Christensen, 2004:301-15), such as intrapreneurship (Pinchot, 1985), exopreneurship (Chang, 1998:187-213), and corporate venturing (Burgelman, 1983:39-55). Without having any distinct corporate entrepreneurship strategy, Smiths has actively used the organizational structure to enable intrapreneurship in the form of corporate ventures, internationalisation and formal networks, and the internal organization has been organized to encourage innovation, knowledge creation and dissemination. But using the organizational structure is not the only way Smiths encourages intrapreneurship adds Naidoo (2006). Christensen (2005:312) cites that entrepreneurial behaviour can be encouraged by effective reward systems that must consider clear goals, feedback, individual influence and rewards based on results or it could be related to the performance of the team. The indications from the internal Smiths' internal newsletters suggest regular feedback and communications are under focus (Smiths' newsletter dated 08/03/2006).

As discussed in chapter four, the formation of MDWT's and SBU's and a bright ideas presentation have gone a long way in striving for and encouraging team performance.

## **5.2.13 Cultural Factors**

The chapter four discussions highlighted that Smiths and Denso are in a joint venture. Shelton et al (2003:313) argue that partnerships like these are driven by the need to produce the economies of scale critical to survival in the global marketplace. However, they also contest that the data demonstrate that the expected synergies often fail to materialize. In fact the cultural, political, psychological and geographical hurdles faced in cross-cultural integrations are enormous (Luthans, 2002:132). Integrating two independent companies with divergent cultures into one cohesive organization is a daunting and delicate process (Shelton et al, 2003:315). Hofstede's value dimension (Deresky, 2002:93-97) applied as follows:



**Figure 5.11: Hofstede Dimensions: SA vs. Japan**

Hofstede Dimensions	Japan	South Africa
Power Distance	High	High
Uncertainty Avoidance	High	Lower
Individualism	Low	High
Masculinity	High	High

Whilst there may be similarities between the two cultures, Deresky (2002:97) cautions that these dimensions do not operate in isolation, rather they are interdependent and interactive and thus complex in their effects on work attitudes and behaviours.

### **5.2.14 Strategic Leadership and Organizational Change**

Against a backdrop of increasing globalisation, deregulation, the rapid pace of technological innovation, a growing knowledge workforce, and shifting social and demographic trends, few would dispute that the primary task of management today is the leadership of organisational change (Graetz, 2000:550). There is also the argument that the traditional organizational view of hierarchical top down approach with centralised control is an anachronism hence the impetus now is towards flatter, more ‘flexible and agile organisational forms’. As discussed previously, Smiths’ inclination towards a centralised structure needs to change to more flatter structures. Chritensen (2005:14) affirms the notion that decentralised decisions create a very high degree of commitment and ensure that employees really make an effort to succeed.

It was established that Smiths had a policy of dissemination of information through internal newsletters and the intranet. Naidoo (2006) subtly remarks that there have been differences of opinion between management and employees. However, he adds that it took several years of antagonism and confrontation between management and the shop floor at Smiths before it became embarrassingly clear that, unless both sides adopted a more consultative, collaborative and conciliatory approach, it was very likely there would be little left to fight over.

The key elements of instrumental leadership are organisational design, control and reward which “involves managing environments to create conditions that motivate desired behaviour” and putting in place the enabling mechanisms that reinforce the required new values way of working (Nadler and Tushman, 1990:85). Inspiring a shared vision and

personally communicating the future direction with clear and honest answers to the what, why, and how questions are needed in the role of leadership in the firm (Graetz, 2000:550). Not only must all employees in the organisation 'find the goal emotionally compelling,' they must also clearly understand how they will contribute to achieving that goal (Jackson, 1997; Hamel and Prahalad, 1994).

### **5.2.15 Scenario Planning**

The rapid rate of change and technological innovation mean organizations have to be agile and flexible - in terms of both strategy and structure. The disruptive impact of technology and faster time-to-obsolescence characterises these competitive spaces (Rylander and Peppard, 2003:319).

Managers need a framework for dealing with various kinds of risk and uncertainty that will continue to confront corporate decision makers as the 9/11 event plays out over the following months and years (Kennedy et al, 2003:4). They caution that it is important to put this process in place now because the lessons learned from coping with the current situation will be applicable to future events that have yet to occur. Moreover, they also admit that traditional scenario planning is extremely effective in working through uncertainties, probing conventional wisdoms, and exposing faulty assumptions inherent in even the most expansive planning exercises.

For many companies then, the need is not to simply dress rehearse big disruptive events, but actually assume one or more will occur and have ironclad continuity plans in place. Trying to anticipate one of these extremes or the other is a phony choice. Indeed, the truly agile business planner or strategist should always contemplate the broadest possible, yet plausible, range of future business conditions and assume the inevitability and unpredictability of change (Kennedy *et al.*, 2003:5). This research unfortunately shows no real evidence of scenario planning being undertaken at Smiths.

Kennedy *et al.*, (2003:13) conclude that scenario planning offers not only long-term direction to the business strategists, but also guidance and support to a range of operational decisions. In fact, they say that scenarios can greatly enhance operational efficiency by confronting ambiguity head-on and forging critical alignment around big issues. They also

argue that while the classic scenario building and strategy development processes need to be re-scoped and in other ways altered to meet a different set of outcomes, the added rigor and creativity that scenario planning brings is essential for executive preparedness in the face of unknowable shocks and crises.

## **5.2.16 Change Management**

*“It’s not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change,” Charles Darwin (Internet 42).*

Change management is usually the process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers (Burnes, 2003:627-42). Mastering strategies for managing change is more important today since the rate of change is greater than at any time in history. The marketplace is changing overnight without any warning signals. Organizational alliances and structures are shifting rapidly. Everything in the organization is open to scrutiny. Basic operating assumptions are questioned. Traditions are challenged. The risk of failure is greater than ever before and the tension within the workforce is great and needs constant attention. Managing change is usually about managing people. Smiths is looking to become a lean enterprise, especially after Denso’s share acquisition, and this involves replacing the traditional bureaucratic type of organization with a teamwork-based system as seen in Japan, remarks Naidoo (2006). He also admits that the company had usually found managing the smallest of challenges difficult.

## **5.3 Porter’s Generic Strategy**

Porter’s novel idea that strategies can be classified into generic types (differentiation, cost leadership, focus or combination) has been the basis for much of the strategy research and practice in the past quarter century (Akan *et al.*, 2006:43). Porter contends that by implementing one of these strategies, a company will have a competitive advantage and earn above average industry returns (Akan *et al.*, 2006:43).

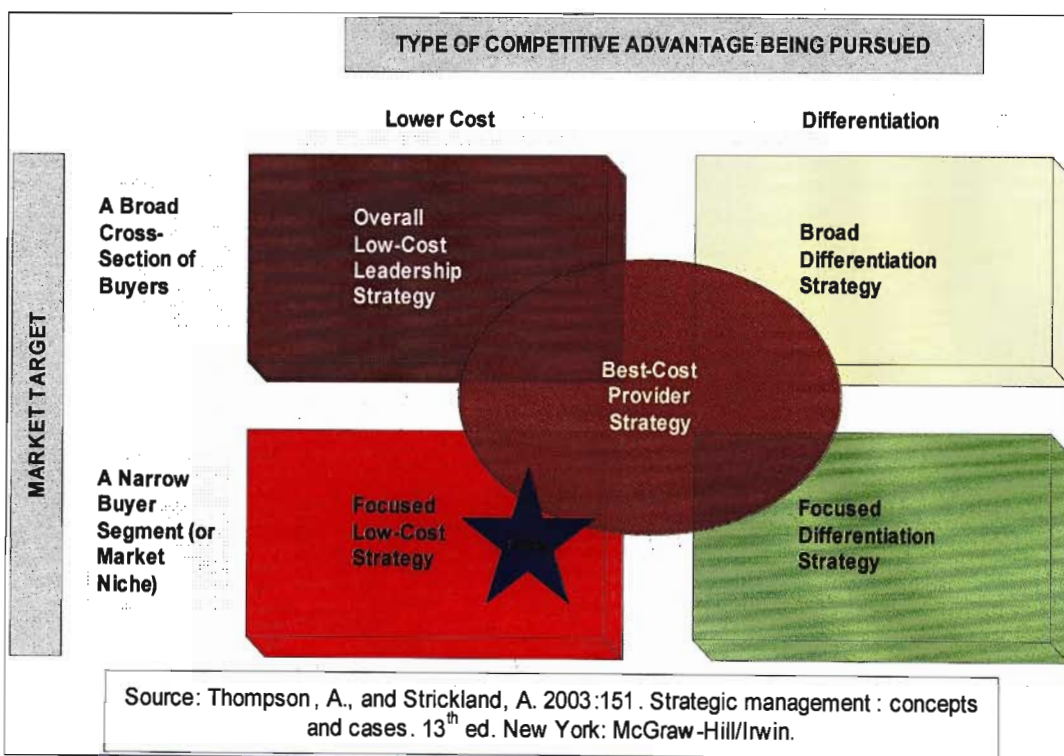
Customers are the foundation of successful business strategies (Hitt, *et al.*, 2003:112). Hence Smiths has considered three key issues in selecting its target customer:

- Who to serve (the local narrow OEM and the export markets)

- What needs to meet (customer specific product technology)
- How needs will be satisfied (continuous cost/quality improvements and innovation together with customer specific deliveries)

Once the target customer has been defined, Smiths has a choice of business-level strategies it may pursue to create differences between its offering and that of competitors. Smiths has demonstrated focused low cost strategy as illustrated in the following figure:

**Figure 5.12: Competitive Advantage vs. Market Target**



Akan *et al.*, 2006:45 establish the following associated tactics with a focused low cost strategy:

- Providing outstanding customer service
- Improving operational efficiency
- Controlling the quality of products or services
- Extensive training of front-line personnel
- Intensive supervision of front-line personnel

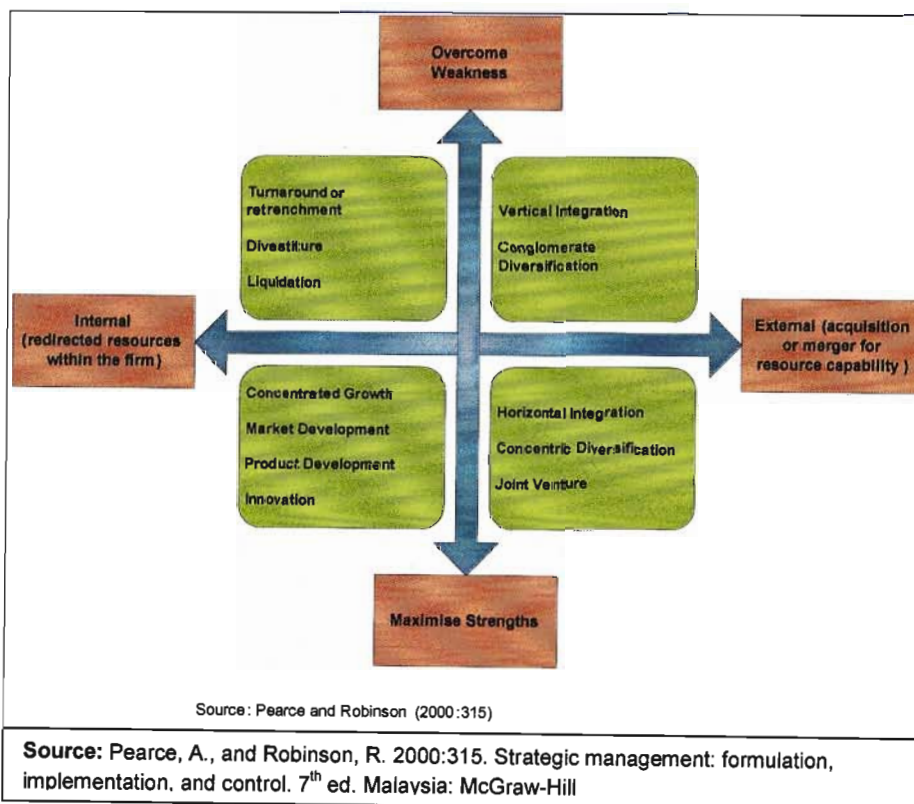
Porter's generic strategies are the widely accepted pool of options that any organization can pursue to achieve success and longevity. Participants in an industry may be successful

following any of these generic strategies as long as they stick closely to the strategy and do not move toward a “stuck in the middle” position of trying to be all things to all customers!

## 5.4 Grand Strategy Selection

Smiths needs to select a strategy that will harness the external and internal environment in order to achieve its mission and intent. The SWOT analysis revealed that Smiths has substantial strengths combined with significant opportunities, and that they are in a position to experience a steady growth. Smiths operates in a relatively slow growing market, retaining a marginally strong competitive position. The models grand strategy selection matrix and grand strategy clusters (Pearce and Robinson, 2000:315-317) is used to ascertain Smiths position as follows.

**Figure 5.13: The Grand Strategy Selection Matrix**



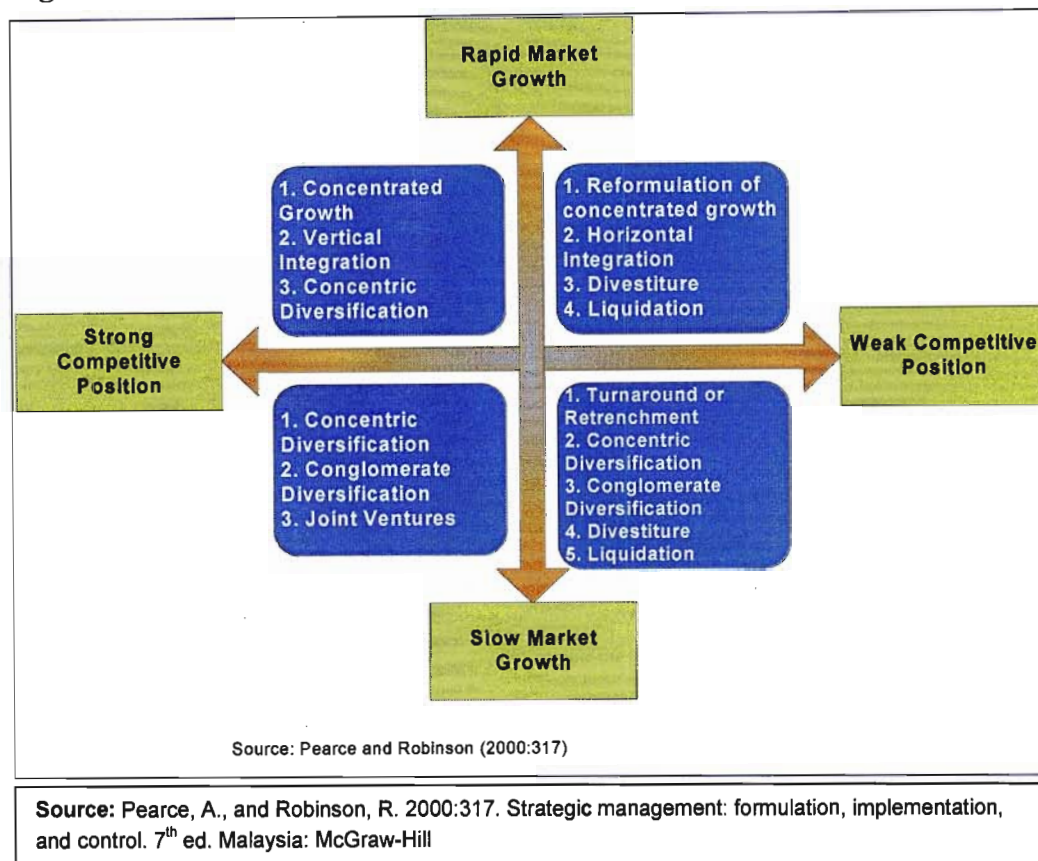
The typical SWOT analysis holds that in seeking an opportunity, firms look for a solution that maximizes the organization’s strengths, minimizes its weaknesses and avoids possible threats (Morris, 2005:53). As such, Smiths would need to maximise their strengths either



internally or externally. Hence the above suggests that Smiths fall into the lower half of the grand strategy selection matrix.

Unlike the above grand strategy selection matrix, the model of grand strategy clusters takes a slightly different approach. The cluster matrix ascertains the strategy options in the dimension of market growth rate against the strength of competitive position as shown in the figure 5.14 below:

**Figure 5.14: Model of Grand Strategy Clusters**



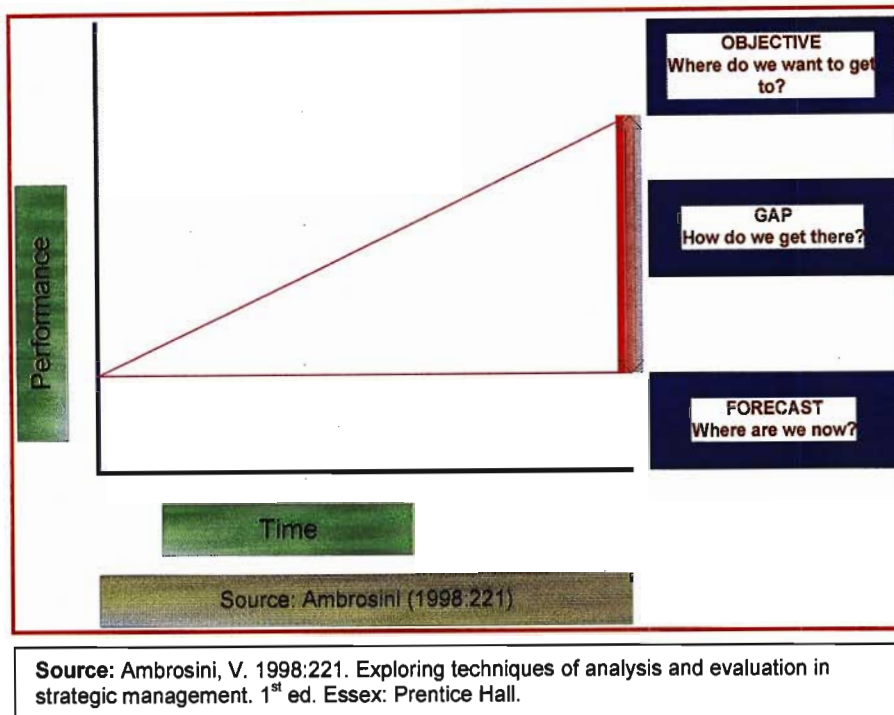
Smiths has a strong competitive position but in a somewhat maturing market with a good potential of rapid market growth with the necessary focus on the appropriate strategies. As such, the model above suggests that Smiths falls into the upper left quadrant indicating the following strategies to be followed:

- Concentrated Growth (by market development and/or product development)
  - Vertical Integration (perhaps with supplier along the value chain)
  - Concentric Diversification (to spread out the risks of narrow product focus)
- (Pearce and Robinson, 2000:317)

## 5.5 Gap Analysis

Ambrosini (1998:221) states that a gap analysis is about answering the three essential questions of where the firm is now, where does the firm want to be and how does it get there. They argue that upon answering the questions, a manager can choose and implement the appropriate strategies to close the gap. Their proposed model is as follows:

**Figure 5.15: Model of Gap Analysis**



### Where is Smiths Now

Smiths is the largest air-conditioning manufacturing company in South Africa and their reasonably strong competitive position is under threat from low cost global manufacturers seeking economies of scale. Smiths has established a good reputation for having world class quality systems, and being capable of delivering similar quality as their first world counterparts and rivals. 25% of Smiths is owned by the Denso Corporation of Japan and that is an advantage in terms of access to world class design and process technologies.

### Where Does Smiths Want To Be

Smiths' vision states that they want to become a globally competitive firm catering for the needs of their customer whilst also meeting the costs and quality aspects. Smiths also looks to achieve economies of scale to become competitive through the symbiotic relationship developed with global players such as Denso. By virtue of this, Smiths also looks to sustain their growth and improve or sustain the current levels of return on investment.



### How to Get There

As earlier discussions have highlighted, the remote as well as industry environments have an impact on the firm's strategy. The SWOT analysis has highlighted the strengths, weaknesses, opportunities and threats. One of the major threats was decreasing cost competitiveness compounded by the strengthening rand which seems to diminish the opportunity of winning businesses with existing as well as new customers. The current industry is under fierce competition from overcapacity in the Asian countries. Added pressure is compounding from Smiths' supplier side due to an import parity pricing strategy used. To compete successfully in this industry, Smiths needs to look at cost leadership, continuous product development and product innovation, and continuous quality improvements. The multiplicity of the license agreements Smiths holds enables them to access bigger markets and these needs to be pursued more aggressively.

## **5.6 Conclusion of Strategic Analysis and Choices**

The automotive components industry in South Africa is stated to have grown out of the first automobile assembly plants established in South Africa during the 1920s. As a result of tariff protection being afforded to these manufacturers, some of the basic components were locally sourced. The various local content programmes, as well as the sanctions era, also created an artificially diverse locally owned automotive components industry in South Africa. The MIDP, which seems to have come under some scrutiny of late from the WTO, has not only changed the focus of the industry from being inwardly to outwardly orientated; it has also changed the nature of the political relationship between OEMs and domestic automotive component manufacturers.

Incentive schemes such as AGOA and other trade agreements provide an opportunity for local manufacturers to export. The SA market for the sale of vehicles is on a positive growth path. The South African political climate has been stable for the past few years in spite of the ongoing volatilities and disruptions among the neighbouring countries. The local OEM's strong affiliation to their parent companies is a catalyst for their growth. Even though Smiths is facing stiff competition from abroad, locally their competitor rivalry is weaker which enhances their competitive position. To complement this, Smiths has significant strengths and a well established close working relationship with its customers as well as international quality standards. That said, there are weaknesses which were highlighted in the earlier chapter, such as a high raw material inventory, and not meeting

the stringent quality performance standards set by the customer amongst others. As highlighted in the earlier chapters, Smiths also face threats from Asian producers who have increasing levels of overcapacity.

The South African Rand has been quite volatile in the recent past but appreciation or the depreciation of the Rand can be viewed as a double edged sword which favours either the importers or exporters depending on the currency movements in the turbulent sentiment driven and speculative global markets. So Smiths needs to monitor the exchange rates and have plans in place for any sharp changes. Strategies become truly successful when they sow the seeds for future success. From the grand strategy cluster, it was established that Smiths follow the following:

- Concentrated Growth (by market development and/or product development)
- Vertical Integration (perhaps with supplier along the value chain)
- Concentric Diversification (to spread out the risks of narrow product focus)

In addition to this, it was established that firms need to create and access knowledge to improve their continuous learning process. Any strategy that is not amenable to enhancement is destined to fall prey to rivals.

# CHAPTER 6

## CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Introduction

The first chapter of study stated the outlines and defined the objectives of the study. The first chapter also highlighted the motivation and methodology of the research. The second chapter discussed the numerous theoretical strategic models as well as their strengths, weaknesses and capabilities broadly in terms of the remote environment, the industry environment as well as the internal analysis. The conclusion of this chapter saw the development of the strategic model to be applied during analysis and evaluation in the following chapters.

In chapter three, the research methodology and the fieldwork was discussed. Unstructured qualitative interviews using an interview schedule so as to ensure all core issues were discussed were conducted with a number of managers in key positions to gather organizational data pertaining to the industry as well as the firm. Chapter four highlighted the case study of the organisation concerned was developed. The chapter was initiated with the current trends and the levels of metamorphosis in the auto industry and the ever evolving roles amongst the OEM's and their suppliers. The discussions also highlighted the key trends and drivers in the industry. In presenting the case study, the various aspects of the organizations from the history of the organization to its current position, its current competitors to its resources and an analysis of its benchmarking report enabled a comprehensive profile to be developed in context of its current operating environment.

Chapter five highlighted the application of the literature search to the case study which enabled the various strategic options to be developed. In the analysis, Smiths' current position was established and the discussions highlighted the strong and weak points thereof in context of the current state of play within the automotive manufacturers' realms domestically and in the global arena. .

The final chapter (chapter six) concludes all the analyses and evaluations and provides the recommendations by means of strategic options for the way forward. The final chapter

concludes with the scope of future research areas whilst also highlighting the limitations of this study.

## **6.2 Discussions of Research Objectives**

In revisiting the problem statement, it was ascertained that Smiths' adopted strategies may need revision, given the nature of the changing environment. If the adopted strategies proved to be inappropriate, the outcomes of research findings were to be used to recommend appropriate strategies for Smiths.

In considering the problem statement, the research objectives were outlined in the first chapter.

### **Objective 1**

- The general trends, patterns & requirements within the automotive industry

The first objective was to identify the trends and demand patterns in the automotive industry locally as well as globally. By means of literature review, the key trends such as global stagnancy in general, follow source-follow-design strategy, collaborative partnerships amongst the various suppliers, higher levels of modularization of various components, better quality at shorter lead times with lower costs of automotive component products are, amongst other trends that have been discussed. Main market growths have been arising predominantly in the emerging economies.

In general, the OEM's relationship with their suppliers has been evolving which has resulted in a greater dependence on first tier manufacturers such as Smiths. The resulting trend as a consequence of this strategy is that these OEMs' suppliers have the potential to achieve economies of scale by becoming global mega-suppliers. This trend has exacerbated by the assimilation of the South African based OEM's into their main corporate entities worldwide.

The markets have evolved from being regional to becoming global. The value chain efficiencies and supply chain management are becoming an integral part within the manufacturing and supply processes. These trends impact upon Smiths directly as Smiths also competes in this market.

## **Objective 2**

- The level of competitiveness of Smiths in comparison to other local as well as international firms

In general, Smiths was found to be in a strong competitive position given the niche market they focus on. Behr as the other competitor to Smiths was found to have high resource similarity and low market commonality on the Competitor Framework Analysis Grid, which according to Hitt *et al.*, (2003:155-157) are not direct competitors.

In terms of levels of capability and performance of local firms relative to international customer expectations & requirements, it was found that most areas were in favour in Smiths and local firms. However, there were weaknesses and threats that were highlighted which needs to be reviewed. Areas of cost quality and speed have proven to be key aspects in order to compete in the local as well as the global arena. Generally the international quality accreditations achieved by firms like Smiths has been in their favour.

South African Rand's weakness has been instrumental in helping to maintain competitiveness against global competitors, mainly of the Asian continent such as China and India. Opportunities such as AGOA and other trade agreements need to be used as a platform for firms like Smiths to further explore the export markets.

Undoubtedly the MIDP has been instrumental in sustaining the competitiveness of the local motor industry. The generally weaker rand has also helped the industry to be competitive. The inherent threats such as political instability and crime seems to be hindering the progress. The other major factor serving as an impediment was the import parity pricing being adopted by local suppliers.

## **Objective 3**

- The levels of improvements and quality concepts such as Kaizen and TQM that are noticeable at Smiths and other South African automotive heat exchanger component manufacturers

It was highlighted that Smiths' MDWT was established to continually improve with a focus on quality and cost and work ergonomics. Smiths' bright idea presentation is reward driven platform which encourages employees to come up with innovative ideas and solutions for

various problem aspects within their working environment. By Denso's acquisition of 25% shares in Smiths, the idea of Kaizen (a Japanese philosophy of continuous improvements) is further strengthened at Smiths. It must be stated that in view of the competitors not being open to discussion that objective was not fully realised and mainly Smiths was the focus. Denso's first world technology also enables a process of technological learning for the employees at Smiths. It was also discovered that the management places increasing emphasis on the intellectual capital to nurture improved organizational learning.

The ABET training programs instituted at Smiths fosters a culture of continuous learning amongst the unskilled workforce. Management do however admit that more needs to be done to continually uplift the work and quality standards within the organisation.

#### **Objective 4**

- The future growth potential of local as well as export markets and the viability thereof for local manufacturers such as Smiths

In keeping with the global trend, the future growth potential exists for Smiths through further collaborations with companies such as Denso. The other developing countries such as China and India also have a hugely untapped market. In reviewing the main part of the objective which was intended to identify the current strategies being pursued by Smiths, it has highlighted a few important points.

As identified in the preceding chapters, the evidence suggests that Smiths is pursuing a low cost focussed strategy which is normally characteristic of a firm targeting a specific, often narrow, segment of the market. Focus also is based on adopting a narrow competitive scope within an industry that large firms may have overlooked. The focus strategy aims at growing market share through operating in a narrow market or niche segment more effectively than larger competitors. A successful focus strategy depends upon an industry segment large enough to have good growth potential but small enough not to be important to other major competitors. Focusing allows the Smiths to direct its resources to certain value chain activities to build its advantage.

The current strategy has enabled Smiths to achieve above the required return on investments. Their strength lies in the multiple license agreements Smiths holds from

various global players which enabled them to manufacture in terms of follow design, follow-source strategy. Through this, Smiths gained access to leading technological innovations in the industry. Smiths' added strength also currently comes from Denso's 25% share acquisition which invariably means that Denso also has vested interest in Smiths' performance. Visit by Mr Toyoda (executive vice president of Toyota Motor Corporation-TMC) on 23<sup>rd</sup> March 2006 was a major highlight in Smiths' history (Smiths' Weekly News). In a letter of appreciation by Dr Toyoda to Smiths' MD, Mr Leon Coetzee, there were compliments and words of encouragement for the level of success achieved by Smiths in close collaboration with Denso and Toyota SA.

There have been in-house and external training programmes instituted by Smiths in recognising the need for improving the vital assets of intellectual capital of the organization which is often the lifeblood of the organization but usually underrated.

### **6.3 Summary of Preceding Discussions**

Strategies become truly successful when they sow the seeds for future success (Fahey, 2002:8). Stated differently, any strategy that is not amenable to enhancement is destined to fall prey to rivals. Platts and Tan, (2004:670) claim that a key activity in developing strategy is understanding the past. They also add that strategy is more than a set of plans for the future; hence, to be meaningful, strategy must be set in a real context that shows how the organisation attained its present state and what factors have driven, drive or have failed to drive the organisation towards attaining its objectives.

Naamsa reported that during 2005, South Africa was probably the best performing market internationally. They stated that the 2005 South African car sales figures were 25.7% higher than the previous year (2004) and 2004's figures were 22% higher than 2003. This indicates the strong growth in the domestic automotive market.

Majority of the South African-based OEMs are being rapidly assimilated into their parent company's global operations, with this leading to a systematic restructuring of their relationship with South African automotive component manufacturers.

The trend of follow-design follow-source and moving away from purchasing products made with localised South African technology is evident. This was seen as inevitable due



to global sourcing arrangements and the restructuring of relationships between OEMs and their first tier suppliers at the global level. It can also be deduced that domestic OEMs are still largely dissatisfied with the performance of their South African automotive component suppliers. Although automotive component manufacturers like Smiths generally tend to over-rate their own performance relative to customer requirements and are not meeting their customers' key performance criteria, they appear to be largely cognisant of the critical success factors in the automotive market and the emphasis placed on various factors by their customers.

The MIDP is said to have been a major success in increasing the output (components and built up vehicles) of the local motor industry. This scheme initiated by the South African Department of Trade and Industry in 1995 and initially expected to continue until 2012 is undergoing its second mid-term review. Due to the duty credits earned by the Import Export Complementation programme of the MIDP, the local OEM's have an option of importing parts from foreign manufacturers duty free. Barnes (2000) argued that automotive component manufacturers would appear to have suffered enormous economic difficulties as a result of their rapid exposure to international competition through market liberalisation.

Naamsa president and Toyota SA CEO Johan van Zyl says that SA motor manufacturers are challenged to not only sustain the business built up under the MIDP, but elevate it to new heights and drastically change the way they do business (Smiths Newsletter, March 2006). He also concedes that Globalisation, with its intense focus on cost-down, quality-up while providing reliability of supply, is a reality for all motor manufacturers. Local manufacturers are far from most export markets, so they have the added impact of rising costs of transports and logistics, he claims. Dr van Zyl also noted that local manufacturers had gripes about some aspects of the country's infrastructure, such as harbours, railways and road capacity but he admits that most of these limitations were being tackled with joint ventures between the industry and government agencies.

## **6.4 Further Limitations Experienced**

Some of the expected limitations were highlighted in chapter one. Further limitations that became apparent during the study are as follows:

- Some of the interviewed managers explicitly stated that they were under sworn oath and under a signed confidentiality agreement in the organization which refrains them from divulging certain information
- Some of the key personnel could not even be approached for interviews (e.g. Dr Toyoda who is the vice president of Toyota Motor Corporation who visited Smiths, had body guards surrounding him thus barring any persons from approaching him)
- Smiths export customers' senior personnel could not be reached for comments
- The research could not delve in depth to ascertain the nature of the specific license agreements due to its high nature of sensitivity
- Some of the emails did not get any responses
- The research could not ascertain the proportion of business activity with each of Smiths' licensors
- The competitors were tight-lipped about their business processes
- Lack of information about international component manufacturers is a short coming in this research
- The research does not discuss the viability of strategic options such as Vertical integration, Conglomerate diversification and its aptness for Smiths

## **6.5 Recommendations for Smiths**

Smiths has been experiencing above average returns until now therefore they must have been doing something right. However, the environmental, industry and competitive environment is drastically changing. Previous discussions highlighted that Smiths' position is somewhat in a maturing industry with a potential of growth. Thompson and Strickland (2003:267) recommend that in order to strengthen a firm's competitive position, pruning the product line, improving value chain efficiency, trimming costs, accelerating sales promotions efforts, expanding internationally and acquiring struggling competitors. Product characteristics also have considerable influence over transportation options, and therefore supply chain strategies. For example, the size of the product with respect to its value influences whether air freight or sea freight is the most viable option, which in turn affects the supply chain strategy of Smiths. The expertise, efficiency and cost of labour as a resource in the supply chain must be considered when supply chain strategies are being determined. Smiths needs to realise and understand that a labour advantage in one location relative to another e.g. better skills or lower wages, may off set additional transportation

costs, so that a supply chain that uses a more distant labour source could offer advantages over one closer to the customer markets.

Focus for Smiths must be on the ongoing recognition of the need to create more responsive, customer-oriented, competitive organisation, which can be effected via significant changes to the organisational structure which nurtures more decision making powers at the lower hierarchical nodes. Kaizen activities and improvement projects need to be continually established throughout the organisation as Smiths attempts to increase its competitiveness and responsiveness through restructuring. However, while restructuring of the business occurs, people's attitudes, beliefs and values must also be changed and be constantly goal (re)aligned. The majority of older staff seems to doggedly adhere to the conservative, engineering mentality of the past which is changing but all too slowly.

To make the upgrading happen, firms must additionally possess the competences to incorporate new technology into their production capacity. These competences are also critical for continuous access to foreign technology in the context of moving closer to the global technology frontier which is of course itself a moving target.

Automotive component firms like Smiths can no longer solely rely on domestic OEM/OES and aftermarket sales for their continued survival. Without any local content provisions, and with the removal of almost all duty protection, the industry has to both keep foreign imports from undermining local sales and significantly increase its levels of exporting.

To penetrate the export markets, automotive component manufacturing firms such as Smiths need to either use the domestic OEMs as a conduit for their exporting and/or generate a close relationship with a first tier MNC component supplier. This has been already achieved strategically by Smiths by virtue of Denso's acquisition of 25% share of Smiths. However, this can only be viewed as a starting point therefore Smiths needs to pursue more partnerships like these to access technological license agreements to venture into global markets.

Smiths also needs to create and access knowledge to improve their continuous learning process by means of strengthening ties by means of more product licenses with other global giants like Modine, Valeo etc. It was highlighted that modularity is the latest trend.

Arnheiter and Harren (2005:700) show that in the computer industry, Compaq was one of the first companies to capitalize on the modular architecture of the IBM PC when it created the IBM AT clone in the early 1980s. They say since that time, Compaq and other computer companies such as Dell and Gateway have found success by integrating only a small number of modules to produce fully finished personal computers. Computer manufacturers prefer modularity because it greatly reduces the time and cost of assembly, and enables mass customization. Similarly, these benefits can be achieved by Smiths who needs to focus on the development of cutting edge modular assemblies which they can offer at competitive pricing at world class quality.

Smiths needs to continuously improve the electronic data interchange (EDI) in order to streamline its business processes and contribute to more efficient transactions across the supply chain. In supporting the above notion, Ratnasingam (2001:265) argues that implementing EDI and electronic trading brings about a number of benefits to the automotive industry including improvements in general logistics, increased productivity, improved product quality, enhanced customer service, and lower inventory requirements. In addition, the automotive organizations were able to eliminate manual re-keying of data, thus reaping economics of scale in time and labour savings.

It has been said that the intellectual capital of the organization should be considered to be its biggest asset. This view was supported by Dennis Kelly, President of Chrysler of Brazil: 'When I think about technology I don't think in terms of robots but in processes of quality training and concept' (Abreu *et al.*, 2000:165-82). With these factors, Smiths also needs to recognize the value of staying current with regulatory issues in the automotive industry.

## **6.6 Suggestions for Future Study**

The limitations highlighted previously indicate that the research does not cover the detailed viability of Smiths' strategic options such as Vertical Integration, or concentric Diversification etc. These could be explored in a future research which encompasses the domestic as well as the international markets.

This research also did not cover sufficiently enough the finer details and the nature of the technical and product licence agreements between Smiths and its Licensors. Perhaps a research that delves into the excruciating details of these agreements may look at

improving and strengthening these agreements in terms of a symbiotic relationship between Smiths and its Licensors.

The sudden growth of the Internet and E-Commerce aspects in the business world has transformed the way in which businesses are operating. With this as a backdrop, a study should focus on how electronic commerce, internet and electronic data interchange (EDI) needs to be exploited between Smiths and its customers and suppliers alike to efficiently handle all the business transactions. And in approaching this study, the improvements of the value chain needs to be looked at in acute detail.

## **6.7 Conclusion**

The world arena is not static hence the environment is continually changing. Flexibility, responsiveness, decisiveness and speed are the facets that companies need to place emphasis upon to succeed. Organizations have to adapt, act faster and become more competitive. Managing business operations is a complex task. As the complexity of the business environment increases, good communication and shared understanding among managers are vital. Managers need to present increasing amounts of information to one another clearly and effectively. Customer is the reason a business exists. There is no escaping the fact that the customer in today's marketplace is more demanding, not just of product quality, but also of service. As more and more markets become accessible, where the customer perceives little technical difference between competing offers, the need is for the creation of differential advantage through added value, at better quality and reduced cost. Hence, it is increasingly becoming important to understand customers' needs and wants and to translate these into a unique value-added business mission. Motives such as cost, quality, and service cannot be ignored. In fact, these are prerequisites to sustain competitiveness of an organization such as Smiths. Blake *et al.*, (2003:11) have also predicted that by 2010 there will be no more than 20 to 30 major systems suppliers globally and Smiths need to take cognisance of this prediction.

The global automotive market is extremely competitive. Many large businesses operate on a worldwide scale. Competitors are constantly trying to find new technologies and markets to increase global market share. Recent years have seen globalization and consolidation strategies increasingly used competitors resulting in more intense levels of competition. Over the past few years Smiths has been formulating new strategies for cost reduction. Smiths must continue to pursue manufacturing innovations aimed at achieving cost

reductions on an extremely large scale. To be successful, these types of programs require relentless hard work behind the scenes.

Firms such as Smiths experience high levels of capital expenditure, which is required if the company aims to continue its market growth through the introduction of new product lines and the opening of new production facilities. If the automotive industry was on the verge of an upturn and guaranteed increases in capacity were required and increases in sales were likely then such capital expenditure would not pose such potential risks. The development of new products though is extremely costly within the industry and the high levels of capital expenditure may be difficult to maintain in the short to medium term as price competition becomes more severe. Smiths' exports market is subject to currency fluctuations. Fluctuations within these currencies can be a great threat or a boon to Smiths' earnings and revenues. Manufacturing systems prefer stable production and long lead times whilst demand is far more dynamic where the strategic focus should be on market responsive manufacturing where the aims should be for optimising revenue and capacity utilisation (Waller 2004:18).

Technology license agreements and collaborations are essential to sustaining competitive advantage in firms like Smiths, but technology transition and collaboration planning require the support of good strategy formulation and planning. While every company's strategy should address those factors unique to its own business environment and technical requirements, the other important factors such as cost, quality and speed have repeatedly proven absolutely essential to implement strategies that drive success of the organization.

Smiths' strategy has been researched and it was found to be working well but with the constant change in the market, the strategies need to be continually fine-tuned to suit the prevalent market conditions. The various objectives that were originally outlined have been researched and the closing discussions highlighted in this final chapter. In light of the findings, the various changes to strategies that have been recommended should enable Smiths to remain viable, competitive and successful. Moreover, in line with the stated limitations of this research, suggestions for future studies have also been highlighted.

# BIBLIOGRAPHY

## Books, Journals and Other Publications

1. Abreu, A.P.R., Benyon, H., and Ramalho, J.R. (2000), *The Dream Factory: VW's Modular Production System in Resende, Brazil*. *Work, Employment & Society*, Vol. 14. No.2. pp.265-282.
2. Akan, O., Allen, R.A., Helms, M.M., and Spralls 111, S.A., (2006), "Critical Tactics for implementing Porter's Generic Strategies." *Journal of Business Strategy*, Vol. 27, No. 1, pp. 43 – 53.
3. Alaez, R., Bilbao, J., Camino, V., and Longas, J.C., (1999), *European Urban & Regional Studies*, Sage Publications, London, Thousand Oaks, New Delhi.
4. Aller, R.A., and Ubillos, J.B., (1999). "New Tendencies in Inter-Firm Relations in the Automotive Industry and their impact on European Periphery Suppliers. Lessons from Spain." Dept. of Economics, Public University of Navarre, Pamplona, Spain.
5. Ambrosini, V., Johnson, G., and Scholes, K., (1998), *Exploring Techniques of Analysis and Evaluation in Strategic Management*, Prentice Hall Europe, Great Britain.
6. Anwar, T., (2002), "Impact of Globalisation and Liberalisation on Growth, Employment and Poverty: A case study for Pakistan.", UNU/WIDER Discussion Paper No. 2002/17, January.
7. Arnheiter, E.D., and Harren, H., (2005), "A Typology to Unleash the Potential of Modularity." *Journal of Manufacturing Technology Management*, Vol. 16, No. 7.
8. Baldwin, C.Y., and Clark, K.B., (2000), *Design Rules*, MIT Press, Cambridge Press, MA.
9. Ball, D., and McCulloch, W., (1996), *International Business*, Irwin McGraw-Hill, New York.
10. Barnes, J.R., (2000), "The Competitiveness of the South African Automotive Industry: Findings from the 1999 Follow-up Study.", Research Report no. 27, Durban Centre for Social and Development Studies, University of Natal.
11. Barnes, J., (2000), "International Customer Perceptions of South African Automotive Component Manufacturer Performance Levels", Industrial Restructuring Project School of Development Studies, University of Natal, Research Report No. 32, August, pg. 6.
12. Barnes, J., and Kaplinsky, R. (2000), "Globalisation and the Death of the Local Firm? The Automobile Components Sector in South Africa", *Regional Studies*.



13. Barnes, J., (2000), "Changing Lanes: The Political Economy of the South African Automotive Value Chain." *Development Southern Africa*, Vol. 17, No. 3.
14. Barnes, J., (2000), "Domestic Market Pressures Facing the South African Automotive Components Industry.", Research Report no. 33, School of Development Studies, University of Natal.
15. Barnes, J., and Black, A., (2002), *Business Day*, 1<sup>st</sup> edition, 9 December.
16. Barnes, J., and Deghaye, C. (2004). An assessment of Smiths Manufacturing's operational Competitiveness. *Benchmarking and Manufacturing Analyst*. South Africa.
17. Barnes, J., and Deghaye, C., (2005), Findings from the Company's 6<sup>th</sup> Competitiveness, Customer and Supplier Benchmark, *Benchmarking and Manufacturing Analysts SA (Pty) Ltd.*, For the South African Automotive Benchmarking Club, 30 March.
18. Barney, J. B., (1991), "Firm Resources and Sustained Competitive Advantage", *Journal of Management*, Vol. 17.
19. Barnevick, P., (1994), *Global Strategies : Insights from the World's Leading Thinkers*, Harvard University Press, Boston, M.A.
20. Benko, C., and McFarlan, W., (2003) "Metamorphosis I the Auto Industry", *Strategy and Leadership*, Vol. 31, No. 4, pp.4
21. Bennett, D., and O'Kane, J., (2006) "Achieving business excellence through synchronous supply in the automotive sector" , *Benchmarking: An International Journal*, University of Northumbria, Newcastle upon Tyne, UK, Vol. 13, No. 1/2 .
22. Black, A. (1998), "The Impact of Trade Liberalisation on the South African Automotive Industry." 1998 TIPS Annual Forum, Johannesburg: Trade and Industry Policy Secretariat.
23. Blake, D., Cucuzza, T, and Rishi, S., (2003), "Now or Never: The Automotive Collaboration Imperative.", *Strategy and leadership*, Vol. 31, No. 4.
24. Bramorski, T., Madan S.M. and Motwani, J. (2000), "QS 9000 registration for lean manufacturing", Vol. 12, No. 4.
25. Burgelman, R.A., (1983), "A Process Model of Internal Corporate Venturing in the Diversified Major Firm." *Administrative Science Quarterly*, Vol. 28, No. 2, pp.39 – 55.
26. Burnes, B., (2003), "Managing Change and Changing Managers from ABC to XYZ." *Journal of Management Development*, Vol. 22, No. 7, pp. 627 – 642.
27. *Business Week*, "Rethinking Work" 17 October 1994

28. Buxey, G., (2000), "Strategies in an Era of Global Competition.", *International Journal of Operations and Production Management*, Vol.20, No.9, pp. 997 - 1016.
29. Chandler, A.D. Jr., (2001), *Inventing the Electronic Century: The Epic Story of the Consumer Electronics and Computer Science Industries*, Free Press, New York, NY.
30. Chang, J., (1998), "Model of Corporate Entrepreneurship: Intrapreneurship and Exopreneurship." *Borneo Review*, Vol. 9, No. 2, pp.182 – 213.
31. Chetty, K. (2003) "Growing a business profitable in a stagnating market." University of Natal: Durban.
32. Christensen, C.M., (2001), "Skate to Where the Money Will Be." *Harvard Business Review*, November, pp. 74 – 81.
33. Christensen, C.M., (2004), "Breakthrough Ideas for 2004." *Harvard Business Review*, February.
34. Christensen, K.S., (2004), "A Classification of the Corporate Entrepreneurship Umbrella: Labels and Perspectives." *International Journal of Management and Enterprise Development*, Vol. 1, No. 4, pp.301 - 315.
35. Christensen, K.S., (2005), "Enabling Intrapreneurship: The Case of a Knowledge-Intensive Industrial Company." *European Journal of Innovation Management*, Vol. 8, No. 3.
36. Claasen, L., (2005) "Temporary employment in motor sector - a worldwide trend" *Business Day*, 22 April.
37. Claasen, L., (2005), "Parts Companies Need Same Incentives as Local Car Makers." *Business Day*, 25 April.
38. Coad, A.F., and Berry, A.J., (1998), "Transformational Leadership and Learning Orientation." *Leadership and Organisation Development Journal*, Vol. 19, No. 3, pp. 164 – 172.
39. Coetzee, L. (2005). In house announcement via internal memorandum at Smiths Manufacturing. March 16<sup>th</sup>.
40. Collis, D.J., and Montgomery C.A., (1998) "Creating Corporate advantage". *Harvard Business Review*. May/June, Vol. 76(3).
41. Constant, R. (2006). Interviewed by A.Rathakrishnaiyar. Smiths' office.19 January at 16h30.
42. Courtney, H., Kirkland, J., and Viguerie, P., (1997), "Strategy Under Uncertainty", *Harvard Business Review*, November – December, pp. 316.
43. Creamer-Kuhn, D., Jinhans, M., and Kronig, J., (2004), "A Rocky Road for European Car Parts Maker." *McKinsey Quarterly*, 2.

44. D'Aveni, R., (1999), "Strategic Supremacy Through Disruption and Dominance", *Sloan Management Review*, Vol. 40, No. 3, pp. 127 – 136.
45. "Denso Acquires 25% of Automotive Air Conditioner Company in Republic of South Africa.", News Release, 17 March, 2006.
46. Denton, M., and Vloeberghs, D. (2003), "Leadership Challenges for organizations in the New South Africa", *Leadership and Organization Development Journal*. 24(2).
47. Denzin, N.K. and Lincoln, Y.S. (1998), "Entering the field of qualitative research", in Denzin N.K. and Lincoln Y.S. (Eds), *Handbook of Qualitative Research*, Sage, Thousand Oaks, CA, pp.1-18.
48. Deresky, H., (2002), "International Management: Managing Across Borders and Cultures." 4<sup>th</sup> ed. Prentice Hall: New Jersey.
49. de Ruyter, K., and Scholl, N. (1998), "Positioning Qualitative Market Research: Reflections from Theory and Practice.", *Qualitative Market Research: An International Journal*, Vol. 1, No. 1, pp 7 – 14.
50. Dicken, P. (1999), *Global Shift*, Paul Chapman, London.
51. Dieh, J.P., (1999), "Regional Market Integration & Decentralisation in Europe and North America – Implications for Business, Govt Relations & Corp Public Affairs – American University." *Business & Society*, Vol. 38, No. 4, Dec. 1999.
52. Doh, J. P., (1999). *Regional Market Integration and Decentralization in Europe and North America Implications for Business-Government Relations and Corporate Public Affairs*. *Business and Society*, Vol. 38 No. 4.
53. Doran, D., (2005), "Supplying on a modular basis: an examination of strategic issues", *International Journal of Physical Distribution & Logistics Management*, Vol. 35, No. 9, pp. 654 – 663.
54. Duguay, C., Landry, S. and Pasin, F., (1997) "From mass production to flexible/agile production", *International Journal of Operations & Production Management*, Vol. 17, No. 12.
55. Duncan, W. J., and Ginter, R., (1998), "Competitive Advantage and Internal Organisation Assessment", *Academy of Management Executive*, Vol. 12, No. 3, pp. 6 – 17.
56. Dutta, S., Lanvin, B., and Pua, F.,(2004), *The Global Information Technology Report: Towards an Equitable Information Society*, Oxford University Press, Oxford.
57. Dutton, J.E., Dukerich, J.M., and Harquail, C.V., (1994), "Organisational Images and Member Identification." *Administrative Science Quarterly*, Vol. 39, pp. 239 – 263.

58. Ealey, L.A., and Troyano-Bermudez, L., (2000), "The Automotive Industry: A 30,000-mile check up.", *McKinsey Quarterly*, 1.
59. Esterhuizen, J. (2006). Interviewed by A.Rathakrishnaiyar. Smiths' office.07 March at 15h00.
60. European Foundation for the Improvement of Living and Working Conditions, 2004.
61. Fahey, L. (2002). *Invented Competitors: a new competitor analysis methodology.* *Strategy and Leadership*. 30, 6. pp 5-12.
62. Fink, C., and Kenny, C., (2003), "W(h)ither the digital divide?", *Info, The Journal of Policy, Regulation and Strategy for Telecommunications*, Vol. 5, No. 6, pp 15 – 24.
63. Fleisher, C.S., and Bensoussan, B.E., (2003), *Strategic and Competitive Analysis: Methods and Techniques for Analysing Business Competition*, Prentice Hall, New Jersey.
64. Fraser, J., (2003), "Quicker tariff cut if SA will give way to EU Business Day", 8<sup>th</sup> December.
65. Fraser, J., (2004), "Bumpy Road for Component Export Industry.", *Business Day*, 1<sup>st</sup> ed., 6 February.
66. Furlonger, D., (2002), "Forfeiting Freedom for Profit.", *Financial Mail*, 4 January.
67. Furlonger, D., (2004), "Oiled by Exports." *Financial Mail*, 3 April.
68. "Globalisation will Continue to Drive Consolidation.", (2000), *PR Newswire*, May 22.
69. Govindsamy, S. (2006). Interviewed by A.Rathakrishnaiyar. Smiths' office.11 January at 16h00.
70. Graetz, F., (2000), "Strategic Change Leadership." *Management Decision*, Vol. 38, No. 8.
71. Graham, D. (1999), "Velocity, Variability and Visibility." *Logistics Manager*, Vol. 6, No. 5, pp. 6 – 8.
72. Grobler, G., (1993) "Rediscovering the Social in the Economics of Interfirm Relations." *The Embedded firm. On the Socioeconomics of Industrial Networks*, Routledge, London.
73. Hagel, J.111, (2002), "Leveraged Growth: Expanding Sales Without Sacrificing Profits.", *Harvard Business Review*, October.

74. Hamel, G., Doz, Y., and Prahalad, C.K., (1989), "Collaborate with your Competitors and Win.", *Harvard Business Review*, Vol. 1, No. 67, pp. 133 -139.
75. Hamel, G. and Prahalad, C.K., (1994), *Competing for the Future*, Harvard Business School Press, Boston, MA.
76. Harris, P.R., (2002), "European Challenge: Developing global organizations." *European Business Review*, Vol. 14, No. 6, pp. 416 – 425.
77. Helper, S., MacDuffie, J.P., Pil, F., Sako, M. Takeishi, A. and Warburton, M. (1999), *Project Report to International Motor Vehicle Program (IMVP)*, MIT, Cambridge, MA.
78. Helper, S., (1993), *The Embedded Firm. On the Socioeconomics of Industrial Networks*, Routledge, London.
79. Hitt, M., Keats, B. and DeMarie, S. (1998), "Navigation in the new competitive landscape: Building Strategic flexibility and competitive advantage in the 21<sup>st</sup> Century", *Academy of management Executive*, Vol. 12, No. 4 pp. 22-42.
80. Hitt, M. A., Ireland, R. D., and Hoskisson, R. E., (2003), *Strategic Management, Competitiveness and Globalisation*, 5<sup>th</sup> ed., Thompson, South Western, U.S.A.
81. Hofstede, G., (1980), "Motivation, Leadership and Organisation: Do American Theories Apply Abroad?" *Organisational Dynamics*, Vol. 9, pp. 42 – 63.
82. Horwitz, F.M., Falconer, A.B., and Searll, P. (1996), "Human Resource Devepolment and Managing Diversity in South Africa." *International Journal of Manpower*, Vol. 17, No. 4/5, pp. 134 – 151.
83. Hudson, R., (1994) "New Product Concepts, New Production Geographics? Reflections on Changess in the Automobile Industry", *Transactions of the Institute of British Geography*, Vol. 19, No. 3. pp. 331-345
84. Hudson, R., (1999) "The learning Economy, the learning Firm and the Learning Region: A Sympathetic Critique of the Limits to Learning." *European and Regional Studies*, Vol. 6, No. 1.
85. Humphrey, J., (2003), "Globalisation and Supply Chain Networks: The Auto Industry in Brazil and India." *Global Networks*, Vol. 3, No. 2.
86. Hussey, J., and Hussey, R., (1997), *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*, Macmillan Press, London.
87. I-Net bridge: 15/03/2006
88. *International Marketing Review*, (2004). Vol, 21, No. 1.
89. Jackson, D., (1997), *Dynamic Organisations: The Challenge of Change*, Macmillan Business, London.

90. Jenkins, C., and Siwisa, N. (1997), "An Overview of Trade Policy in South Africa.", 1997 TIPS Annual Forum, Johannesburg: Trade and Industry Policy Secretariat.
91. Johnson, G., and Scholes, K. (1999). Exploring Corporate Strategy. 5<sup>th</sup> ed. England: Prentice Hall.
92. Journal of Consumer Marketing, Vol. 21, No. 7, (2004), Emerald Group Publishing Limited.
93. Judge O'Shaughnessy, N.J., (1996), "Michael Porter's Competitive Advantage Revisited" Management Decision, Vol. 34, No. 6, pp. 12 – 20.
94. Kaplan, S., and Beinhocker, E., (2003), "The Real Value of Strategic Planning" MIT Sloan Management, Vol. 44, No. 2, pp 71 – 77.
95. Kauffman, R. S., (1992), "Why Operations Improvement Programmes Fail : Four Managerial Contradictions", Sloan Management Review, Fall.
96. Kennedy, P., Perrottet, C., and Thomas, C., (2003), "Scenario Planning after 9/11: Managing the Impact of a Catastrophic Event." Strategy and Leadership, Vol.31, No. 1, pp.4 – 13.
97. King, N., (1994), Qualitative Methods in Organisational Research: A Practical Guide, Sage, Thousand Oaks, CA.
98. Kyro, P., (2004), "Benchmarking as an Action Research Process.", Benchmarking: An International Journal, Vol. 11, No. 1, pp. 52 – 73.
99. Lakhan, R. (2006). Interviewed by A.Rathakrishnaiyar. Smiths' office.15 February at 13h00.
100. Liard – Murriente, C.F., (2005), "Globalisation and Inequality, Western New England College Dept. of Economics, Vol. 24 No. 1.
101. Lindgren, M., (2002), "How much does Strategic Flexibility Matter?", Paper presented at the 22<sup>nd</sup> Annual International Conference of the Strategic Management Society, Paris.
102. Lorentzen, J., Barnes, J., (2004), "Learning, Upgrading and Innovation in the S.A. Automotive Industry." The European Journal of Development Research, Vol. 16, No. 3. Autumn.
103. Lourens, C., (2005) "Daimler Chrysler to spend R2bn retooling for next C-Class model" 08 March.
104. Lourens, C., (2005), "Car Sector adds jobs Rapidly in First Quarter.", Business Day, 20 June.
105. Lourens, C., (2005) "Car makers help reverse jobless tide", Business Day, 11 August.

106. Lourens, C., (2003), "SA Needs to Raise Vehicle Production.", *Business Day*, 1<sup>st</sup> edition, 30 September.
107. Luchi, R., and Paladino, M., (2000), *Improving Competitiveness in a Manufacturing Value Chain: Issues Dealing with the Automobile Sector in Argentina and Mercosur*, MCB University Press.
108. Luiz, J.M., (2002), *International Journal of Social Economics*, Vol. 17, No. 45.
109. Luthans, F., (2002), *Organisational Behaviour*, 9<sup>th</sup> ed., Irvin McGraw-Hill, New York, NY.
110. Ma, H., (2004), "Towards Global Competitive Advantage", *Management Decision*, Vol. 42, No. 7, pp. 907 – 924.
111. MacNeill, S., Sribjanin, A., and Bentley, G., (2002), "Developments In the Automotive Industry 2000 - 2015", University of Birmingham.
112. Mangan, J., Gardner, B., and Lalwani, C. (2002), *International Journal of Physical Distribution and Logistics Management*, Vol. 34, No. 7, pp. 565 – 578.
113. Manning, J., and Robertson, B., (2002), *Industrial and Commercial Training*, Vol. 34, No. 2.
114. Masakowska E., and Earley, C., (2000), "A Selective Review of Time Assumptions in Strategy Research" *Academy of Management Review*, Vol. 25, No. 4, pp. 796-812.
115. Masson, P., (2001), "Globalisation: Facts and Figures." IMF Policy Discussion Paper 01/04, IMF., October.
116. Milazi, A., (2004), "Buzz in an Auto Industry Hive Rises to a Crescendo.", *Financial Mail*, 26 March.
117. Miles, M.B., and Huberman, M.A. (1994), *Qualitative Data Analysis-An Expanded Source Book*, 2<sup>nd</sup> ed., Sage, Thousand Oaks, CA.
118. Millington, A.I., Millington, C.E.S. and Cowburn, M. (1998), "Local assembly units in the motor components industry", *International Journal of Operations and Production Management*, Vol. 18. No. 2, pp.180-94.
119. Mills, K., Neely, A., Richards, H., and Bourne, M., (2002), *Creating a Winning Business Formula*, Cambridge University Press, Cambridge.
120. Moodley, S., (2002). "Internet-enabled supply chain integration: prospects and challenges for the South African automotive industry". *Development S.A.* Vol. 19, No. 5.
121. Morris, D., (2005), "A New Tool for Strategy Analysis: The Opportunity Model." *Journal of Business Strategy*, Vol.26, No.3, pp. 50 - 56.



122. Mutula, S. M., (2005), "Peculiarities of the digital divide in Sub-Saharan Africa.", Department of Library and Information Studies, University of Botswana, Gaborone, Botswana, *Electronic Library and Information Systems*, Vol. 39, No. 2.
123. Nadler, D.A., and Tushman, M.L., (1990), "Beyond the Charismatic Leader: Leadership and Organisational Change.", *California Management Review*, Winter, pp.77 – 97.
124. Naidoo, K. (2006). Interviewed by A.Rathakrishnaiyar. Smiths' office.13 March at 17h40.
125. Nee, R.A., Hollenbeck, J.R., Gerhart, B, and Wright, P.M., (2000), *Human Resource Management (3<sup>rd</sup> Ed)* McGraw Hill U.S.A.
126. Nelissen, G., (2002), "Structural change in the European automotive sector", Research Paper, European Metalworkers' Federation.
127. Neuman, W.L., (2000), *Social Research Methods 2<sup>nd</sup> ed.*, Allyn and Bacon, London.
128. News Release (2005). "Denso Acquires 25% of Automotive Air Conditioner Company in Republic of South Africa". Internal Memo, March 17<sup>th</sup>.
129. Njobeni, S., (2005), "Car Sector looks for New Strategy.", *Business Day*, 1 August.
130. Normann, R., (2001), *Reframing Business*, Wiley, Chichester.
131. Norris, N. (1997), *Educational Action Research*, Vol. 5, No. 1, pp. 174.
132. Ohmae, K. (1989), "The Global Logic of Strategic Alliances.", *Harvard Business Review*, March – April, pp. 143 – 154.
133. Padayachee, V. (1997), "South Africa's Re-entry into the Global Economy: A Review and Critique of Post-1990 Strategies of Reintegration." *CSDS Working Paper No. 14*, Durban: Centre for Social and Development Studies, University of Natal.
134. Panagariya, A., (2004), Review Essay, "The Miracles of Globalisation Free Trade's Proponents Strike Back.", *Foreign Affairs* Sept/Oct 2004, Vol. 83.
135. Papadarkis, I., (2003), "On the sensitivity of Configure-to-order Supply Chains for Personal Computers after Component Market Disruptions" *International Journal of Physical Distribution & Logistics Management*, Vol. 33, No. 10.
136. Pearce, A., and Robinson, R., (2000), *Strategic Management: Formulation, Implementation and Control*, 7<sup>th</sup> ed, McGraw-Hill, Malaysia.

137. Peters, J., and Howard, K., (2001), "Looking for Good Research in Management – A Publisher's Case Study." *Management Decision*, Vol. 3, No, 7.
138. Pett, T.L., and Dibrell, C.C., (2001), "A Process Model of Global Strategic Alliance Formation." *Business Process Management Journal*, Vol. 7, No. 4.
139. Pettigrew, A. M., and Whipp, R., (1991), *Managing Change for Competitive Success*, Blackwell, Oxford.
140. Pingo. M., (2004), "Investors Interest in S.A.Grows.", *Business Day*, 28 January.
141. Platts, K., and Tan, K.H.T., (2004), "Strategy Visualisation: Knowing, Understanding, and Formulating.", *Management Decision*, Vol. 42, No. 5, pp. 667 – 676.
142. Prahalad, C.K., and Hamel, G. (1990), "The Core Competence of the Corporation." *Harvard Business Review*, May – June, pp. 108.
143. Prahalad, C.K., and Lieberthal, K., (2003), "The End of Corporate Imperialism.", *Harvard Business Review*, August, pp. 109 – 117.
144. Preston, G. (2006). Interviewed by A.Rathakrishnaiyar. Smiths' office.23 February at 16h00.
145. Porter, M., (1985), "Competitive Strategy", The Free Press, New York N.Y.
146. Porter, M.E., (1990) "Competitive Advantage of Nations", Free Press, New York N.Y.
147. Porter, M.E., (1998), *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, Free Press, New York N.Y.
148. Porter, M.E., (2001) "Strategy and the internet", *Harvard Business Review*, March.
149. Pinchot, G., (1985), *Intrapreneuring: Why you don't have to leave the Corporation to Become an Entrepreneur*, Harper and Row, New York, NY.
150. Rae, S. (2002), *Away – day Conference*, Electronic qualitative research available at <http://iet.open.ac.uk/pp/s.a.rae/SRC%20conference%202002.pps>
151. Rajagopalan, N., and Spreitzer, G. M. (1996), "Toward a Theory of Strategic Change : a Multi-Lens Perspective and Integrative Framework", *Academy of Management Review*, Vol. 22, No. 1, pp. 48 – 79.
152. Ramkawal, R. (2006). Interviewed by A.Rathakrishnaiyar. Smiths' office.13 March at 14h40.
153. Ratnasingam, P. (2001). *Inter-organizational trust in EDI adoption: the case of Ford Motor Company and PBR Limited in Australia*. *Internet Research-Electronic Networking Applications and Policy* Volume 11. No.3.

154. Rees, G., (1999), "Report on the Economic Prospects for the Automotive Industry in the UK and Europe, and its Impact on Ford of Dagenham", Cardiff University Business School.
155. Riege, A. M., (2003). Validity and reliability tests in case study research: a literature review with "hands-on" applications for each research phase. *Qualitative Market Research: An international Journal* Volume 6.Number 2.
156. Rothschild, W.E., (1996), "A Portfolio of Strategic Leaders." *Planning Review*. New York.
157. Rowley, J., (2002), "Using Case Studies in Research.", *Management Research News*, Vol. 25, No. 1.
158. Rubesch, E., and Banomyong, R., (2005), "Selecting Suppliers in the Automotive Industry: Comparing International Logistics Costs." *Asia Pacific Journal of Marketing and Logistics*, Vol. 17, No. 1.
159. Rugman, A., (2000), "Competing on a World Stage. Think regional, Act Local, Forget Global." *The Antidote*, Issue 28.
160. Rust, R.T., and Cooil, B. (1994), "Reliability Measures for Qualitative Data: Theory and Implications." *Journal of Marketing Research*, Vol. 31, No. 1, pp. 1 – 14.
161. Rylander, A., and Peppard, J., (2003), "From Implementing Strategy to Embodying Strategy: Linking Strategy, Identity and Intellectual Capital.", *Journal of Intellectual Capital*, Vol. 4, No. 3, pp. 316 – 331.
162. Shaw, V., and Kauser, S. (2000), "The Changing Patterns of International Strategic Alliance Activity by British Firms.", *Journal of General Management*, Summer, pp. 51 – 69.
163. Tay, H.K., (2003), "Achieving Competitive Differentiation: The Challenge for Automakers.", *Strategy and Leadership*, Vol. 31, No. 4.
164. Thompson, I., and Cox, A., (1997), "Don't Imitate, Innovate", *Supply Management*.
165. Thompson, A.A. (Jnr.), and Strickland, A.J. (2003), *Strategic Management Concepts and Cases*, 13<sup>th</sup> ed., McGraw Hill, New York.
166. Tuten, T.L., and Urban, D.J., (2001), "An Expanded Model of Business to Business Partnership Formation and Success.", *Industrial Marketing Management*, Vol. 30, No. 2, pp. 149 – 164.
167. Sadler, D., (1999), "Internationalisation and Specialisation in the European Automotive Components Sector: Implications for the Hollowing-Out Thesis", *Regional Studies*.

168. Saunders, M., Lewis, P., and Thornhill, A., (2003). "Research Methods for Business Students. 3<sup>rd</sup> ed. Prentice Hall: England.
169. Shelton, C.D., Hall, R.F., and Darling, J.R., (2003), "When Cultures Collide: The Challenge of Global Integration." *European Business Review*, Vol. 15, No. 5. pp.312 – 323.
170. Schein, E. H., (1985), *Organisational Culture and Leadership*, Jossey-Bass, San Francisco, C.A.
171. Slywotski, A., and Nadler, D., (2004), "Breakthrough Ideas for 2004: The Strategy Is the Structure." *Harvard Business Review*, February.
172. Smiths' Internal Newsletter, (2006), Vol. 1, Issue 4, 3 February.
173. Smiths' Internal Newsletter, (2006b), Vol. 1, Issue 7, 24 February.
174. Smiths' internal MDWT (Mission Directed Work Teams) manual
175. Smith's Internal Newsletter, (2006), Vol. 1, Issue 8. March.
176. Srinivas, K.M., (1995), "Globalisation of Business and the Third World Challenge of expanding the mindsets" *Journal of Management Dev.* Vol. 14, No. 3 pg. 26-49.
177. Sterling, J., (2003), "Translating Strategy into Effective Implementation: Dispelling the Myths and Highlighting what Works." *Strategy and Leadership*, Vol. 31, No. 3.
178. Stryker, J.D., Rajarathnam, B., and Cassim, F., (2000), "Effects of Fiscal, Monetary and Exchange Rate Policy on the Structure of South African Growth and Employment.", Paper presented at the TIPS Forum: Paths to Growth and Employment in South Africa, Glenburn Lodge, 18 - 20 September.
179. Syrett, M. and Lammiman, J. (1997), "The art of conjuring ideas", *Director*, Vol. 50 No. 9, pp.48-54.
180. Vale, M., (2004), "Innovation & Knowledge driven by a Focal Corporation. The case of the Autoeuropa supply chain", *European Urban and Regional Studies*, Sage Publications, London, Thousand Oaks, C.A. and New Delhi.
181. Veloso, F., (2000), "International Competitiveness of Asian Economics: A cross country Study.", Massachusetts Institution of Technology.
182. Veloso, F., and Kumar, R., (2002) "The Automotive Supply Chain: Global Trends and Asian Perspectives", Working Paper No. 3. Asian Development Bank.
183. Voss, C., Tsikriktsis, N., and Frohlich, M., (2002), "Case Research in Operations Management.", *International Journal of Operations and Production Management*, Vol. 22, No. 2, pp. 195 – 219.

184. Waller, B., (2004), "Market responsive manufacturing for automotive supply", *Journal of Manufacturing Technology Management*. Vol. 15 No. 1.
185. Walters, D., and Rainbird, M., (2004), "The Demand Chain as an Integral Component of the Value Chain," *Journal of Consumer Marketing*, Vol. 21, No. 7, pp. 465 – 475.
186. Wei, C.C., Lui, P.H. and Chen, C.B., (2000), "An automated system for product specification and design", *Assembly Automation*. Vol. 20, No. 3.
187. Womack, J., Jones, D., and Roos, D. (1990), *The Machine that Changed the World*, Macmillan, New York, NY.
188. Yin, R.K., (1994), *Case Study Research: Design and Methods*, 2<sup>nd</sup> ed., Sage, Thousand Oaks, CA.
189. Zairi, M. (1996), "Competition: What does it Mean?", *The TQM Magazine*, Vol. 8, No. 1. pp. 54 – 59.

## Internet Searches

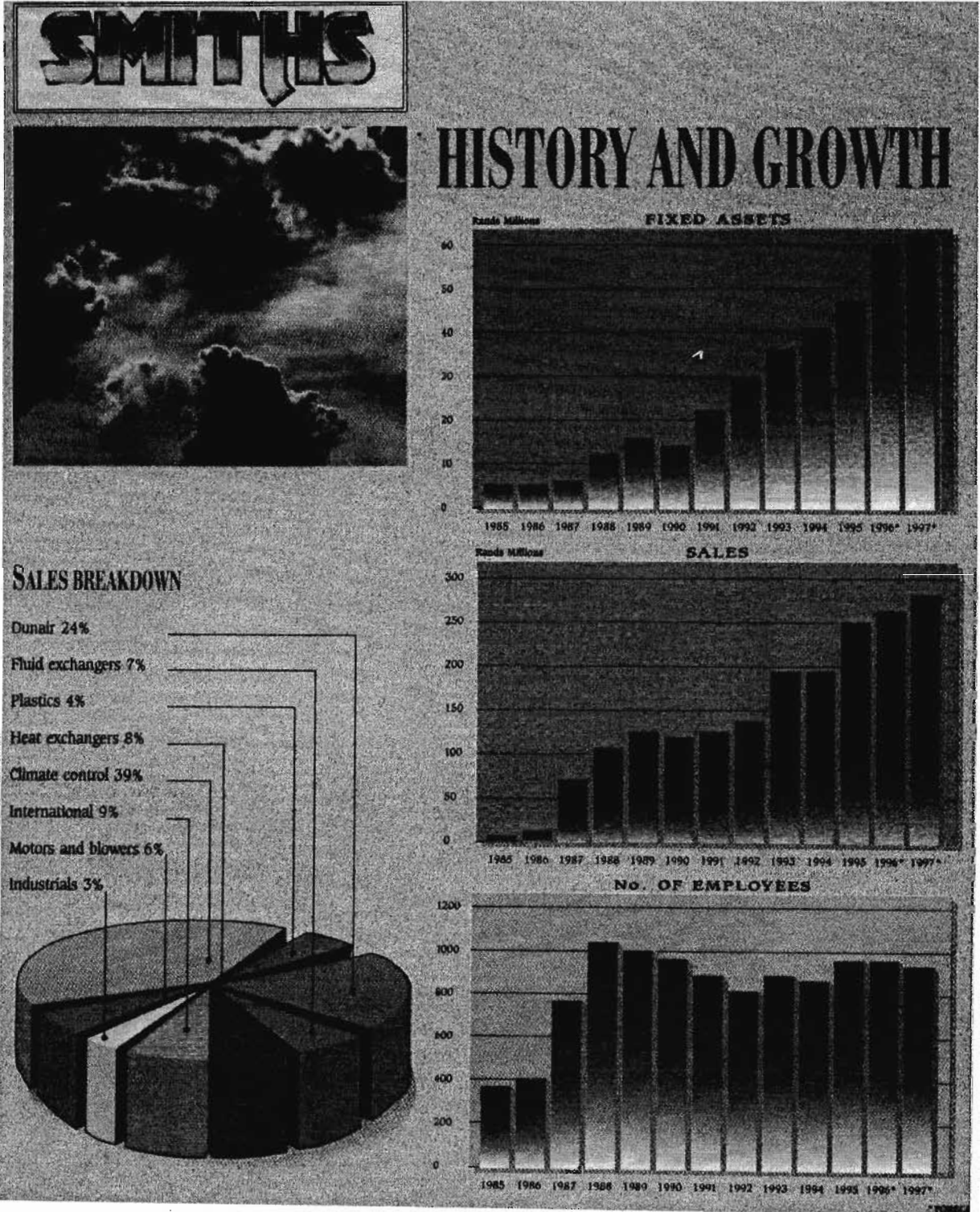
1. <http://globaledge.msu.edu/NewsAndViews/views/papers/0018.pdf>. Accessed on 2 February 2006.
2. [http://www.southafrica.info/doing\\_business/economy/econoverview.htm](http://www.southafrica.info/doing_business/economy/econoverview.htm). Accessed 9 March 2006.
3. <http://econ.ucsc.edu/faculty/flannery/econ136/PowerPoints/Chap001.ppt>. Accessed 21 April 2006.
4. <http://www.acea.be/EucarInternet/start.html>. Accessed 16 February 2006.
5. <http://en.wikipedia.org/wiki/Globalisation>. Accessed on 03/01/2006
6. [http://www.dfw.com/mld.dfw/classifieds/automotive/for\\_sale/13717303.htm](http://www.dfw.com/mld.dfw/classifieds/automotive/for_sale/13717303.htm). GM Loses \$4.86 in the 4<sup>th</sup> Quarter, A.P., January 26, 2006. Accessed 24 March 2006.
7. <http://en.wikipedia.org/wiki/Apartheid>. Accessed 9 March 2006.
8. <http://richardknight.homestead.com/files/sisaeconomy.htm>. Accessed 09/03/2006
9. <http://www.info.gov.za/speeches/2006/06020310531001.htm>. Accessed 8 March 2006.
10. <http://www.reservebank.co.za/monetarypolicystatements>. Accessed 8 January 2006
11. <http://earthsummit2002.org/es/issues/FDI/fdi.PDF>. Accessed 27 January 2006.
12. [http://www.southafrica.info/doing\\_business/economy/key\\_sectors/manufacturing.htm#automotive](http://www.southafrica.info/doing_business/economy/key_sectors/manufacturing.htm#automotive). Accessed 10 January 2006.
13. <http://www.geohive.com/>. Accessed 11 March 2006.
14. <http://unfcc.int/resource/docs/convkp/kpeng.html>. Accessed 15 January 2006.
15. <http://www.futureenergies.com/print.php?sid=541>. Accessed 11 March 2006.
16. <http://www.autobusiness.co.uk/publications/technology/index.shtml>. Accessed 9 March 2006.
17. <http://www.just-auto.com/store/?gclid=CIWNze7NloMCFRgwEQodXIj86A>. Accessed 9 March 2006.
18. <http://www.motoring.iafrica.com/newsbriefs/822644.htm>. Accessed 21 January 2006.
19. <http://www.metair.com>. Accessed 25 February 2006.
20. [www.globaldenso.com](http://www.globaldenso.com). Accessed 23 March 2006.
21. <http://www.cnn.com/WORLD/africa/9810/08/safrica.affirmative.action>. Accessed 9 March 2006.
22. [http://www.ustr.gov/Document\\_Library/Fact\\_Sheets/2004/Trade\\_with\\_Sub-Saharan\\_Africa\\_AGOA\\_is\\_the\\_Cornerstone\\_of\\_Success.html](http://www.ustr.gov/Document_Library/Fact_Sheets/2004/Trade_with_Sub-Saharan_Africa_AGOA_is_the_Cornerstone_of_Success.html). Accessed 15 March 2006.
23. [http://www.southafrica.info/doing\\_business/sa\\_trade/agreements/traderelations.htm](http://www.southafrica.info/doing_business/sa_trade/agreements/traderelations.htm). Accessed 9 February 2006.
24. [http://www.europa.eu.int/comm/external\\_relations/merconsur/intro/index.htm#1](http://www.europa.eu.int/comm/external_relations/merconsur/intro/index.htm#1). Accessed 2 April 2006.
25. <http://www.avert.org/safricastats.htm>. Accessed 9 April 2006.
26. <http://www.iso14000-iso14001-environmental-management.com/iso14000.htm>. Accessed 13 April 2006.
27. [http://www.southafrica.info/doing\\_business/economy/key\\_sectors/manufacturing.htm#metals](http://www.southafrica.info/doing_business/economy/key_sectors/manufacturing.htm#metals). Accessed on 12 February 2006
28. <http://www.eaa.net/downloads/auto.pdf>. Accessed on 18 March 2006.
29. <http://www.oica.net/htdocs/press/releases/Communique%20presseOICA2004English.pdf%207%20juillet%202005.pdf>. Accessed 1 February 2006.
30. [http://www.oica.net/htdocs/statistics/tableaux2004/worldproduction\\_country2004.pdf](http://www.oica.net/htdocs/statistics/tableaux2004/worldproduction_country2004.pdf). Accessed 12 January 2006.
31. <http://www.ecdc.co.za/sectors/visual.asp?pageid=137&imageid=power>. Accessed 23 March 2006.
32. <http://www.naamsa.co.za>. Accessed 20 April 2006.

33. <http://www.allbusiness.com/periodicals/article/863885-1.html>. Accessed 12 April 2006.
34. [http://www.southafrica.info/doing\\_business/economy/infrastructure/](http://www.southafrica.info/doing_business/economy/infrastructure/). Accessed 3 March 2006.
35. [http://www.southafrica.info/doing\\_business/economy/infrastructure/transport.htm](http://www.southafrica.info/doing_business/economy/infrastructure/transport.htm). Accessed 3 March 2006.
36. [http://www.southafrica.info/doing\\_business/economy/infrastructure/acsa3108.htm](http://www.southafrica.info/doing_business/economy/infrastructure/acsa3108.htm). Accessed 3 March 2006.
37. <http://www.behrgroup.com/upload/magazine/SouthAfrica301e.pdf>. Accessed 6 April 2006.
38. <http://www.srr.com> Key Success Factors and Value Drivers Impacting the Success of Automotive-Related M&A Transactions. Accessed 12 March 2006.
39. <http://www.motoring.iafrica.com/newsbriefs/973560/htm>. Accessed 24 April 2006.
40. [www.eurofound.eu.int](http://www.eurofound.eu.int). Accessed 9 April 2006.
41. [www.csun.edu/~hfmgt001/diagnosis.ppt](http://www.csun.edu/~hfmgt001/diagnosis.ppt). Accessed on 23 April 2006.
42. [www.cs.utah.edu/~crj/quotes.html](http://www.cs.utah.edu/~crj/quotes.html). Accessed on 12 March 2006.

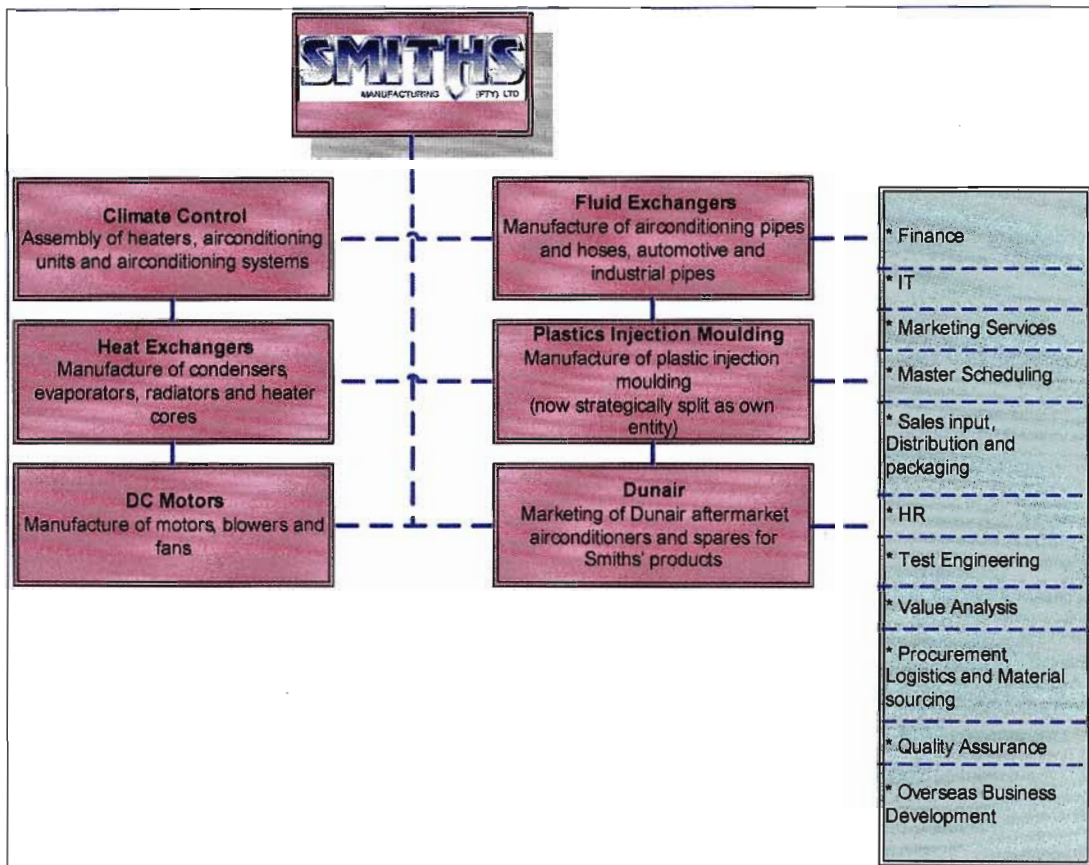


# APPENDICES

## Appendix 1: Smiths History and Growth



## Appendix 2: Smiths' Divisional Company Chart



## Appendix 3: Interview Schedule

### Notes:

Please note that this interview is part of a research for a master's degree in Business Management. The research focuses on the automotive industry. The automotive component industry is being researched to assess its competitiveness; Smiths Manufacturing is being compared to local and global manufacturers. Please note the following before the interview:

- Participation in this interview is voluntary
- Responses will be treated with confidentiality
- Anonymity will be maintained
- At any stage, the interviewee may withdraw at his/her discretion

### 1. Firm Level Questions

1.1 Do you understand the meanings of:

- Company vision?
- Company mission?
- Strategic objectives? If yes,.....Can you explain the vision and mission of Smiths Manufacturing (Pty) Ltd?

1.2 Briefly outline the company's history and your involvement with the firm

1.3 Briefly give an outline of Smiths current operations in heat exchangers

1.4 Does Smiths have a formalised strategic planning process?

1.5 Does the firm continuously re-asses its goals and objectives?

1.6 Do you see the firm pursuing the set out strategic objectives? Elaborate.

1.7 How does recruitment and selection of intellectual capital take place?

1.8 How important is the intellectual capital development of staff at the firm and how do other senior management view this?

1.9 Who are the stakeholders in the firm?

1.10 What influence does the parent company have on this organization?

1.11 How is the performance of the organization monitored and evaluated?

Are there any feedback loops present from top down?

1.12 Compare the previous leadership to the current one

1.13 Are there any manufacturing systems such as (Toyota Production Systems) TPS employed at Smiths? If so, describe them.

1.14 What quality standards are employed at Smiths?

1.15 Does the firm display corporate social responsibility?

1.16 What is the organizational culture within Smiths?

1.17 What is the impact of the Denso's acquisition of 25% of Smiths?

### 2. External Environment

2.1 How do you think globalisation is impacting on the organization?

2.2 How do you think the following external factors impact upon the organization?

- Political
- Economic
- Social

- Technological
- Ecological
- Legal

2.3 Does the firm continuously evaluate these factors?

2.4 What trends are prevalent in the global automotive industry?

2.5 What trends are prevalent in the local automotive industry?

### **3. Industry Environment**

3.1 How competitive is the local automotive sector?

3.2 How competitive is the global automotive sector?

3.3 What efforts are being effected to be competitive within the organization?

3.4 What is the nature of the relationships between Smiths and its customers?

3.5 Does Smiths have any collaboration with any other manufacturers, e.g. licenses etc?

3.6 How does Smiths' product technology compare to its counterparts?

3.7 How does Smiths' process technology compare to its counterparts?

3.8 What can be considered as key success factors for the firm?

3.9 Who are the competitors to Smiths?

3.10 How do you think Smiths' capability fares in terms of its manufacturing expertise internally to other competitors?

### **4. Internal Environment**

4.1 Does Smiths have adequate resources to meets its objectives (e.g. Financial, Managerial and organizational)?

4.2 How is organizational performance of Smiths measured?

4.3 What is the nature of the relationship between Smiths and its parent company (Metair)?

4.4. How does the acquisition of 25% share of Smiths by Denso impact on Smiths? Does it hinder or help Smiths?

4.5 How well is the cross cultural interaction managed between Smiths and Denso?

4.6 Are the processes and operations at Smiths benchmarked?

4.7 How effective are communication channels within the organization and between its customer and suppliers alike?

4.8 Are the firm's performances audited? How?

Thank you for your voluntary participation in this research. Your input is most valued.