

An analysis of a selected aviation company's competitive environment in South Africa

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*This mini-dissertation is dedicated to my loving grandmother,
Susan Schumacher (1924-2010), who has been and always will be a constant source of
knowledge and inspiration.*

‘Loop jou pad reguit my kind’

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ABSTRACT

An analysis of a selected aviation company's competitive environment in South Africa.

Competitiveness and gaining a sustainable competitive advantage are very important factors when analysing the success of companies involved in the aviation industry in South Africa. The success of these companies will depend on their ability to maintain technological capabilities in the areas of human resources and product development. Global aviation currently is concentrated in a few countries, with the USA being the largest contributor to an industry which is regarded as one of the fastest globalizing industries in terms of market structure and production systems. In South Africa, companies have managed to develop skills in aviation manufacturing. The opportunities that will be created, owing to changes in global production chains, will enable South African companies to establish themselves further as global suppliers.

The aviation industry contains high risks, especially because it is considered to be the industry which acts as a driver for innovation. Complexity of production, the capital-intensive nature and high risks involved in developing new products and services have linked the industry to inevitable political influence and support. The industry can broadly be divided into two main sectors: military and commercial. Analysts predict that opportunities in the global aviation markets in future will increase considerably. This is attributed to more Asian, African and Latin-American regions capitalizing on opportunities that exist mainly within the commercial sector. They will form strategic alliances which will enable them to perform on low-cost platforms and offer exceptional services to major players in the aviation sector.

To capitalize on these opportunities, companies need to analyse their external and internal environment. The main objective of this study is to analyse and to evaluate the competitive environment of a selected aviation company, to ensure that the best strategy is chosen and adopted and to confirm that the company can create and sustain a competitive advantage over competitors.

The planning tools utilized in this study are the PEST and SWOT analyses. Both have been used in the strategic planning process of many other firms. These analyses have proved to be the key element needed to formulate an action plan to be and to stay

competitive in the aviation industry. This study evaluates both of these planning tools and applies them to the company chosen for this case study.

Key words: competitive environment, corporate strategy, environmental analysis, competitive advantage, corporate resilience, aviation, aeronautical, aircraft

OPSOMMING

'n Ontleding van die mededingende omgewing van 'n gekose lugvaartmaatskappy in Suid-Afrika.

Mededinging en die skep van 'n volhoubare mededingende voordeel is twee belangrike faktore wat ontleed moet word om die sukses van die maatskappye betrokke by die lugvaartindustrie in Suid-Afrika te bepaal. Die sukses van hierdie maatskappye sal afhang van hul vermoë om tegnologiese vaardighede op die gebied van menslike hulpbronne and produkontwikkeling te handhaaf. Bedrywighede in die lugvaartindustrie wêreldwyd is tans in slegs 'n paar lande gekonsentreer, met die VSA wat die grootste bydrae maak in 'n industrie wat bestempel word as een wat die vinnigste groei wat markstruktuur en produksiesisteme betref. In Suid-Afrika het maatskappye vaardighede ontwikkel om lugvaartvervaardiging te handhaaf. Die geleenthede wat geskep word as gevolg van veranderinge in globale vervaardigingskettings sal Suid-Afrika in staat stel om hom te vestig as 'n verskaffer van wêreldgehalte produkte.

Die lugvaartindustrie het hoë risiko's, veral omrede dit bestempel word as 'n industrie wat innovasie bevorder en ontwikkel. Komplekse vervaardiging, die kapitaalintensiewe aard en hoë risiko's in die ontwikkeling van nuwe produkte en dienste het daartoe gelei dat die industrie gekoppel word aan politieke invloed en onvermydelike politieke ondersteuning. Die industrie kan verdeel word in twee sektore, naamlik die militêre en kommersiële sektore. Ontleders voorspel dat geleenthede in die toekoms in die globale lugvaartmarkte skerp sal toeneem. Dit word daaraan toegeskryf dat meer streke in Asië, Afrika en Latyns-Amerika voordeel sal trek uit die geleenthede wat hoofsaaklik in die kommersiële sektor bestaan. Hulle sal saamwerk om met laekosteplatforms mee te ding, en sal sodoende dienste van uitstekende gehalte aan hoofspelers in die lugvaartsektor bied.

Om uit hierdie geleenthede voordeel te trek moet maatskappye hul eksterne en interne omgewing ontleed. Die hoofdoelwit van hierdie studie is om die mededingende omgewing van 'n gekose lugvaartmaatskappy te ontleed en te evalueer; om seker te maak dat die beste strategie gekies is en toegepas word, wat sal verseker dat die maatskappy 'n mededingende voordeel bo mededingers kan skep en handhaaf.

Die beplanningsmetodes wat gebruik word in hierdie studie is die PEST- en SWOT-metodes. Beide metodes word gebruik in die strategiese beplanningsprosesse van baie ander maatskappye. Daar is bewys dat dié metodes uiters belangrik is in die formulering van 'n volhoubare plan om te verseker dat die maatskappy mededingend is en mededingend bly in die lugvaartindustrie. Hierdie studie evalueer beide hierdie beplanningsmetodes and pas dit toe op die maatskappy wat vir hierdie gevallestudie gekies is.

Sleutelwoorde: mededingende omgewing, korporatiewe strategie, omgewingsanalise, mededingende voordeel, korporatiewe veerkrag, lugvaart, vliegtuig

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CHAPTER 1

1. INTRODUCTION

1.1 BACKGROUND

Events in recent years — such as the replacement of the apartheid system in South Africa by a democratically elected majority government in 1994 — had a major impact on the aviation industry in South Africa and internationally. The shift in political structure meant a momentous shift in the way local business was run. What had been a very localized and secluded country, economically, was going to open up to the global market (Anon., 2010). In a very short period new markets that were previously inaccessible have opened up and a number of foreign operators have extended their services to South Africa (Le Grange & Buys, 2002:132). As a result of this expansion, manufacturing companies in the aviation industry needed to create a sustainable competitive advantage to neutralize threats and exploit opportunities.

According to Lefebvre and Lefebvre (1998:223), the aerospace industry represents a key strategic sector, as it is viewed as a symbol of competence and pride, an incubator of advanced technologies, a generator of highly specialized jobs and, most of all, an engine of growth and wealth. The aviation industry creates a strategic need for businesses conducting international operations, because no one can do business merely by using a telephone or written communication; there is no substitute for being there (Agur, 1997).

Role players in the aviation industry have shown that manufacturing both commercial and military aviation is a sustainable advantage, since both of these industries are rapidly evolving. Competition creates constant pressure to innovate. It is the survival of the fittest (Pandey, 2010:2). From the 1960s to the present, the Boeing Company, the largest aerospace company in the world, has been especially adept at securing international sales from non-critical technology transfers to nations such as India, China and Japan and currently supports airlines and government customers in 150 countries (MacPherson, 2009:484).

Airbus is also a leading global aircraft manufacturer and relies on industrial co-operation and partnerships with major companies all over the world, and a network of some 1 500 suppliers in 30 countries. Boeing and Airbus compete for the same buyers who hold on to their purchases for many years (Ibsen, 2009:344).

Competitiveness has become a crucial and concerning issue in South Africa and among companies operating in South Africa and foreign countries. The aviation industry faces rapidly changing and fierce competition worldwide, which is driven by several factors that need to be taken into account when competing for product excellence and customer satisfaction. The arrival of powerful new players is drastically increasing the already high levels of competition (Lefebvre & Lefebvre, 1998:223). Today, these international companies seem to be looking for manufacturers that are able to offer high service quality products, on-time delivery and low cost all at once.

To cope with what are often ambiguous and incomplete environmental data and to increase the understanding of the general environment, firms engage in a process called *external environmental analysis* (Hoskisson et al., 2004:70). To conduct such an analysis, four key activities are included (Hoskisson et al., 2009:54):

- Scanning: Identifying early signals of environmental changes and trends
- Monitoring: Detecting meaning through ongoing observation of environmental changes and trends
- Forecasting: Developing projections of anticipated outcomes based on monitored changes and trends
- Assessing: Determining the timing and importance of environmental changes and trends for firms' strategies and their management.

1.2 STRATEGIC ANALYSIS TECHNIQUES

A number of techniques and concepts are available for management to aid in the analysis of its competitive environment. These tools have been used successfully for many years to utilize and expand companies' strategies and thus their profitability. A few of these techniques are the following:

- The PEST and SWOT analysis techniques used to analyse the industry in which the company operates (Barney, 1995:49; Korkmaz & Messner, 2008:208);
- Porter's five-force model used to analyse the role of competition (Porter, 1980; 2008 80);
- Porter's value chain analysis techniques used to analyse the costing process of a business from beginning to end (Gereffi et al., 2005:79; Porter, 1980);
- Competitor analysis to obtain an understanding of each company against which a firm directly competes and to build models of how they might react, based on

their future goals, assumptions, capability and current situation (BPP, 2010a; Upson et al., 2012:95);

- Total quality management techniques as a means of developing and sustaining a culture of continuous improvement which focuses on meeting customers' expectations (BPP, 2010a; Rodrigues, 2007:697);
- Knowledge-based management techniques to capture, file and categorize information to improve and optimize business decisions (Calof, 2001; Murray, 2002:73);
- Generic strategies such as cost leadership, differentiation and focus to be successful and outperform other firms in the industry (Hax & Majluf, 1988:107; Porter, 1980); and
- Industry benchmarking techniques used in comparing a company against other companies that have similar interests and technologies, in order to identify performance and trends within an industry (Kale & Karaman, 2012:336; Langfield-Smith et al., 2006:671).

As the rate of change of the business environment continues to accelerate — driven by technology, deregulation, changing customer preferences, and volatile exchange rate and commodity prices — the implications for strategic management are far reaching (Grant, 2008:xiii). Management is often faced with the dilemma of not realizing the full potential of a company because they are uncertain as to which management direction for sustained success they should pursue. Furthermore, managers and executives find it increasingly challenging to manage strategic problems in a world that is constantly changing and evolving and environments that are global, complex and turbulent.

1.3 CONTEMPORARY COMPETITIVE ENVIRONMENT

As the aviation industry is faced with continuous innovation and competitiveness, those charged with governance need to formulate an answer to the following question: How can our company create and maintain a competitive sustainable advantage with the available resources, capabilities and core competencies?

There may be two ways of achieving this objective, which Grant (2008:19) defines as follows:

- Corporate strategies that define the scope of the firm in terms of the industries and markets in which it competes. Corporate strategic decisions include

investment in diversification, vertical integration, acquisitions, and new ventures; the allocation of resources between the different businesses of the firm and divestments.

- Business strategies, which is concerned with how the firm competes within a particular industry or market. If the firm is to prosper within an industry, it must establish a competitive advantage over its rivals. This area of strategy is also referred to as *competitive strategy*.

Resources, capabilities and core competencies form the foundation for creating competitive advantage. Hoskisson et al. state that strategic leaders must ensure that their firm exploits its core competencies, which are used to produce and deliver products that create value for customers (Hoskisson et al., 2004:58).

According to Pitts and Lei (2006:8–9) the key to formulating and implementing an effective strategy, that builds competitive advantage, depends on the attention of the firm to a core set of six strategic ingredients:

- vision;
- value creation;
- planning and administration;
- global awareness;
- managing stakeholders; and
- leveraging technology.

Strategic competitiveness results only when the firm is able to satisfy a group of customers by using its competitive advantages to compete in individual product markets. The most successful companies constantly seek to chart a new competitive space in order to serve new customers, as they simultaneously try to find ways to better serve existing customers (Hoskisson et al., 2004:135). Finding and creating new areas to serve customers takes time but can result in a remarkable difference in performance and outcome.

A starting point for the above would be an analysis of the corporate competitive environment. A distinguishing factor between the external and internal environment of the firm is, according to Grant (2008:12), common to most approaches to strategy analysis. This is crucial to the success of the aviation industry that is operating in international markets which is faced with a high standard of competitiveness.

The process of external environmental analysis typically entails i) an analysis of the political, economic, sociocultural and technological factors and ii) an industry competitive environment analysis which leads to determining the strengths, weaknesses, opportunities and threats of the firm (Analoui & Karami, 2003:74). Strengths and weaknesses relate to the internal environment whereas threats and opportunities relate to the external environment (Analoui & Karami, 2003:95).

1.4 MOTIVATION

Largely owing to globalization and technological change and evolution, the competitive landscape in the 21st century is one in which change is frequent, complex, and challenging (Hoskisson et al., 2004:xvi). Along with the rapid globalization of economic markets comes an additional set of pressures for developing countries such as South Africa. As highlighted by Du Toit (2003:114), entry into the global economy requires high-grade competitive intelligence on aspects such as standards, regulations, consumer preferences, competitor strategies and business styles. Manufacturing enterprises in South Africa could therefore greatly benefit if they were able to build or strengthen existing intelligence capabilities (Du Toit, 2003:114).

In a world where the number of rivals in any industry is growing, with many supplementary and/or alternative products being manufactured, staying competitive becomes more challenging. Opportunities would be so much easier to realize were it not for the presence of current and potential competitors. Rivals' current and potential actions pose threats to the success of any strategy (Fahey, 2007:7).

To address these perturbing factors and to formulate an action plan to stay ahead of emerging competition, Company A must analyse its competitive environment.

Company A was formed in 1990 and currently employs more than 700 people. It is a specialist leader in the South African aviation industry and operates in a very competitive global market place. Company A is an engineering group that specializes in composite forming and engineering, aircraft and interior refurbishment and structural fabrication. In recent years the company has secured contracts for global main players such as Airbus and Boeing; manufacturing aircraft parts. Over the years, Company A has grown to be recognized as a respected brand offering customers an increasingly satisfactory product. Company A considers that its business, management and technical

skills have the potential for long-term sustainability as a credible, commercially successful private business enterprise.

1.5 PROBLEM STATEMENT AND OBJECTIVES

1.5.1 Research question

In a world faced with continuously changing technology, creating and maintaining a sustainable competitive advantage is an integral factor for success. Competitive advantage in specific industries depends fundamentally on the rate of improvement and innovation (Porter, 1998:145). Considering the aforementioned, the primary problem statement for the purpose of this research project is the following:

- P1: What is the competitive environment Company A currently finds itself in and what techniques are currently used to analyse strategy?

In the light of the above primary research question, a secondary research question can also be formulated based on the above:

- P2: What recommendations can be made regarding the adaptability of Company A within the competitive environment, so as to maintain a competitive advantage?

1.5.2 Research objectives

The primary objective of this study is to analyse and to research the competitive environment — both internally and externally — to determine whether Company A has strategies in place to sustain a competitive advantage.

Resulting from the primary objective, specific detailed objectives have been formulated:

- To analyse the macro-economic factors within the competitive environment by conducting a PEST analysis;
- to determine the key performance indicators of Company A by means of a SWOT analysis;
- the identification of employees' understanding of the competitive environment of Company A; and
- the development of recommendations for improving sustained competitive advantage based on conclusions from the above.

1.6 RESEARCH METHOD

This study will consist of conducting both a literature study and an empirical study, to address and to achieve the objectives set out above.

1.6.1 Literature review

The theoretical literature study will focus on explaining the external corporate environment by highlighting and analysing recent research conducted by professionals in the field of corporate strategy and the creation of competitive advantage.

The literature study will involve collecting information from recent and relevant academic journals, traditional text books and other publications or articles relating to the topic.

The purpose of this theoretical research is to identify and to understand the relevant important variables attributable to the PEST and SWOT frameworks, as well as corporate strategies.

The information gained in this section of this study will contribute largely to the development of the questionnaires that will be used to conduct the empirical study.

1.6.2 Empirical research

The empirical study will aim to give an explanatory analysis of the external and internal corporate competitive analysis of Company A. Sekaran (2000:123) states that an explanatory study is undertaken when little is known about the situation at hand, or when no past information is available on how similar problems have been solved in the past.

The aviation industry in South Africa is often regarded as a world-class provider of products and services to foreign companies and is a contributing factor in the South African economy, creating 270 000 high-productivity jobs in 2011 and contributing 2,1% to the gross domestic product of South Africa (IATA, 2011). Owing to the complexity and nature of role players and the lack of availability of relevant information, no past studies were conducted in assessing, monitoring and evaluating the competitive environment of the industry.

To gather the relevant information needed to reach a conclusion, questionnaires will be distributed to employees at Company A. The questionnaires will also be presented to

external experts who will assist with analysing the results of the outcome of the questionnaires.

Semistructured interviews will also be conducted with employees of Company A to gather information.

1.7 DEFINITIONS

For purposes of this mini-dissertation, the following definitions and concepts are considered to be correct:

Aeronautical: The science of motion or travel in the air (*Oxford Dictionary*, 1998:26). The art or science of flight (*Merriam-Webster Dictionary*, 2014a).

Aircraft: A machine capable of flight. Aeroplanes are aerodynamics to overcome gravity. An upward force, known as lift, is achieved by creating more air pressure beneath the wings than above them. The degree of lift depends on the surface area of the wings or blades, and the speed or airflow across them (*Oxford Dictionary*, 1998:30).

Aviation: The skill or practice of operating aircraft (*Oxford Dictionary*, 1998:62).

Case study: The use of a particular instance as an exemplar of general principle (*Oxford Dictionary*, 1998:130). A research into the development of a particular person, group, or situation over a period of time or a particular instance of something used or analysed in order to illustrate a principle (*Oxford Dictionaries Online*, 2014).

Competitive advantage: The conditions that make a business more successful than the business it is competing with, or a particular thing that makes it more successful (*Cambridge Dictionaries Online*, 2014).

Competitive environment:	The immediate competitive context in which a company or enterprise operates (McMillan, 2013), or the dynamic system in which a business competes (Mack, 2013). It includes competitors, customers, creditors and suppliers (Miesing & Van Ness, 2007:159).
Environmental analysis:	The evaluation of the possible or probable effects of external forces and conditions on an organization's survival and growth (<i>Business Dictionary</i> , 2014a).
Exploratory research:	The investigation into a problem or situation which provides insights to the researcher. The research is meant to provide details where a small amount of information exists. It may use a variety of methods such as case studies, interviews and experiments for the purpose of gaining information (<i>Business Dictionary</i> , 2014b). Studies which are merely formative, for the purpose of gaining new insights and discovering new ideas (<i>Medical Dictionary</i> , 2014).
Methodology:	A system of broad principles or rules from which specific methods or procedures may be derived to interpret or solve different problems within the scope of a particular discipline (<i>Business Dictionary</i> , 2014c). The science of methods; a body of methods used in a particular branch of activity (<i>Oxford Dictionary</i> , 1998:513).
PEST:	A type of situation in which political-legal, economic, socio-cultural, and technological factors are examined to chart an organization's long-term plans (<i>Business Dictionary</i> , 2014d).
Positivism:	The form of empiricism that bases all knowledge on perceptual experience, not on intuition or revelation (<i>Webster's Online Dictionary</i> , 2014).

Qualitative data:	Data that are used to describe a product but not to define its characteristics. It is information that has been collected about the reputation of a product and how it is then perceived by the public (<i>The Law Dictionary</i> , 2014). Qualitative data describes whereas quantitative data defines (<i>Business Dictionary</i> , 2014e).
Quantitative data:	Data that can be quantified and verified, and is amenable to statistical manipulation (<i>Business Dictionary</i> , 2014f).
Strategy:	A careful plan or method for achieving a particular goal, usually over a long period of time; the skill of making or carrying out plans to achieve a goal (<i>Merriam-Webster Dictionary</i> , 2014b).
Strategic decisions:	Chosen alternative that affect key factors which determine the success of an organization's strategy. In comparison, a tactical decision affects the day-to-day implementation of steps required to reach the goals of a strategy (<i>Business Dictionary</i> , 2014g).
SWOT:	Situation analysis in which internal strengths and weaknesses of an organization, and external opportunities and threats faced by it, are examined closely to chart a strategy (<i>Business Dictionary</i> , 2014h).

1.8 CHAPTER DIVISION

This study will be in the format of a mini-dissertation and will be written in accordance with the rules and guidelines which have been formulated by the North West University. This study will be divided into six chapters which are as follows:

Chapter 1: Introduction

The opening chapter provides a background to the study as well as of the aviation industry, indicating the need to conduct a study. The problem statement, motivation for the study and research objectives are also explained in this chapter.

Chapter 2: Research Methodology

The chapter focuses on explaining the research method that will be used in conducting this study into the competitive environment of the aviation industry.

Chapter 3: Development of the South African aviation industry

This chapter provides an oversight of the aviation industry, indicating relevant and major developments that were experienced in establishing the industry as a major contender in the world and local economy.

Chapter 4: Assessing the competitive environment

This chapter provides the literature study and explains the techniques used to evaluate the corporate environment, namely:

- PEST is a framework that can be used to analyse the macro-environment in which an organization operates, by identifying and assessing the Political, Economic, Social and Technological factors which occur in the environment;
- SWOT is a quantitative and qualitative review of the internal strengths and weaknesses an organization experiences and its relationship with external threats and opportunities.

Chapter 5: Assessment in practice: an empirical study

This chapter will elaborate on the research into the competitive environment of Company A, by gathering data on the company using a basic questionnaire to guide discussions. The results of the information-gathering process will be presented in a relevant format and as a final part of the chapter an analysis and evaluation of the answers to the questionnaire will be given.

Chapter 6: Summary, conclusions and recommendations

The final chapter will begin with a summary of the results obtained in the empirical study and the conclusions reached, based on these results. The objectives of the overall study will be highlighted to ensure they were met in performing the study and any limitations to the study will be addressed here. Current methods used by Company A will be evaluated and recommendations will be made to Company A so as to improve its current strategy, to ensure they obtain a sustainable competitive advantage. Lastly, a scope of further research relevant to this study will be made.

CHAPTER 2

2. RESEARCH METHODOLOGY

2.1 INTRODUCTION

This chapter will clearly explain how the proposed study will be conducted. The discussion starts with the explanation regarding the research paradigm, the type of research, the research design and the objectives of the empirical study. In addition to this, a high-level description of the sample and the data-collection procedure used to obtain information is given. The chapter concludes with an indication of the measuring instruments relating to the research problem. The empirical study explained below will give an explanatory analysis of the external and internal corporate competitive analysis of Company A.

This overall research study will also consist of a literature study, in addition to the empirical study which is explained below. The theoretical explanation will explain the external corporate environment by means of a PEST analysis and also will evaluate the internal environment by conducting a SWOT analysis. These analyses will be explained and assessed by collecting information that was compiled from academic journals, publications and traditional text books on the respective topics. By analysing the competitive environment, an understanding will be gained on what elements form part of the environment and how they are related and interacting to achieve a sustainable competitive advantage over competitors. The literature study will also form the basis of the empirical study, by forming the basis of the survey questionnaires and the semistructured interviews that will be conducted. A detailed analysis of the competitive environment is presented in Chapter 4 and the results of the empirical study will be analysed and discussed in Chapter 5.

2.2 RESEARCH PARADIGM

Researchers typically have their own understanding and beliefs of their surroundings and the world around them. As a result of this, the manner in which researchers conduct their studies will vary accordingly. The use of the word *paradigm*, to describe a particular way of perceiving the world, derives from the work of the well-known philosopher of science, Thomas Kuhn (Arthur et al., 2012:17). According to Arthur et al. (2012:17), a paradigm represents a person's conception of the world, its nature and their position in therein, as well as a multitude of potential relationships with that world

and its constituent parts. Teddlie and Tashakkori (2009:84) define a paradigm as a 'world-view', together with the various philosophical assumptions associated with that point of view. In concurrence, Creswell and Plano Clark (2007:21) also refer to a paradigm as a 'world-view'.

In accounting, three main paradigms (or 'world-views') are often used by researchers. Firstly, as defined by Smith (2011), the task of positivistic research is to develop explanations of phenomena by concentrating on pure facts. Wahyuni (2012:71–2) indicates that *positivists* believe that different researchers observing the same factual problem will generate a similar result by carefully using statistical tests and applying a similar research problem in investigating a large sample. He further indicates that accounting issues, which typically deal with *number crunching*, are studied predominantly within the positivist paradigm. This stand of strongly numerical studies forms the basis of the so-called mainstream research in accounting.

Interpretive research is the second paradigm and is characterized by human actions which form the results of external influences. The task of the researcher goes beyond measurement to developing an understanding of the situation (Smith, 2011). As noted by Wahyuni (2012:71) *interpretivists* believe that reality is constructed by social actors and people's perceptions thereof. They recognize that individuals — with their own varied backgrounds, assumptions and experiences — contribute to the continuing construction of reality existing in their broader social context through social interaction. To understand the social world from the experiences and subjective meanings people attach to it, Wahyuni (2012:71) indicates that interpretivist researchers prefer to interact and to have a dialogue with the participants studied.

Thirdly, critical research expands on the scope of interpretive research and criticizes the status quo and taken-for-granted assumptions (Smith, 2011). Critical research is a subtype of the interpretive paradigm. The critical research approach is one in which people are involved in the research process and where data are used for social change (Hardina, 2008).

This study will, in consideration of the above-mentioned, take the form of a combination of both interpretivistic and positivistic research, and will primarily contain elements of interpretivism combined with elements with positivism research paradigms.

2.3 RESEARCH TYPE

Research can be categorized as either *basic* (or fundamental) research or *applied* research. Graziano and Raulin (1993:53–4) define basic research as research carried out to add to our understanding and store of knowledge, but without any particular practical goals. Fraenkel and Wallen (2008:7) state that basic research is concerned with clarifying underlying processes, with the hypothesis usually expressed as a theory. In contrast hereto, applied research is defined by Graziano and Raulin (1993:53–4) as research that is conducted with the goal of providing practical solutions to actual problems. According to Fraenkel and Wallen (2008:7), researchers engaged in applied research studies may or may not want to investigate the degree to which certain theories are useful in practical settings. Basic research findings often lead to applied research, once properly conducted.

The research type utilized in this study is considered as basic (or fundamental) research in the context of it being done to enhance the understanding of certain problems that commonly occur in the organization and to seek out methods of solving them.

2.4 RESEARCH DESIGN

Research design is the development of an action plan for getting from here to there, where 'here' may be defined as the initial set of questions to be answered, and 'there' as some set of conclusions about these questions (Yin, 1994:19). Hair et al. (2007:151) also define research design as providing the basic direction for conducting the research project. The researcher should choose a design that will provide relevant information on the research question; and will complete the job most efficiently. As a summary definition, Nachmias and Nachmias (1992:77–8) describe research design as a plan that guides the investigator in the process of collecting, analysing, and interpreting observations. The research design is a logical model of proof that allows the researcher to draw inferences concerning causal relations among variables under investigation. There are three types of research design (refer to Table 2.1), i.e. exploratory, descriptive and causal research types.

Table 2.1 Comparison of basic research designs

	Exploratory	Descriptive	Causal
Objective	Discovery of ideas and insight	Describe market characteristics or functions	Determine cause-and-effect relationships
Characteristics	Flexible Versatile Often the lead in total research design	Marked by the formulation of prior hypotheses Preplanned and structured design	Manipulation of one or more independent variables Control of other mediating variables
Method	Expert surveys Pilot surveys Case studies Secondary data (qualitative) Qualitative research	Secondary data (quantitative) Surveys Panels Observational and other data	Experiments

Source: Rofianto (2011)

As seen above, *exploratory* research can take many forms and relies heavily on qualitative techniques, although it is possible to use quantitative approaches (Hair et al., 2007:155). Elahi and Dehdashti (2011:3) define *descriptive research* as research that relies heavily on interviews of respondents and data available in secondary data sources. Anon. (2011:27) defines descriptive research as a research design in which the major emphasis is on determining the frequency with which something occurs or the extent to which two variables co-vary.

Causal research design is research in which the major emphasis is on determining cause-and-effect relationships (Anon., 2011:27). According to Elahi and Dehdashti (2011:3), causal research relies on interviews and in the conducting of experiments. Causal research is proper when the research objective is to identify variables that cause the phenomenon being predicted and to understand why they cause what is being predicted.

In this study, exploratory research will be used to gain a better understanding of business problems and opportunities. The importance of exploratory research has been described by Swaddling and Zobel (1996:21) as a window into consumer perceptions, behaviours, and needs. It enables companies to develop successful new products more

consistently. This superior understanding of the consumer leads to effective decision-making and recognition of market opportunities, a distinctive definition of the business in which your company competes, and a high probability of producing new innovative products that drive extraordinary profits.

In the context of this study, a literature review will be conducted to gain a better understanding of the issue at hand. This will be supported by an empirical case study undertaken to collect information from individuals and to determine their understanding of the research topic. A case study is a typical example of exploratory research using qualitative approaches, as questionnaires will be completed and interviews will be conducted in collecting the information.

2.4.1 Case study research

As emphasized by Schramm (1971), the essence of a case study, the central tendency among all types of case studies, is that it attempts to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result. According to Welman, Kruger and Mitchell (2005:25), the objective of a case study is usually to investigate the dynamics of some single-bound systems, typically of a social nature such as a group, a family, an institution and a practice.

Yin (1994:13) defines a case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life content, especially when the boundaries between phenomenon and context are not clearly evident. Fraenkel and Wallen (2008:430) states that a case study is a form of qualitative research in which a single individual or example is studied through extensive data collection.

As a research strategy, the case study may be used in many situations, including in professional fields such as business administration and management sciences. In brief, the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events — such as individual life cycles, organizational and managerial processes, international relations, and the maturation of industries (Yin, 1994:3). Case studies are also often the preferred strategy used when 'how' and 'why' questions are asked and when the focus is within some real-life context. The strength of case-study research lies in its ability to enable the researcher to investigate the case thoroughly, to probe, to drill down and get at its complexity, with often repeated visits to/encounters with the case (Arthur et al., 2012:102).

For case studies, Yin (1994:20) suggests five components of a research design that especially are important:

- Questions of a study — to clarify precisely the nature of the questions.
- Propositions (if any) — to direct attention to something that should be examined within the scope of the study.
- Units of analysis — defining what the 'case' is.
- The logic linking the data to the propositions — represents the data analysis steps.
- The criteria for interpreting the findings.

One major feature of case study methodologies is that different methods are combined to illuminate a specific case from different angles by combining methodologies, theories and techniques. Case studies also combine other research strategies. In that respect the case study could be said to be a meta-method (Johanson, 2003:3–4). Table 2.2 explains how different research strategies are appropriate for relevant situations.

Table 2.2 Relevant situations for different research strategies

Strategy	Form of research question	Requires control over behavioural events	Focuses on contemporary events
Survey	Who, what, where, how many, how much	No	Yes
History	How, why	No	No
Case study	How, why	No	Yes

Source: Yin (1994:6)

2.4.2 Quantitative versus qualitative research

According to Hair et al. (2007:151–2), *quantitative* data are measurements in which numbers are used directly to represent the characteristics of something, and most commonly takes the form of a statistical analysis. Quantitative research usually involves a large number of respondents and also structured questions in which the response options have been predetermined. *Qualitative* data, in contrast, represents descriptions of things in which numbers are not directly used, and are generally collected using questionnaires, interviews and observation (Hair et al., 2007: 151–2). Denzin and Lincoln (2005) define qualitative research as a multimethod involving an interpretive,

naturalistic approach to its subject matter. Qualitative research involves the use and collection of a variety of empirical materials, personal experience, life-story interviews and historical and interactional texts that describe routine moments and meaning in individuals' lives.

There can be little doubt that research that involves the integration of quantitative and qualitative research has become increasingly common in recent years. An examination of the research methods and research designs suggests that, on the quantitative side, structured interview and questionnaire research tends to dominate; while on the qualitative side the semistructured interview tends to dominate (Bryman, 2006;97). As a result it potentially could have considerable value in combining both methods —referred to in practice as the mixed-method research. Table 2.3 gives a clear indication of the purpose and properties of both these approaches and how they can be combined successfully as a mixed-method research method.

Table 2.3 Comparison of qualitative and quantitative approaches

Description	Quantitative approach	Qualitative approach
Purpose	Collect quantitative data More useful for testing Provides summary information on many characteristics Useful in tracking trends	Collect qualitative data More useful for discovering Provides in-depth information on a few characteristics Discovers 'hidden' motivations and values
Properties	More structured data collection techniques and objective ratings Higher concern for representativeness Emphasis on achieving reliability and validity of measures used Relatively short interviews (1 – 20 minutes) Large samples (over 50) Results relatively objective	More unstructured data collection techniques requiring subjective interpretation Less concern for representativeness Emphasis on the trustworthiness of respondents Relatively long interviews (half-hour to many hours) Small samples (1 – 50) Results relatively subjective

Source: Hair et al. (2007:152)

Considering the above, this study will contain elements of both quantitative and qualitative research (and then 'mixed-method' research), as questionnaires and

interviews will be analysed by means of a statistical analysis to interpret the data and to draw conclusions and to make recommendations.

2.5 OBJECTIVES OF THE EMPIRICAL STUDY

In Chapter 1 it was emphasized that the primary objective of this research project is to analyse and to research the competitive environment of a selected aviation company within South Africa, to determine whether strategies are in place to ensure the company sustains their competitive advantage over its competitors. Only after proper research has been undertaken and a better understanding has been achieved regarding the competitive environment, can recommendations be made to the selected company to improve its current strategies.

The objectives of the study as applicable to Company A therefore includes the following:

- a general analysis of the internal and external environment of Company A, as understood by the research subjects; and
- identification of key-performance indicators as perceived by the research subjects, by means of a SWOT analysis in the survey questionnaire.

2.5.1 Data collection procedure

To meet these objectives the research includes both semistructured interviews and survey questionnaires, discussed in more detail below. It was decided that both data-collection procedures will be used in conducting this study.

Semistructured interviews will be conducted with senior employees of Company A. Their financial and managerial experience will enable them to formulate answers that specifically will address the competitive environment of Company A. This will aid in gaining insight into the strategies used and the difficulties experienced by Company A, with regard to strategy and to gain a competitive advantage over competitors.

Survey questionnaires will be used to determine the awareness of employees of the competitive environment of the company. Being paper based, it will provide the employees with pre-populated answers to choose from. This will assist in achieving the research objectives because a large proportion of employees of Company A are technically skilled; thereby finding the formulation of answers — specifically relating to components of the competitive environment of the company — problematic.

2.5.1.1 *Semistructured interview*

As described by Babbie (2004:263), an interview is a data-collection encounter in which one person — the interviewer — asks questions of another, the respondent. Lincoln and Guba (1985:268) describe interviewing as simply a conversation with a purpose. Patton (1990:278) maintains that the purpose of an interview is to find out what is on the mind of the other person and to gain access to the perspective of the person being interviewed.

There are many reasons to use interviews for collecting data and for using it as a research instrument. Gray (2004:14) has given the following reasons:

- a need to attain highly personalized data;
- a need to exchange the data and also the experiences;
- a need to gain an understanding of the initial issue;
- there are opportunities required for probing;
- to determine organizational strengths and challenges;
- a good return is important; and
- respondents are not fluent in the native language of the country, or where they have difficulties with written language.

In this study, semistructured interviews will be conducted. Semistructured interviews have an overall structure and direction, but allow a lot of flexibility to include unstructured questioning. Researchers are free to exercise their own initiative in following up the answer of an interviewee to a question (Hair et al., 2007:197).

To manage and to conduct an interview — as a technique for gathering data for one's research study — successfully, Leedy (1989:149) describes the process as follows:

- Set up the interview well in advance;
- send the agenda of questions you will ask the interviewee;
- ask for permission to record the conference on tape;
- immediately confirm the date in writing;
- send a reminder together with another agenda of question ten days before you expect to arrive;
- be prompt; follow the agenda; have a copy of your questions for your interviewee in case he or she has mislaid his or her copy;

- following the interview, submit a typescript of the interview and get either a written acknowledgement of its accuracy or a correct copy from the interviewee; and
- after you have incorporated the material into your research report, send that section of the report to the interviewee for final approval and written permission to use the data in your report.

The sample subjects for these interviews, who were willing to participate in the study, consist of five senior managers employed within Company A. The objective will be to gain an understanding of the way internal as well as external environments currently are analysed within the competitive environment of Company A. Prior to conducting the interviews, the subjects will be notified and a reasonable and suitable time and location within Company A will be arranged. All interviews will be conducted anonymously and will take place within private conference rooms on the premises of Company A. All the information obtained during the interview will be documented and summarized.

2.5.1.2 Survey questionnaire

A questionnaire is a document containing questions and other types of items designed to solicit information appropriate for analysis. Questionnaires are used primarily in survey research but also in experiments, field research and other methods of observations (Babbie, 2004:244). Arthur et al. (2012:231) describe a questionnaire as a tool for collecting information to define a problem.

Marshall (2005:132) states that, with careful planning, questionnaires can yield high-quality usable data, can achieve good response rates and can provide anonymity. A questionnaire is a useful data-collection tool where the following conditions are met:

- the target audience can clearly be defined and be identified;
- the majority of respondents know what is asked of them; and
- the focus of the analysis is numerical.

Babbie (2004:244–50) provides the following guidelines when designing a questionnaire:

- choose the appropriate question form (open-ended versus closed-ended questions);
- make items clear — the respondent should understand the question asked;
- avoid double-barrelled questions;

- respondents must be competent to answer;
- respondents must be willing to answer — sensitive questions should be avoided;
- questions should be relevant to the topic;
- short items are best — respondents should be able to answer without difficulty;
- avoid negative items; and
- avoid biased items and terms.

In this research, *SurveyMonkey* software will be used to host the questionnaire via the World Wide Web. The respondents selected will be sent an e-mail containing the URL link to the questionnaire and will be asked to complete it within a specific time frame. Once the questionnaire has been completed by all subjects, the *SurveyMonkey* software will be used to collect and to analyse the data.

The questionnaire will be developed based on the knowledge gained after conducting the literature review and will include questions on the internal and external competitive environment of Company A. These questions will be anonymously completed by the subjects selected, based on their knowledge and experience gained whilst being employed by Company A. The questionnaire will consist of two sections, namely:

Section A: Personal information of employees

Section B: Internal and external environment of Company A, according to the knowledge of its employees

The population of this study will consist of 700 employees within all business areas of Company A. The sample will be based on 10% systematic sampling, resulting in 70 subjects being identified. According to Babbie (2004: 203), systematic sampling is a type of sampling which every k^{th} unit in a list is selected for inclusion in the sample. To compute k the size of the population is divided by the desired sample size; k is called the sample interval. Within certain constraints, systematic sampling is a functional equivalent of simple random sampling and is usually easier to do. Typically, the first unit is selected at random.

2.5.2 Measurement of the research instrument

Measurement is the quantifying of any phenomenon, substantial or insubstantial, concrete or abstract, and involves comparison of the data being measured to a pre-established standard (Leedy, 1989:21). To determine the degree of measurement, two

considerations are very important: one of these is validity, the other is reliability. Both considerations are discussed in detail below.

2.5.2.1 Validity

According to Hair et al. (2007:143), the term *validity* refers to a measure that accurately reflects the concept it is intended to measure. Though the ultimate validity of a measure can never be proven, we may agree to its relative validity on the basis of face validity, criterion validity, content validity, construct validity, internal validation and external validation.

Validation in qualitative research is the extent to which qualitative findings accurately represent the phenomenon being examined. With quantitative research, methods for assessing validity involve inserting numbers into formulas and calculating the outcome (Hair et al., 2007:297). When a case-study approach is used, validity can be assessed by comparing the outcome of the cases described with the predictions of the researcher. If the predictions are accurate, the research is valid (Hair et al., 2007: 297).

In this study, validity will be assessed by measuring the results obtained from the empirical study to the objectives set out in the beginning of the study and comparing these to the information gathered in the literature review of the research project.

2.5.2.2 Reliability

Reliability addresses the ability of a measuring tool to provide the same result on repeated occasions (De Vaus, 2002). In measurement, reliability is a necessary but not sufficient condition; validity provides that sufficiency (Scheurich, 1997:81). The method of test–re-test reliability addresses the questions of consistent answers from multiple occasions of use. If the information needed is not expected to change in time, then the same results would be achieved both times. According to Graziano and Raulin (1993:83–4) the factors that contribute to reliability include:

- the precision and clarity of the operational definition of the construct;
- the care with which we carry out the measures and the precision with which we follow the procedures outlined in the operational definition; and
- the number of independent observations on which the score is based.

Reliability is critical in research because, should the measures used in the study not be reliable, the study cannot produce useful and accurate information. However, in

qualitative research, reliability is not considered to be such an important consideration because there are many nonrepeated operations (Lindlof and Taylor, 2011:273). For instance, a person is asked a set of questions only once during an interview, and the questions may vary across the participants of the study.

2.6 SUMMARY

In this chapter the research methodology of the study has been discussed and the research design, population, sample size, data collection and the measurements that will be used in conducting the study, have been identified. It has been indicated that this study will be a case-study approach in a combined interpretive/positivist paradigm. Since this is a new research field, the study is considered to be an exploratory research project utilizing primarily qualitative techniques with some limited quantitative aspects. The data primarily will be collected during structured interviews, together with questionnaires. Chapter 3 will discuss major and relevant developments within the aviation industry, both locally and globally.

CHAPTER 3

3. DEVELOPMENT OF THE SOUTH AFRICAN AVIATION INDUSTRY

3.1 INTRODUCTION

This objective of this chapter is to give an insight into the South African aviation industry. The discussion will provide an understanding of the history relating to the establishment of the industry in South Africa as a major contender, when compared to world economies. Following will be an indication of the major role players in the South African aviation industry and an overview of the relevant and major developments that were experienced in the 100 years since the start of the industry in this country.

3.2 HISTORY OF THE AVIATION INDUSTRY IN SOUTH AFRICA

The term *aviation* usually is used to refer to a wide range of related activities, including research and development, design, manufacture, support, maintenance, conversion and upgrade of rotary and fixed-wing aircraft, satellites, satellite launch and tracking systems, air-traffic controlling systems, unmanned aircraft, and weapons systems as well as their relevant subsystems and components (Dunne, 2006). The above definition excludes the activities of domestic and international aircraft or ground/flight crew, attendants, and catering.

According to Kraemer-Mbula (2008:5), the origins and development of the aviation industry in South Africa cannot be separated from the defence industry. Designed to serve the military purposes of the State in a period of economic isolation, aerospace and defence activities have relied heavily on funding support from the government. Protection from external competition allowed it to acquire positions in the domestic market and as a result, many successful domestic aviation companies are largely a result of government investment (AMTS, 2004). Later exposure to international markets provided the means to formulate competitive alternatives to maintain the existing South African aerospace capabilities.

Aviation began in South Africa in earnest in 1913 when citizens were invited to join the South African Aviation Corps (SAAC) as officer-aviators. According to the South African Power Flying Association, the Union Government did not have any training facilities so it

negotiated with the Paterson Aviation Syndicate for the training of military pilots (Chikunga, 2013).

The Armaments Development and Production Corporation (Armcor) was established in 1968. Initially its duties included the management and expansion of state-owned arms manufacturing facilities and the administration of all arms imports and exports. In addition to this, Armcor expanded its production activities through acquisition of private companies and establishing of subsidiary companies. Armcor became the central player in South Africa's domestic defence industry, by acting as both player and referee in the domestic defence market (Goldstein, 2002).

During the early 1990s, political transition in South Africa and the economic recession of that period had resulted in dramatic cuts in the national defence budget. As a result, many firms were forced to withdraw from the defence industry. The sustainability of the industry became a major concern and Armcor was split into two entities: Denel was established in 1992 as a parastatal private company with the state being the sole shareholder, while Armcor remained part of the Ministry of Defence (Kraemer-Mbula, 2008:26).

From the start Denel aimed actively to pursue conversion and diversification towards civilian business; particularly through the acquisition of nondefense products of firms, mergers and joint ventures with civilian firms, and the development of civilian products derived from existing defence technologies and products (Bachelor & Dunne, 2000).

3.3 MAIN PLAYERS OF THE SOUTH AFRICAN AVIATION INDUSTRY

The South African aviation industry currently is dominated by a few large companies. The public-sector defence industry consists of Armcor, Denel and CSIR Defencetek. Private companies include Aerosud, African Defence Systems (ADS), Advanced Technologies and Engineering (ATE), and Saab Grintek. Most aviation companies are located in Gauteng with a smaller hub of aviation firms in the Western Cape (Kraemer-Mbula, 2008:28). A brief highlight of some of the key players in the industry are provided below.

3.3.1 Armcor

Since the reforms that led to the split from Denel, the explicit new role of Armcor was the acquisition of defence material, with the approval of the South African Minister of

Defence, primarily for the Department of Defence (DoD) but also for other security services such as the South African Police Service (SAPS) and Correctional Services. In 2006 Armscor had employed about 1 000 people and had reported a revenue of about 1 billion rand (Anon., 2014c).

3.3.2 Denel

Denel, established in 1992, is the largest single entity in defence and aerospace in South Africa. Denel is based in Gauteng and currently employs about 8 000 people. Employment and revenues have been consistently declining since 2003, and in 2005 the group reported total revenue of about 2 billion rand, operating at a loss. In recent years, Denel has focused on restructuring, switching from a loose network of companies and divisions to more autonomous business groups. In 2002 its training division, *Denel Centre for Learning and Development (DCLD)*, became a separate entity (Kraemer-Mbula, 2008:27).

3.3.3 CSIR Defencetek

Being a division of the Council for Scientific and Industrial Research (CSIR) and therefore fully sponsored by the South African Government, Defencetek is a simulation, design, testing and evaluation facility of aircraft and air weapons. It also provides advice on and technological support for radar-artificial-intelligence products, electronic-systems engineering, and navigation-systems technology. The group is a strategic defence capability; operating as an extension of the South African National Defence Force (SANDF), and also providing research in support of the national aeronautics research strategy of the Department of Science and Technology (Kramer-Mbula, 2008:27; Anon., 2014e).

3.3.4 Aerosud

Aerosud Holdings is an aeronautical engineering group with a very strong engineering design capability and is South Africa's largest private-sector aviation-industrial company. Aerosud was formed in 1990 as a private company. Since then it has grown rapidly. It currently employs more than 700 people in structural fabrication, composite forming and engineering, custom design and development, and aircraft and interior refurbishment. The company has secured contracts for aircraft-parts manufacture from global main players such as Boeing and Airbus (Anon., 2014a).

3.3.5 Advanced Technologies and Engineering (ATE)

ATE is a privately-owned military systems company based in Midrand, Gauteng. Established in 1983, ATE has grown from a consulting group to a development company with a workforce of 320 personnel, mainly engineers and technicians. The company offers turnkey solutions and takes responsibility at platform level for both new and upgraded wing aircraft, helicopters, unmanned air vehicles and armoured vehicles. ATE is a supplier to Thales (France), BAE Systems (UK) and Armscor (South Africa). The company has been very successful in the international and domestic markets and has maintained a steady growth of 10% per year for the last 10 years (Kraemer-Mbula, 2008:28). In 2013, the company was acquired by the Paramount Group and the integration of the two companies means Paramount Group now has one of the strongest aerospace offerings in Africa, encompassing mission sensors and systems, avionics, logistical and planning support, research and development, and systems integration (Anon., 2014f).

3.3.6 Saab Grintek Group

Saab Grintek Group is a partnership between Kunene Bros Holdings and Saab AB (Sweden) and has deep roots in defence production in South Africa. Most of its enterprises are heavily engaged in production of military material. Contemporary interests of Saab Grintek range across a spectrum of private-sector telecommunications and electrical power applications, and it is an acknowledged world leader in the miniaturization of aircraft communications (Anon., 2014h).

3.4 HISTORY AND OPERATIONS OF COMPANY A

Company A was formed in 1990 by the then key designers of the South African Rooivalk Combat Support Helicopter, and also key leaders involved in the Cheetah fighter program. The company was initially managed as a design burrow, focusing on the upgrade of military aircrafts. Towards the mid-1990s the team realized that the design business did not provide the solid business base needed to sustain the growth of the company. As a result, in 1995 Company A embarked on diversification into the commercial aviation market, incorporating the design of galleys and other interior systems into their line of operations. The company also formulated a separate volume manufacturing business (Anon., 2010).

Today, deeply involved in both Civil and Military Aviation Engineering projects, the activities of Company A cover design, development, prototyping, manufacture and in-service support. The team of Company A attributes their success to their willingness to conquer uncharted territories whilst investing in technology for the future in manufacturing (Anon., 2014g). Company A is now a global leader in the upgrading of existing military aircraft and design-manufacturing activities for commercial aviation.

Major customers include Airbus, Boeing, BAE Systems, Labinal, and Spirit Aero Systems, who recognizes Company A as a respected brand name in a fiercely competitive global market-place (Anon., 2014g).

Company A currently manufactures roughly 1,3 million parts, details and assembly per annum. As a result of this, Company A is investing in new innovative technologies for the future in manufacturing. These technologies include continuous fibre reinforced thermoform plastic (CFRTP), advanced composites, and laser-centred direct manufacturing technology (Anon., 2010). These technologies are explained in detail below.

3.4.1 Carbon fibre reinforced polymers

As defined by Masuelli (2013:3) fibre reinforced polymer is a composite material made of a polymer matrix reinforced with fibres. The polymer is usually an epoxy, vinyl ester or polyester thermosetting plastic, and phenol formaldehyde resins are still in use.

Carbon fibre reinforced polymers (CFRPs) is a very strong and light fibre-reinforced polymer which contains carbon fibres. Carbon fibres are created when polyacrylonitrile fibres (PAN) are carbonized (through oxidation and thermal pyrolysis) at high temperatures. The existence of carbon fibre came into being in 1879 when Thomas Edison took out a patent for the manufacture of carbon filaments suitable for use in electric lamps (Masuelli, 2013:16).

The use of carbon fibre reinforced polymers in the aviation and other high-technology industries has increased enormously in the last few decades and looks set for significant further expansion. This has been attributed to the specific stiffness and strength of these materials, the excellent corrosion resistance, outstanding damping properties and the low-density and high-fatigue strength. Sandvik Coromant (2010:4) explains that carbon fibre is commonly used to reduce the weight of the structural components on aircraft and thereby improving fuel economy, reducing emissions and

increasing carrying load. As a result of this CFRPs are now one of the most important structural materials in the aerospace industry (Tsigkourakos et al., 2012:573).

3.4.2 Advanced composites

Masuelli (2013:3) defines composites as engineered or naturally occurring materials made from two or more constituent materials with significantly different physical or chemical properties, which remain separate and distinct within the finished structure. The objective usually is to create a component which is strong and stiff with a low density. Most composites have strong, stiff fibres in a matrix which is weaker and less stiff.

The increased availability of these light, stiff and strong materials has made it possible to achieve a number of milestones in aerospace technology (Kumar) — a sector which relies heavily on maintaining high standards of safety and security. Driving forces taking advantage of composite material properties are cost, environmental and technology benefits. Various industries are now using composites at a greater extent, especially in the aerospace industry (Sandvik Coromant, 2010:5). Figure 3.1 shows what materials are used in the manufacturing of an aircraft.

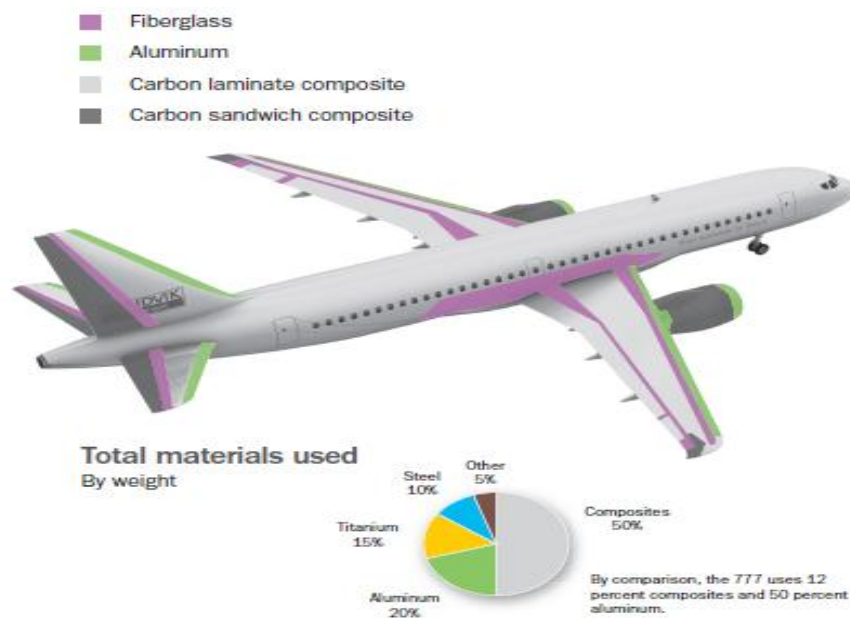


Figure 3.1 Materials used in the Boeing 787

Source: Sandvik Coroman (2010)

3.4.3 Digital manufacturing

Digital manufacturing is an important area of the assembly and production process of an aircraft. It relies on the computational modelling of the parts of the aircraft, to evaluate the best strategy to simulate it, showing the assembly process with its different parameters and specifications (Guerra et al., 2006:1). Manufacturing systems and processes are combined with computer hardware and software, simulation technology, and operating systems to reduce costs and increase company profitability.

Guerra et al. (2006:2) states that in addition, digital manufacturing reduces the cost of tooling, eliminates the need for multiple physical prototypes and reduces material waste. It provides assurance to manufacturers that they will be able to deliver high-quality products to the specific market in time and with the constraints of a budget.

The automotive and aviation industries have been early adopters of digital manufacturing technologies. Ford uses 3D printers for rapid prototyping of automobile parts. In 2012, GE Aviation purchased Morris Technologies, a company heavily invested in 3D printing and other manufacturing technologies, which produces components used in commercial jet engines. A more efficient jet engine is manufactured as a result of the way in which 3D printing reduces the amount and weight of the material in these engine parts (Hallex, 2013:2).

3.5 SUMMARY

In this chapter the major developments in the aviation industry, has which has enabled the industry to become increasingly competitive and emerging, have been discussed. As a result of the industry being dependent on technological innovations, developments in the manner in which components are manufactured are of major importance to all role players within the industry. The major contenders within a South African context were also identified and explained, and a brief description of the operations of each role player was given. An overview of Company A and the position of the company in the overall industry was also provided, as well as how the overall competitive environment of the industry may impact on the company. Chapter 4 will give an understanding of the external and internal competitive environment by analysing and interpreting research conducted by professional individuals.

CHAPTER 4

4. ASSESSING THE COMPETITIVE ENVIRONMENT

4.1 INTRODUCTION

In the previous chapter the major developments, both locally and internationally, in the aviation industry was discussed. The purpose of this chapter is to explain the external corporate environment by analysing recent research conducted by professionals.

Historically Boeing has been a global leader in manufacturing commercial airplanes. However, in 1999, for the first time in their competitive history Airbus had more orders than Boeing. Figure 4.1 gives an indication of the orders during 1995–2010 of both Boeing and Airbus. Ireland, Hoskisson and Hitt (2009:4) state that Airbus won the competitor battle between 2001 and 2005 because it had focused on the mid-sized market as well, using the A320 strategy which competes with the 737 and 757 aircraft of Boeing. Besides the lack of new models, the commercial aircraft business was sluggish; new orders significantly ebbed owing to the complication of the terrorist attacks of September 2001 in the USA, and the subsequent recession. It was a bleak time for Boeing relative to Airbus (Ireland et al., 2009:4).

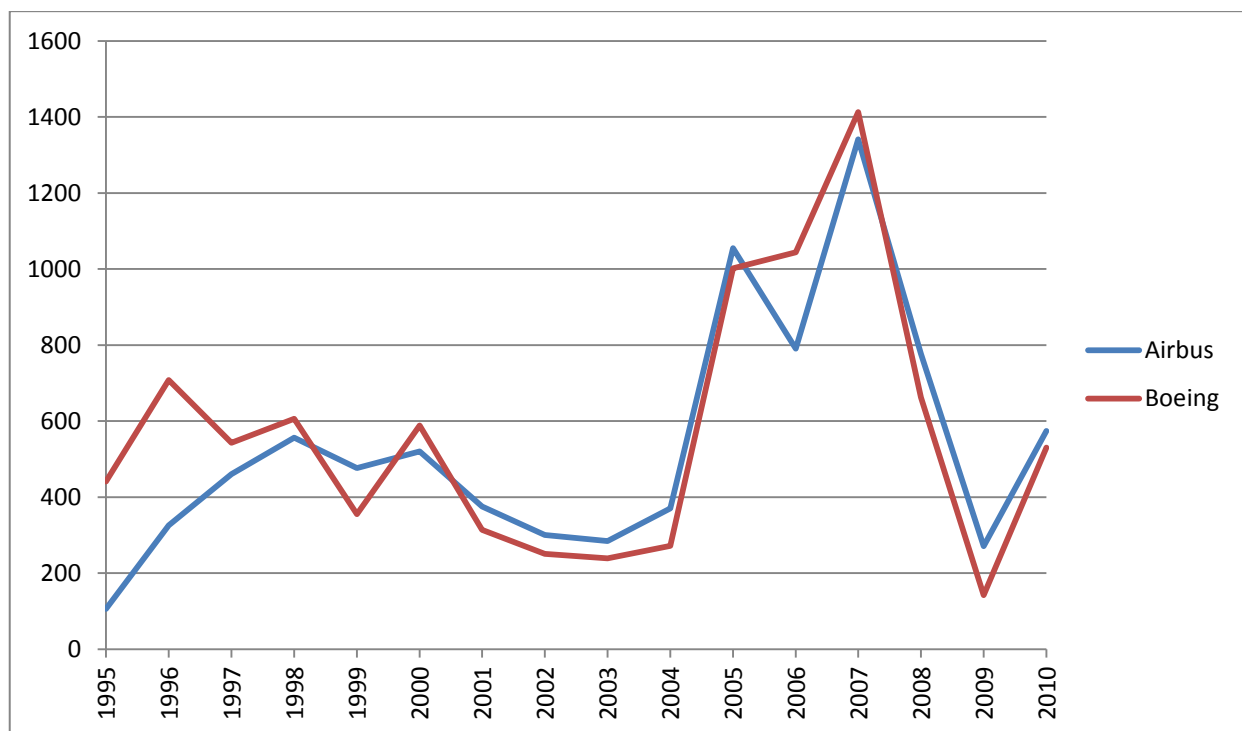


Figure 4.1 Orders per company — Airbus and Boeing

Source: Airbus (2014b); Boeing (2014d)

In 2006, however, Boeing regained its supremacy over Airbus with 1 044 versus 790 orders for commercial aircraft. The main turnaround in this battle for competitor orders has been most visible in the super jumbo category with Airbus' A380 versus Boeing's 787. More recently, the strategy of Boeing with regard to overall design with the 787 Dreamliner is winning the day, as far as the order battle goes. The company also has realized successes by implementing a different strategy with regard to the production processes. It has been able to speed up the process by creating an efficient global supply chain, which involves many potential customers around the world, including Japan, China and others (Ireland et al., 2009:4).

4.2 CONCEPT OF THE COMPETITIVE ENVIRONMENT

The point being illustrated by the above, the basic reason for this turn of events on the part of Boeing is attributable to the *strategic decisions* that was made during the period that it lost its competitive edge to Airbus. For the reason that both firms want to be highly competitive, both have analysed their similar competitive environments and in view of the facts made decisions they believed to be correct. To be successful, as is the objective with any company, management needs to 'do the right thing' through strategic thinking and gather relevant information from inside the company and from the external competitive environment. This in turn will result in strong competitive strategies.

According to Fahey (1999), detecting, anticipating and understanding the competitive environment is the basis for outmanoeuvring and outperforming its competitors (Fahey, 1999). Too often, companies neglect properly to be aware of their competitive environment, although adjusting their company to its competitive environment is one of the key tasks in strategic planning. Furthermore, the speed in which the market and technologies change is constantly increasing; thus continuous and systematic scanning becomes extremely important (Rajaniemi, 2007:478). Therefore, it would seem that strategic decisions often are made without proper information.

The competitive environment is defined by Mack (2013) as the dynamic system in which a business entity competes. The state of the system as a whole limits the flexibility of the business. McMillan (2013) defines the competitive environment as the immediate competitive context in which a company or enterprise operates. Miesing and Van Ness (2007:159) add that the competitive environment includes competitors, creditors, customers and clients, general interest groups, trade associations, suppliers, and trade unions.

According to Langfield-Smith, Thorne and Hilton (2006:16), strategic planning involves making corporate strategy decisions about the types of businesses and markets in which the company operates, and business (or competitive) strategy decisions about how the company is to compete within its particular markets.

In this remaining section of this chapter the aspects of both the PEST and SWOT analyses are examined in more detail, as both frameworks provide useful information during the strategic planning process.

4.3 PEST ANALYSIS

4.3.1 Introduction

Companies cannot directly control the segments and elements of its external environment. Accordingly, successful companies gather the information required to understand each segment and its implications for the selection and implementation of their most appropriate strategies. Therefore, companies around the world are challenged to understand the effect on their current and future strategies of the decline, when it occurs, of individual economies (Ireland et al., 2009:35–6).

For any company certain environmental influences will constitute powerful forces that significantly affect decision-making. Companies should examine their environment for opportunities and threats, to establish where they can gain a competitive advantage and where their resources might most usefully be concentrated (Louw & Venter, 2008:84). PEST is a framework that can be used to analyse the macro-environment in which an organisation operates, by identifying the Political, Economic, Social and Technological factors that make up the environment. Examples of the segments and elements related to the PEST analysis are given in Table 4.1.

Table 4.1PEST analysis: segments and elements

Segment	Examples of elements
Political	Taxation laws Labour training laws Deregulation philosophies
Economic	Inflation rates Interest rates Business savings rates Gross domestic product Trade deficits or surpluses
Socio-cultural	Women in the workforce Workforce diversity Concerns about the environment Changes in work and career preferences
Technological	Product innovations Applications of knowledge New communications technologies

Source: Ireland et al. (2009)

Management can use the PEST framework to identify factors affecting the company. All factors will not fit neatly into a group: they interact and take effect in complex ways. Sometimes the framework is extended to PESTEL, with Environmental and Legal factors being added. The environmental category highlights the importance of considering issues such as sustainability and corporate social responsibility in strategic decisions (BPP, 2010b: xxii) while the legal category defines the regulatory parameters within which companies must operate and which include fair-trade decisions, tax programmes, pollution, and pricing policies (Louw & Venter, 2008:97).

4.3.2 Political environment

The political environment is the arena in which companies and interest groups compete for attention, resources and a voice in overseeing the body of laws and regulations guiding interactions among nations (Ireland et al., 2009:42).

National government regulations and laws are a product of the political systems in which they originate, the socio-cultural backdrop which precedes those systems, and the historical circumstances that give rise to political company. Not only must

businesses be able to negotiate their way through a wide variety of regulations and laws, but they must also understand how those regulations and laws are administered in country-specific situations (Wilkinson, McAllister & Widmier, 2007:18).

According to Thompson and Martin (2010:86), economic decisions are influenced by politics and government policy. Government decisions can affect companies both directly and indirectly as they provide both opportunities and threats. Examples of these include:

- labour costs will be influenced by inflation and the power and involvement of trade unions;
- government spending can increase the money supply and make capital markets more buoyant;
- the interest rate will be dependent on the rate of inflation;
- stakeholders' expectations with regard to company performance, their willingness to provide more equity funding or their willingness to sell their shares will also be affected; and
- the availability of skills in the labour force is affected by training, which is influenced by government and other regional levels.

Therefore, in the context of this study, the political environment is taken as the South African regulatory environment, and then specifically pertaining to the aviation industry. Owing to the dynamic nature thereof, factors such as nationwide strikes in the mining sector, political insecurity, regulatory concerns, and public policy issues are putting unnecessary pressure on the stability of the South African regulatory environment.

4.3.3 Economic environment

According to Ireland et al. (2009:42), the economic environment refers to the nature and direction of the economy in which a company competes or may compete.

The economic conditions affect how easy or how difficult it is to be successful and profitable at any given time, because they affect both capital availability and cost, as well as demand for the products or services offered. The timing and relative success of particular strategies can be influenced by economic conditions. When either the economy as a whole or certain sectors of the economy are growing, demand may exist for a product or service which could not be in demand in more depressed circumstances. Similarly, the opportunity to exploit a particular strategy successfully

may depend on demand, which exists in growth conditions and does not exist in recession (Thompson & Martin; 2010:86). For this reason, companies study the economic environment to identify trends, changes and the possible effect on strategic decisions.

From an economic point of view, South Africa has enormous potential as an investment destination, offering a unique combination of highly developed first-world economic infrastructure with a vibrant emerging market economy. Factors such as sound economic policies, the fact that the South African Reserve Bank can maintain its independence from the government and the special trading relationships South Africa has with more than 200 countries, are all contributing to the stability of the South African economic environment.

4.3.4 Social culture environment

Ireland et al. (2009:43) state that the social culture environment is concerned with attitudes and cultural values of a society. Louw and Venter (2008: 84) indicate that the social cultural factors that affect a company involve the beliefs, opinions and lifestyles of persons in the external environment of the company, as developed from cultural, ecological, demographic and educational conditions. As social attitudes change, so does the demand for different types of products and services.

Companies should be aware of demographic changes. The structure of the population by ages, regions, numbers working, etc., can have an important bearing on demand as a whole, and on demand for particular products and services. Because attitudes and values form the cornerstone of a society, they often drive demographic, economic, political and technological conditions and changes (Ireland et al., 2009:43).

Recognizing that decision-makers need environmental as well as socio-economic data, the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, urged nations to issue reports on the environment that would complement traditional fiscal policy statements, budgets and economic development plans (South Africa, 2006:18). As a result, in 1999, the Department of Environmental Affairs and Tourism released the first *National State of the Environment Report*, written by Jay Walmsley, which is a report that provides information on the current state of the environment, and gives an indication of which factors are causing environmental change and what is being done about it. According to the Department of Environmental

Affairs (South Africa, 1999), the aim of State of the environment reporting is to provide understanding of environmental and sustainable development issues, to elucidate environmental trends and to inform decision-making, and consists of three fundamental characteristics, namely:

- interpretation, assessment and integration of high-quality data to generate meaningful information;
- development of spatial and temporal trend information; and
- identification of the linkage between biophysical and socio-economic considerations within a sustainable development context.

According to the *National State of the Environment Report* (South Africa, 1999), there are social changes within South Africa that are putting pressure on the South African social culture environment. These are:

- population and demographic change: the population has grown substantially over the past decade. Improvements in the transport infrastructure have increased the mobility of the population;
- social and economic development: the increase in poverty and the changing of lifestyles of the population have put a burden on the attempts to achieve sustainable development; and
- changing values and beliefs of the population and the struggle to distinguish between what is right and what is wrong.

4.3.5 Technological environment

The technological environment includes institutions and activities involved in creating new knowledge and translating that knowledge into net outputs, products, processes, and materials (Ireland et al., 2009:44).

Technology is part of a company and the industry forms part of the business model, as it is used for the creation of competitive advantage. New technology could provide a useful input in both manufacturing and service companies, but in turn the acquisition of such new technologies will require funding and possible employee training before it can be used (Thompson & Martin, 2010:87).

Given the rapid pace of technological change, it is vital for companies thoroughly to study the technological environment. Ireland et al. (2009:44) highlights the fact that

companies continuously should scan the external environment to identify potential substitutes for technologies that are in current use, as well as to identify newly emerging technologies from which their firm could derive competitive advantage. According to Rajaniemi (2007:467–8), leading change in technology will be a fusion of information technologies and telecommunications, resulting in creating new industries, restructuring existing ones and changing the way companies compete. Similarly, other new technologies can change our competitive environment by changing one or several competitive forces.

Technological forecasting can help to protect and improve the profitability of companies in growing industries. It alerts strategic managers to both impending challenges and promising opportunities. According to Louw and Venter (2008:89), certain technologies developed in South Africa are ideal for Africa, such as the mini-ATM.

4.4 SWOT ANALYSIS

4.4.1 Introduction

If one wished to claim that a company was being managed effectively from a strategic point of view, one firstly would have to show that its managers fully appreciated the dynamics, opportunities and threats present in their competitive environment, and that they were paying due regard to wider societal issues. Secondly, that the resources of the company were being managed strategically, taking into account its strengths and weaknesses, and that the company was taking advantage of its opportunities (Thompson & Martin, 2010:29). The factors behind these issues are listed ubiquitously in the form of a SWOT analysis.

Ireland et al. (2009:90) note that the most effective companies recognize that strategic competitiveness and above-average returns are only possible when core competencies, analysed by means of a study of the internal company, are matched with opportunities that are determined by studying the external environment of the firm. Companies should try to convert weaknesses into strengths to take advantage of an opportunity, should it arise in the future. They should also try to limit the exposure to threats by means of remedying weaknesses, which can in turn lead to the ability to grasp opportunities.

A SWOT analysis is defined by Thompson, Strickland and Gamble (2010:106) as a simple but powerful tool for assessing resource capabilities and deficiencies of a company, its market opportunities, and the external threats to its future well-being.

BPP(2010a: xxiii) explains that a SWOT analysis is a quantitative and a qualitative review of internal strengths and weaknesses within the company, and its relationship with external threats and opportunities that exist in the business market in which the company operates.

Chermack (2011:108) argues that a SWOT analysis is useful as long as it is not the sole means of internal environmental analysis. SWOT analysis contributes useful information and can be used in two distinct ways:

- as a tool to structure data once collected; and
- as a tool to provoke further insights and areas in which to conduct further research.

Figure 4.2 indicates how a SWOT analysis functions. Weaknesses and threats, as identified within a company, should be analysed and should be assessed to be translated into strengths and opportunities that can assist the company in reaching and maintaining a competitive advantage over competitors.

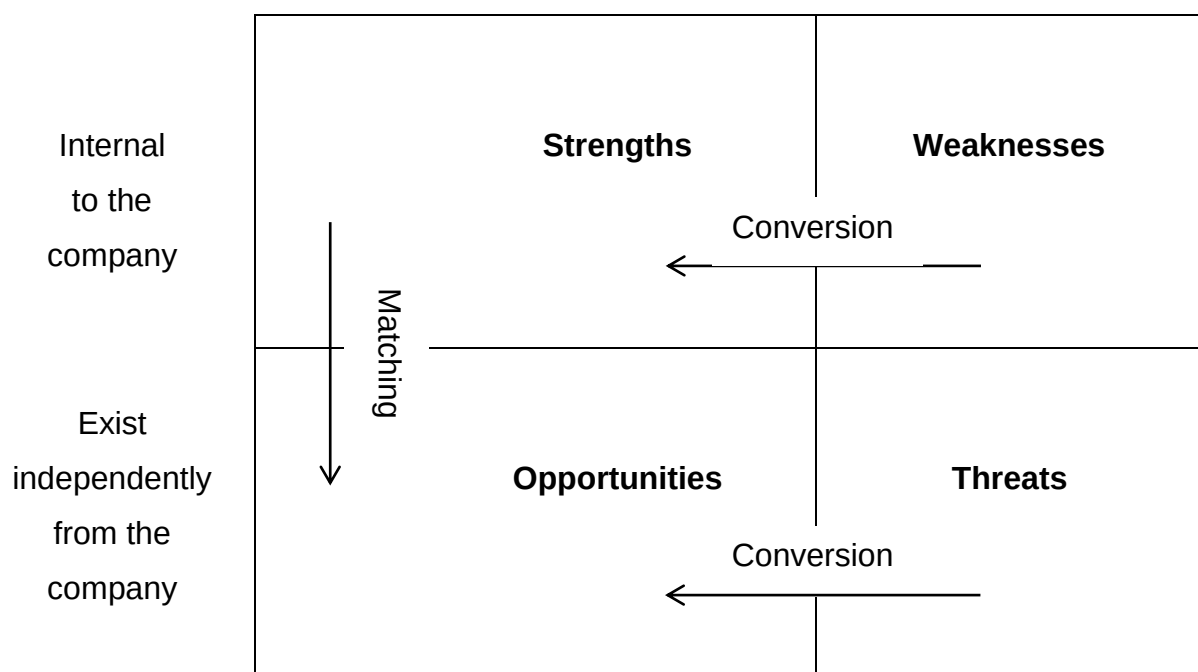


Figure 4.2 SWOT analysis

Source: BPP (2010a)

The key characteristics of the components of a SWOT analysis are briefly considered below.

4.4.2 Strengths

A 'strength' is something a company does well or an attribute that enhances its competitiveness in the market-place (Thompson et al., 2010:106). Hazelbaker (2006:53) describes a 'strength' as a resource advantage relative to competitors and the needs of the markets that a firm serves or expects to serve. According to Thompson et al. (2010:106) strengths can take several forms:

- a skill, an area of specialized expertise in keeping operating costs low, proven capabilities in creating and introducing innovative products, and expertise in providing consistently good customer service;
- valuable human assets and intellectual capital — an experienced and capable work-force, talented employees in key areas and cutting-edge technological knowledge;
- valuable intangible assets – a powerful or well-known brand name or strong buyer loyalty;
- an achievement or attribute that puts the company in a position of market advantage — low overall costs relative to competitors, market-share leadership, a wider product line than rivals or award-winning customer service; and
- competitively valuable alliances or co-operative ventures — fruitful partnerships with suppliers that reduce costs and/or enhance product quality and performance.

Within South Africa, and in particular in the aviation industry, strong, independent institutions exist, including the judiciary and security services that provide sufficient services to the people of the country. Another strength in South Africa would be the prudent fiscal policy that government have pursued since 1994, allowing it to increase public expenditure during the economic downturn.

4.4.3 Weaknesses

Thompson et al. (2010:111) define a weakness as something that a company lacks or does inadequately or a condition that places it at a disadvantage in the market-place. Hazelbaker (2006:53) refers to a weakness as a limitation or a deficiency in one or more resources or competencies relative to competitors, which impedes the effective performance of a firm. According to Thompson et al. (2010:111) a company weakness can relate to:

- inferior or unproven skills, expertise, or intellectual capital in competitively important areas of the business;
- deficiencies in competitively important physical, organizational, or intangible assets; and
- missing or competitively inferior capabilities in key areas.

Within South Africa the construction industry is the third largest employer in the country and provides work to more than 1,3 million people. However, the industry has a high liquidation rate, which is caused by the instability of small firms, demand volatility and high levels of competition and is ranked third worst in South Africa in terms of safety. These factors will make it potentially difficult for the aviation sector because they are dependent on the construction industry to expand their current infrastructure.

4.4.4 Opportunities

An opportunity is a condition in the general environment that, if exploited, can help a company to achieve its strategic competitiveness (Ireland et al., 2009:37). Hazelbaker (2006:54) defines an opportunity as a major favourable situation in the environment of a firm. Depending on the prevailing circumstances, the opportunities of a company can be plentiful or scarce, fleeting or lasting, and can range from wildly attractive to marginally interesting to unsuitable (Thompson et al., 2010:111).

Peter Drucker first wrote in the 1950s about the need for disciplined processes to convert opportunities into real values. He identified seven sources of opportunities that account for the great majority of innovation opportunities; an effective business strategy embraces external realities and opportunities and provides the context to help ensure that every decision, priority and allocation of resources is geared to value creation (see Table 4.2). Innovation strategy is the programme of change that will create the company of the future (Edersheim, 2007:103–5).

Table 4.2 Where to look for opportunities

The unexpected	Unexpected successes Unexpected failures
Industry and market disparities over time or geography	Customers and expectations Industry economics Technologies and operations
Incongruities	Internal misperceptions Conflicting internal realities Gaps in customer expectation
Process vulnerabilities	Weak link in process Technological vulnerabilities
Demographic changes	Aging Changes in culture and labour force Globalization
Changes in perception and priorities that alter buying habits	Customer perception Customer vulnerability and receptivity
New knowledge	Expensive innovation with long lead times and risks Application of knowledge and information in new areas

Source: Edersheim (2007)

Opportunities within the economic sector of South Africa involve increasing the trend rate of growth that is essential to long-term plans to alleviate poverty. The government is in the process of addressing this issue by offering skills training to individuals that have the need for this.

4.4.5 Threats

Ireland et al. (2009:37) define a threat as a condition in the general environment that may hinder the efforts of a company to achieve strategic competitiveness. According to Hazelbaker (2006:54), a threat is also a major unfavourable situation in the environment of a firm. As challenges arise, a plan should be developed to address those challenges in a way that the company not only survives them but also grows and prospers (Hazelbaker, 2006:54).

Identifying threats can therefore help managers plan and better manage problems that arise. Threats can be broadly based and difficult to identify but can be thought of in

terms of 'what if' in strategy planning sessions. Threats can be treated as opportunities for change and growth.

With the dominance of state-owned infrastructure operators in South Africa, this places a burden on private companies wanting to be successful. As a result companies wanting to expand are forced to do business with state-owned operators, which to an extent can result in a number of obstacles that will have to be overcome if the expanding companies want to be successful.

4.5 SUMMARY

In this chapter the various aspects that form the PEST and SWOT analyses are analysed. The analysis of the external and internal business environment is fundamental in determining risk and profitability analysis. Organizations do not exist in a vacuum and the environment in which they operate has a significant impact on the production, competitiveness and profits thereof. For example, if government formulates new regulations of which a company is unaware, it might be penalized, which could in turn result in loss of business and profits.

A PEST analysis provides a valuable framework for analysing especially the relevant external environmental forces. A SWOT analysis is a second valuable framework for evaluating the position of a company in relation to its environment, both from internal and external perspectives. It is, however, important that the SWOT analysis is used to create ideas and is not just seen as a static statement of position.

It is important for management to conduct an extensive analysis of the competitive environment, as the information gained during this process will form the basis of the strategic decision-making. Chapter 5 will explain and evaluate the research method chosen in Chapter 1 and will constitute the empirical study of this research project.

CHAPTER 5

5. ASSESSMENT IN PRACTICE: AN EMPIRICAL STUDY

5.1 INTRODUCTION

The overall objective of the research was to analyse Company A's employees' understanding of their internal and external competitive environments, and also to determine whether there are currently any efforts being taken by Company A to enhance such an understanding. This chapter will present and summarise the results of the survey questionnaires and interviews that was conducted.

5.2 EMPIRICAL RESULTS

As mentioned earlier, 70 subjects were identified to partake in the research questionnaire. Twenty six responses were received, and thus a 37% response rate was achieved.

5.2.1 Results of the survey questionnaire

5.2.1.1 Background information of research subjects

Part A of the survey questionnaire (Appendix 1) aims to gather individual information about the staff of Company A. Appendix 3.1 gives an indication of the background information of the research subjects together with the frequency and percentage of answers given. A total of 26 responses were received. Twelve (46,15%) respondents were male and fourteen (53,85%) were female, as indicated by Figure 5.1.

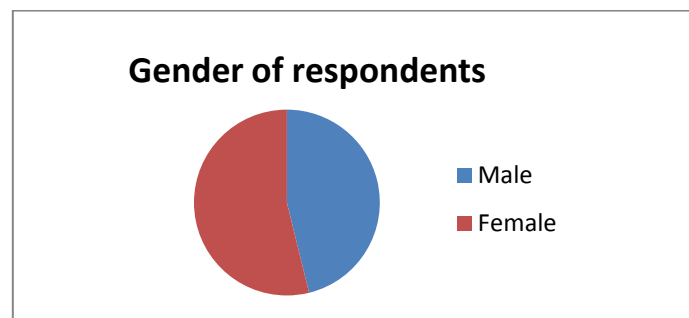


Figure 5.1 Gender of respondents

Five (19,23%) respondents came from the Aerospace department, four (15,38%) respondents came from the Program Management department, two (7,69%) respondents came from the Manufacturing Engineering department while four groups of

three (46,15%) respondents each came from the Supply Chain, ITC, Holdings and other departments. Three groups of one (11,55%) respondent each came from the departments of Product Development, Inventory Management and Fabrications. The results are shown in Figure 5.2.

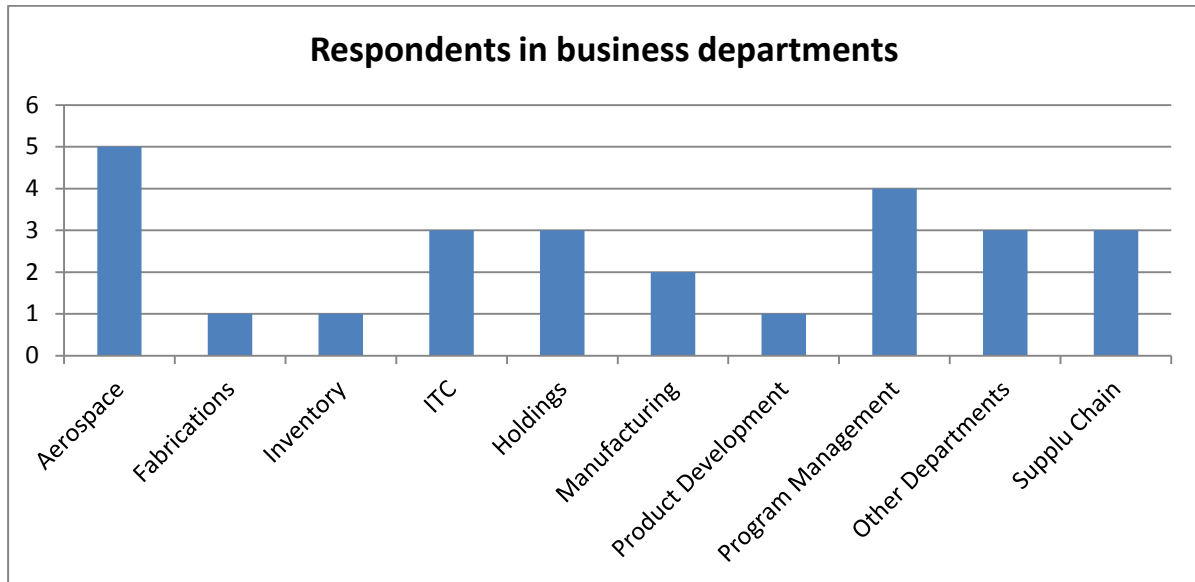


Figure 5.2 Departments the respondents are employed in

Two groups of six (46,16%) respondents obtained a high school qualification and a college diploma. Seven (26,92%) respondents obtained a bachelor's degree, while two groups of three (23,07%) respondents obtained an honours degree and another relevant qualification. One (3,85%) respondent obtained a Master's degree. Three (11,54%) respondents have less than one year experience in the aviation industry, while five (19,23%) respondents had one to five years' experience, seven (26,92%) respondents had five to ten years' experience and eleven (42,31%) respondents had ten years or more experience in the industry. These results are shown in Figures 5.3 and 5.4 respectively.

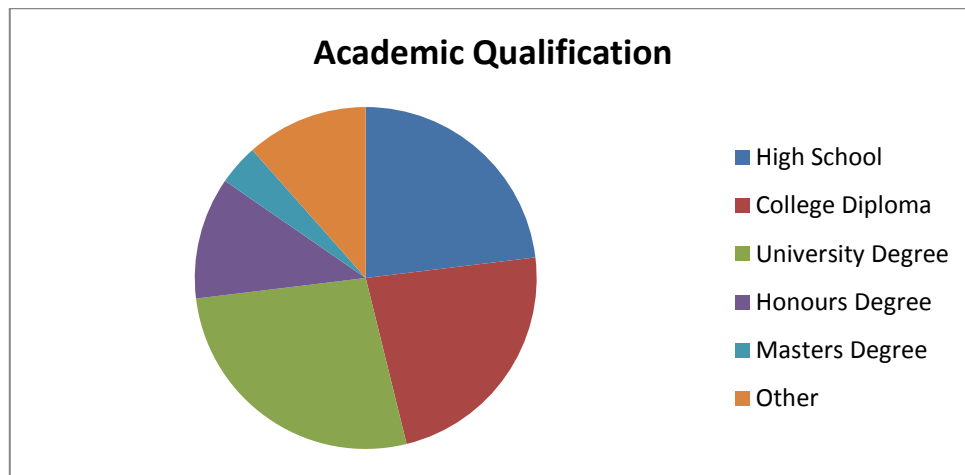


Figure 5.3 Academic qualification

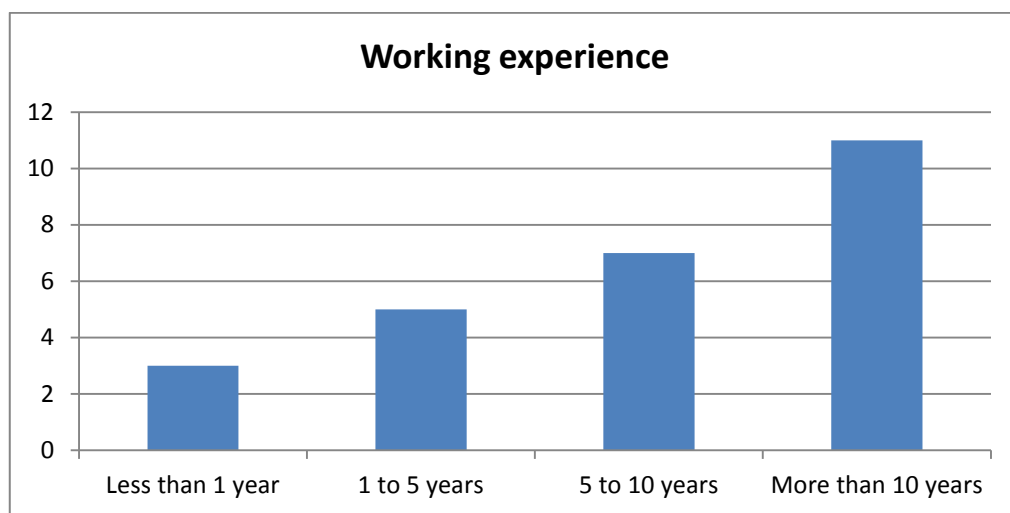


Figure 5.4 Working experience

The internal and external competitive environments are important to the success and operations of Company A. The respondents were asked to comment on these environments in Part B of the survey questionnaire. The detail results are shown in Appendix 3.1 to Appendix 3.10 and include the frequency and percentage of answers given. With regard to competitive analysis done by the company, Appendix 3.2 indicates that seven (26,92%) respondents were aware of such activities, while seven (26,92%) respondents answered that no such activities existed. A further eleven (46,16%) respondents indicated that they were unaware of such activities. Refer to Figure 5.5 for the results.

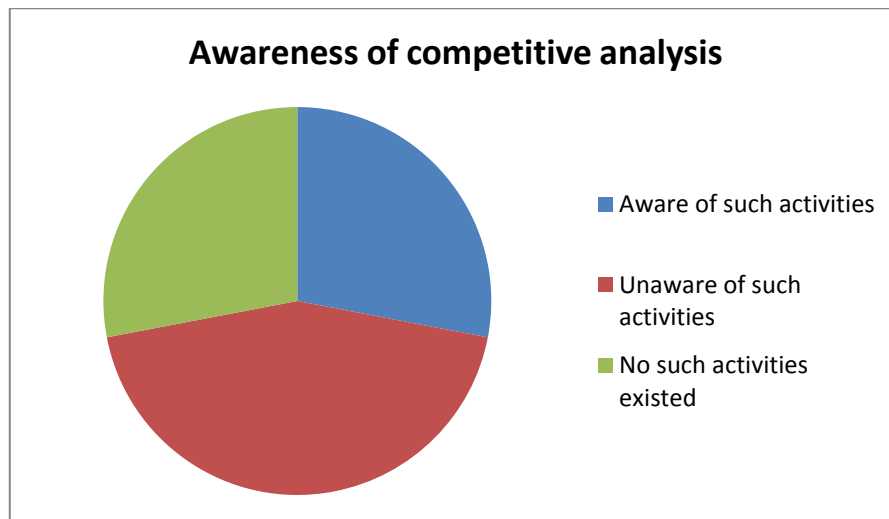


Figure 5.5 Awareness of competitive analysis

5.2.1.2 PEST Analysis

Political environment

Three questions about the political environment were asked and the respondents had to answer them, the answers based on their knowledge. Figure 5.6 presents a summary graph on the data collected on items relating to possible obstacles that Company A might face in the political environment. The detailed results of all the questions can be found in Appendix 3.3.

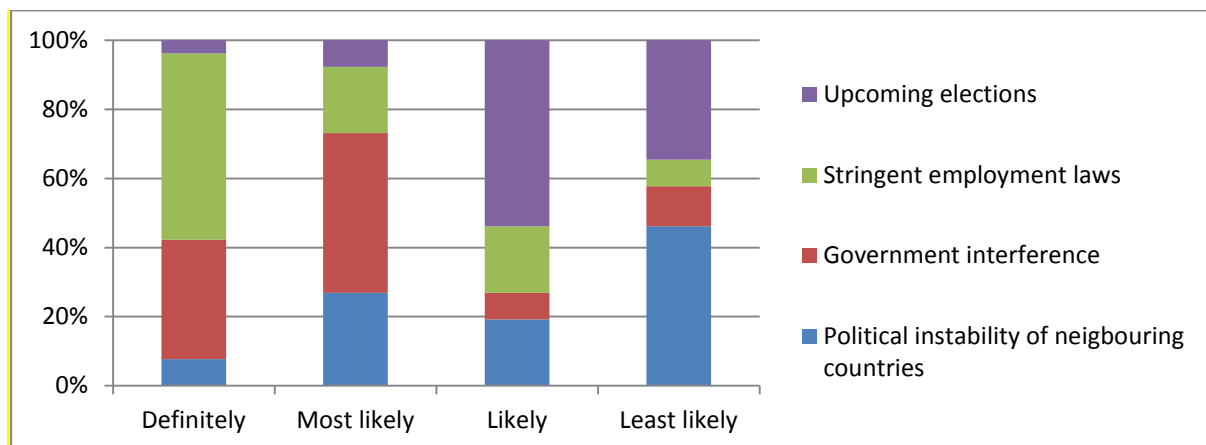


Figure 5.6 Political environment

Fourteen (53,85%) respondents indicated that more stringent employment laws would most definitely be the biggest obstacle in the political environment, while twelve (46,16%) respondents indicated that government interference would most likely be an obstacle. Fourteen (53,85%) respondents indicated that the upcoming elections in the country would likely be an obstacle, with twelve (46,16%) respondents' indication that

the political instability of neighbouring countries would be the least likely obstacle in the political environment.

Additionally, thirteen (50%) respondents indicated that the political environment will have a positive impact on Company A, while thirteen (50%) respondents indicated that the impact will be negative (Figure 5.7). Seven (26,62%) respondents are of the opinion that government regulation will have a direct impact on their work function, while nineteen (73,08%) respondents indicated that government regulation will not have a direct impact on their work function, as shown in Figure 5.8.

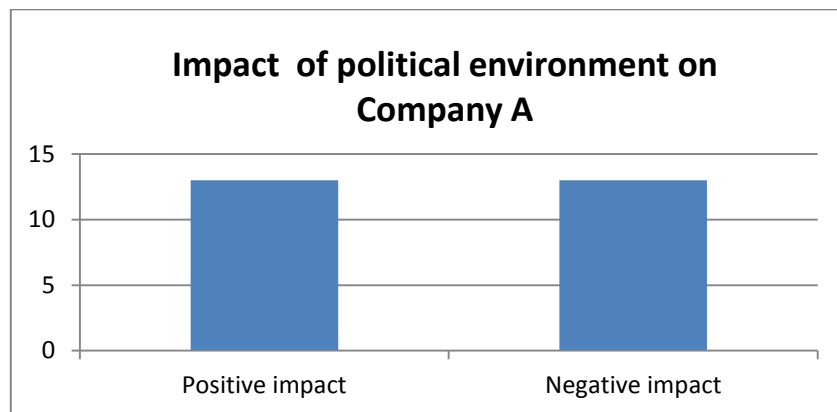


Figure 5.7 Impact of the political environment on Company A

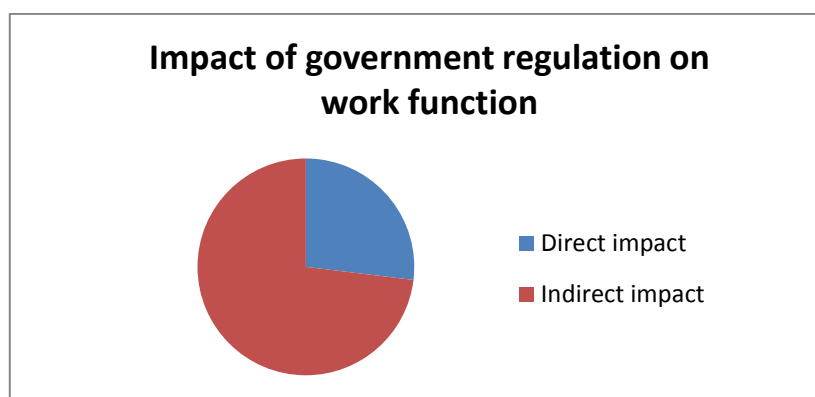


Figure 5.8 Impact of government regulation on work function

Economic environment

Regarding the economic environment and specifically the impact on the South African economy, the following was found. Appendix 3.4 represents the detailed data collected and Figure 5.9 gives a graphic indication of the results achieved.

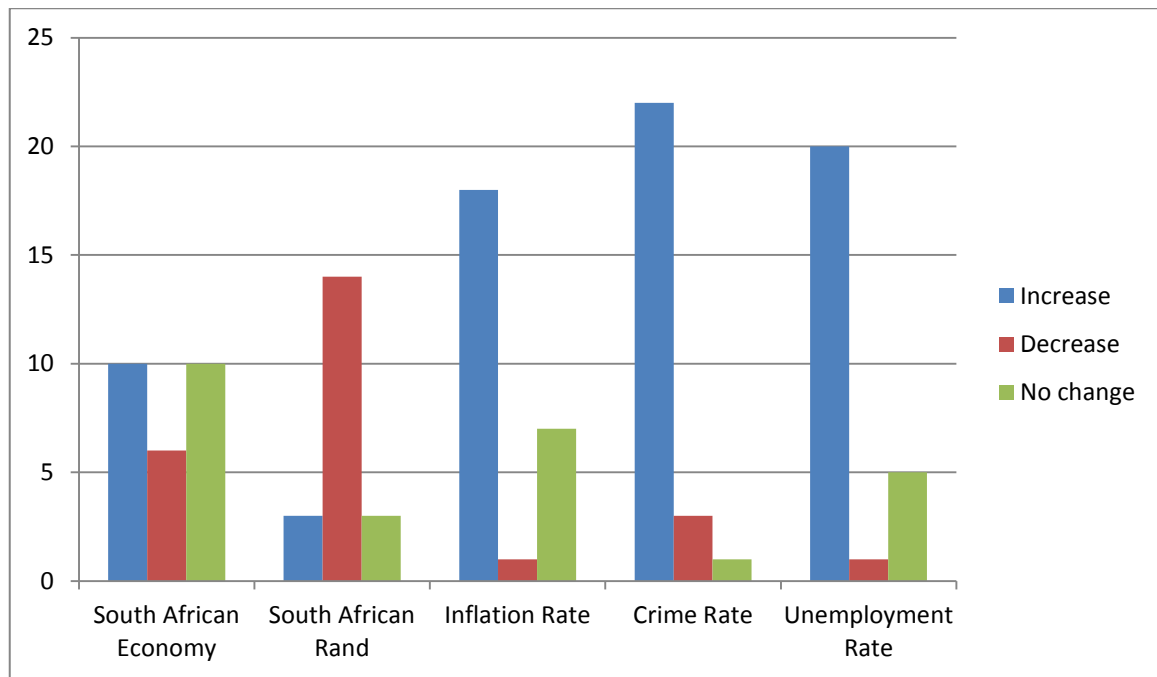


Figure 5.9 Economic environment and the South African economy

- The respondents were asked about their expectancy of the South African economy over the next three years. Ten (38,46%) respondents indicated that they expected positive growth in the economy, while six (23,08%) respondents indicated that they expected negative growth. Ten (38,46%) respondents indicated that they do not expect a change in the South African economy.
- The respondents were asked to predict what the rand will do over the next three years. Three (11,54%) respondents indicated that the rand will increase, while fourteen (53,85%) respondents indicated that the rand will decrease and three (11,54%) respondents predict the rand to stay consistent. Six (23,08%) respondents indicated that it is too difficult to predict the rand over the next three years.
- The respondents were asked to predict what the inflation rate in South Africa would do in the next three years compared to the current inflation rate of approximately 6%. Eighteen (69,23%) respondents indicated that the inflation rate will increase, while one (3,85%) respondent indicated that the inflation rate will decrease. Seven (26,92%) respondents are of the opinion that the inflation rate will remain consistent at the current levels of approximately 6%.
- The respondents were asked to predict what impact crime will have on the economy of South Africa. Twenty two (84,62%) respondents indicated that crime will have a high impact, while three (11,54%) respondents indicated the

impact will be low. One (3,85%) respondent indicated that crime will have no impact on the economy of South Africa.

- The respondents were asked to predict what the unemployment rate in South Africa would do over the next three years. Twenty (76,92%) respondents indicated that the unemployment rate will increase, while one (3,85%) respondent indicated that the unemployment rate will decrease. Five (19,23%) respondents indicated that the unemployment rate will remain consistent at current levels.

Regarding the economic environment of Company A, the following was found. Appendix 3.4 represents the detailed data collected and Figure 5.10 gives a graphic indication of the results achieved.

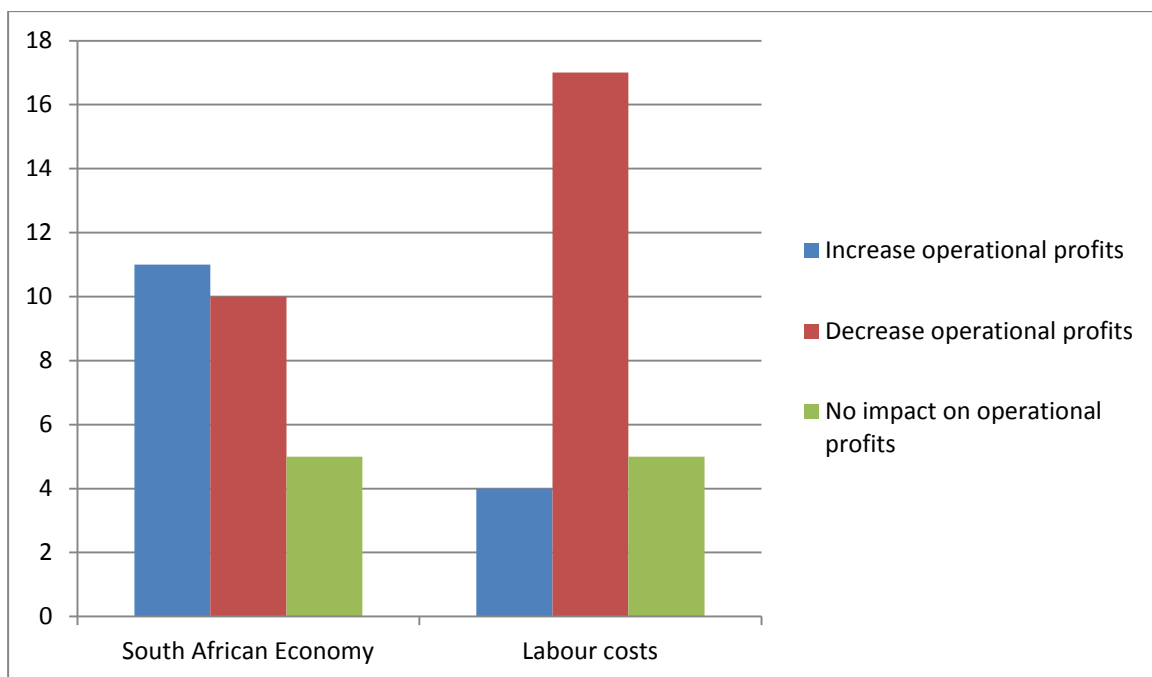


Figure 5.10 Economic environment and operational profits of Company A

- The respondents were asked to predict the influence that the South African economy will have on the operational profits of Company A. Eleven (42,31%) respondents indicated that the operational profits of Company A will increase, while ten (38,46%) respondents indicated that the operational profits will decrease. Five (19,23%) respondents are of the opinion that the South African economy will have no impact on the operational profits of Company A.
- The respondents were asked to predict what impact the increase in labour costs will have on the operational profits of Company A. Four (15,38%) respondents

indicated that operational profits will be increased, while seventeen (65,38%) indicated that an increase in labour costs will lead to decreased operational profits for Company A. Five (19,23%) respondents indicated that there will be no change in the operational profits of Company A.

Social environment

Three questions about the social environment were asked and the respondents had to answer them, the answers based on their knowledge. Figure 5.11 presents a summary graph on the data collected on items relating to the social environment. The detailed results of all the questions can be found in Appendix 3.5.

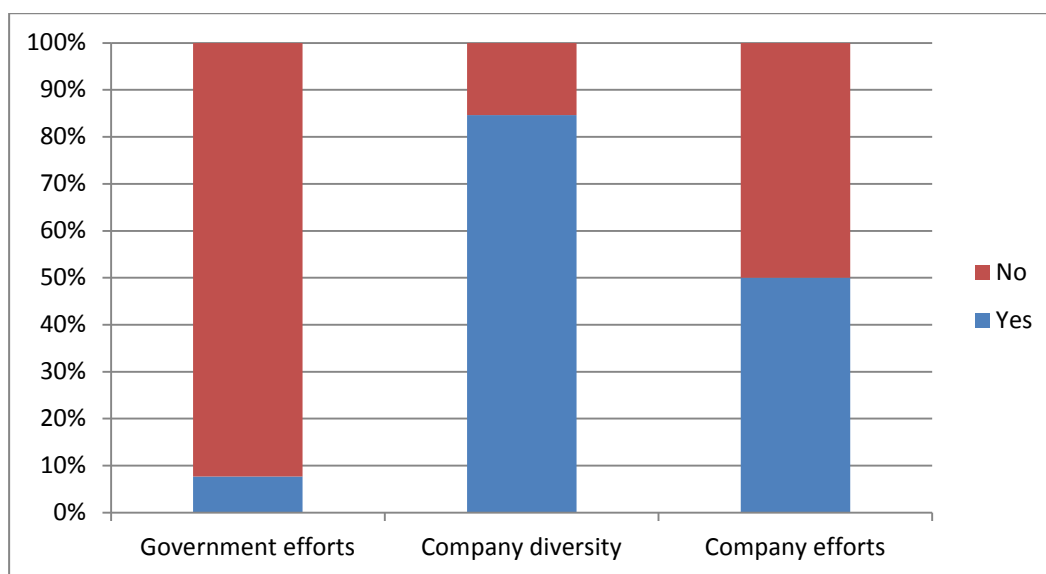


Figure 5.11 Social environment

Respondents were asked whether they think that government is doing enough to improve the social environment within South Africa. Two (7,69%) respondents indicated that they are of the opinion that efforts are made by the government, while twenty four (92,31%) respondent indicated that they are not aware that such efforts existed.

Respondents were asked if Company A's staff is very diverse. Twenty two (84,62%) respondents indicated that Company A's staff is very diverse, with four (15,38%) respondents indicating that the staff of Company A is not very diverse. Respondents were further asked whether Company A is doing enough to improve the social culture within the company. Thirteen (50%) respondents indicated that the company is making an effort to improve the social culture within Company A, with thirteen (50%) respondents indicating that they are not aware of such efforts.

Technology environment

Questions about the technology environment were asked and the respondents had to answer them, the answers based on their knowledge. Figure 5.12 presents a summary graph on the data collected on items relating to the technology environment. The detailed results of all the questions can be found in Appendix 3.6.

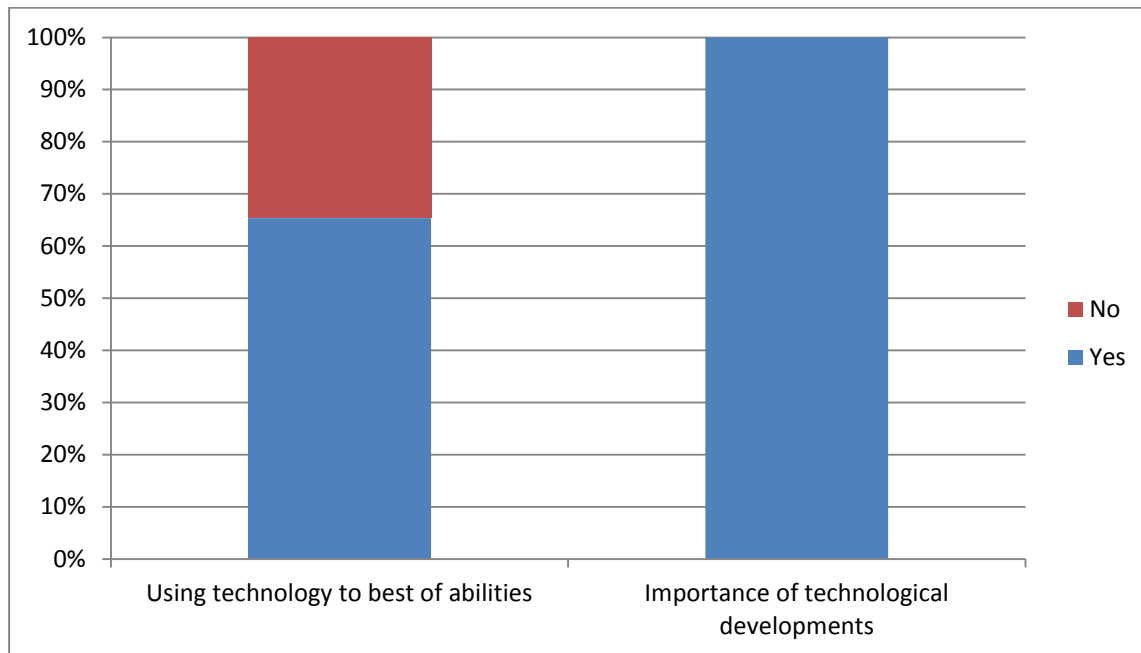


Figure 5.12 Technology environment

Respondents were asked if Company A was using the available technology to the best of its abilities. Seventeen (65,38%) respondents indicated that Company A was making full use of the available technology, with nine (34,62%) respondents indicating that Company A could use the available technology in a more productive manner. Additionally, respondents were asked whether technological developments were of great importance to the operations of Company A. All twenty six respondents (100%) indicated that technological developments are critical to the operations of Company A.

Further, respondents were asked whether Company A was making use of relevant technology to improve their operations. Figure 5.13 represents a summary of the data collected on the current use of technology within Company A. The detailed information can be found in Appendix 3.6.

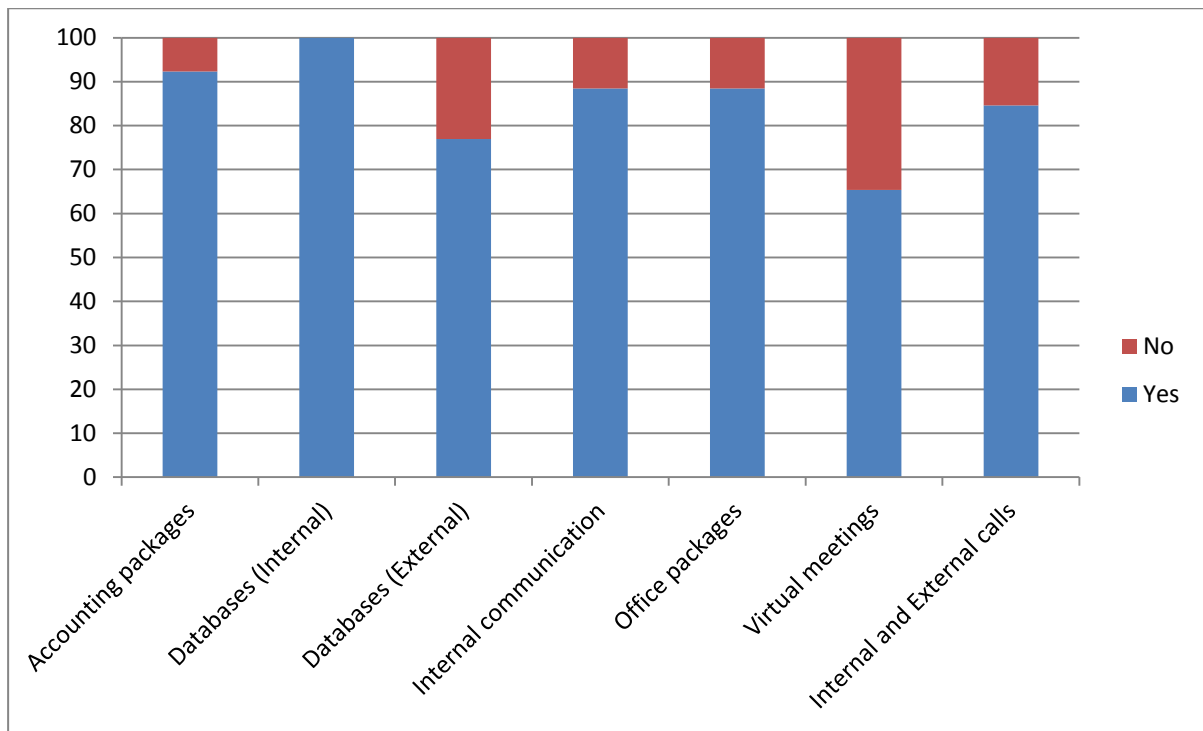


Figure 5.13 Using available technology

Twenty three (88,46%) respondents indicated that Company A was making use of internal communication, seventeen (65,38%) respondents indicated that Company A uses virtual meetings, twenty three (88,46%) respondents states that Company A is making use of office packages, twenty two (84,62%) respondents that Company A uses internal and external calls, twenty six (100%) respondents indicated that the company is using internal databases with twenty (76,92%) respondents indicating that the company uses external databases. Twenty four (92,31%) respondents also indicated that Company A is currently making use of accounting and auditing packages.

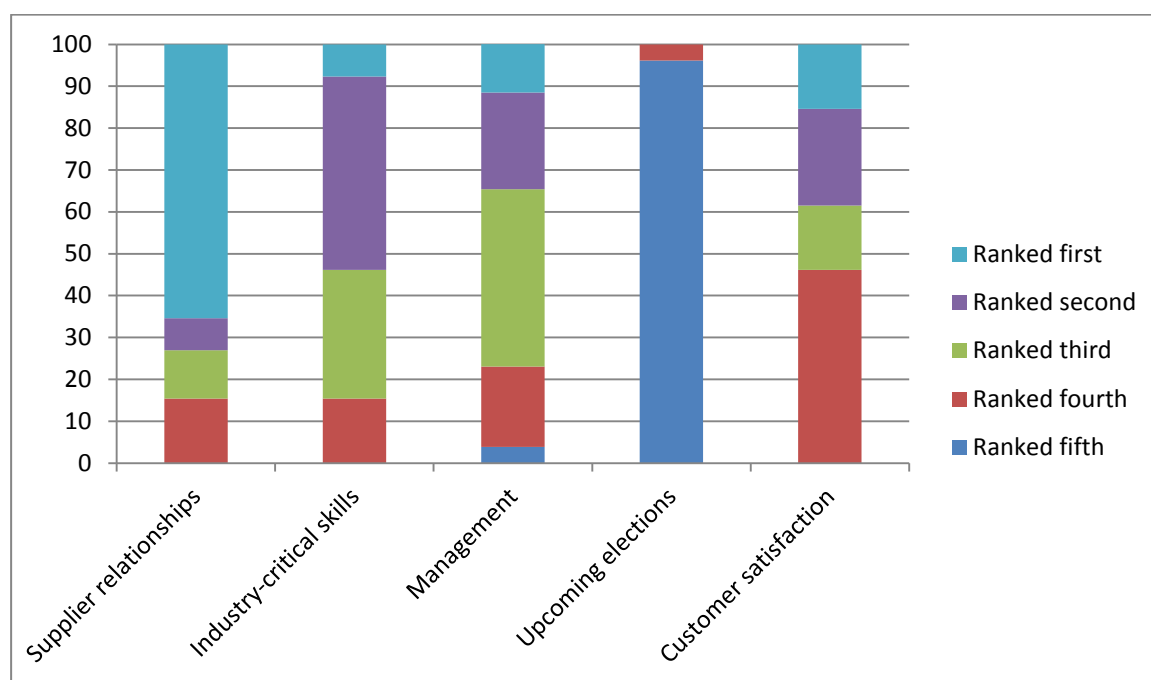
5.2.1.3 SWOT Analysis

Strengths

Respondents were asked to rank five possible strengths that Company A might have. Table 5.1 and Figure 5.14 present a summary of the data collected on items relating to the strengths of Company A. The detailed information can be found in Appendix 3.7.

Table 5.1 Strengths of Company A

Criteria	Ranked first	Ranked second	Ranked third	Ranked fourth	Ranked fifth
	%	%	%	%	%
Relationships with big suppliers	65,38	7,69	11,54	15,38	–
Industry-critical skills	7,69	46,15	30,77	15,38	–
Management and its management style	11,54	23,08	42,31	19,23	3,85
Upcoming elections in the country	–	–	–	3,85	96,15
Customer satisfaction	15,38	23,08	15,38	46,15	–

**Figure 5.14** Strengths of Company A

Seventeen (65,38%) respondents ranked the relationship with big suppliers as the main strength of Company A. Four (15,38%) respondents ranked customer satisfaction as a possible main strength, with three (11,54%) respondents believing that management and their management style is the biggest strength of Company A. Two (7,69%) respondents indicated that they are of the opinion that industry-critical skills are the biggest strength of Company A.

Weaknesses

Respondents were asked to rank five possible weaknesses that Company A might have. Table 5.2 and Figure 5.15 present a summary of the data collected on items relating to the weaknesses of Company A. Percentages highlighted in grey refer to the most selected item according to the ranking. The detailed information can be found in Appendix 3.8.

Table 5.2 Weaknesses of Company A

Criteria	Ranked first	Ranked second	Ranked third	Ranked fourth	Ranked fifth
	%	%	%	%	%
Meeting customer budgets	46,15	19,23	7,69	7,69	19,23
Shortages in specialised workforce	26,92	50	11,54	7,69	3,85
Qualifications of workforce	15,38	19,23	42,31	15,38	7,69
Providing training for staff	7,69	7,69	26,92	42,31	15,38
Maintaining relationships with suppliers	3,85	3,85	11,54	26,92	53,85

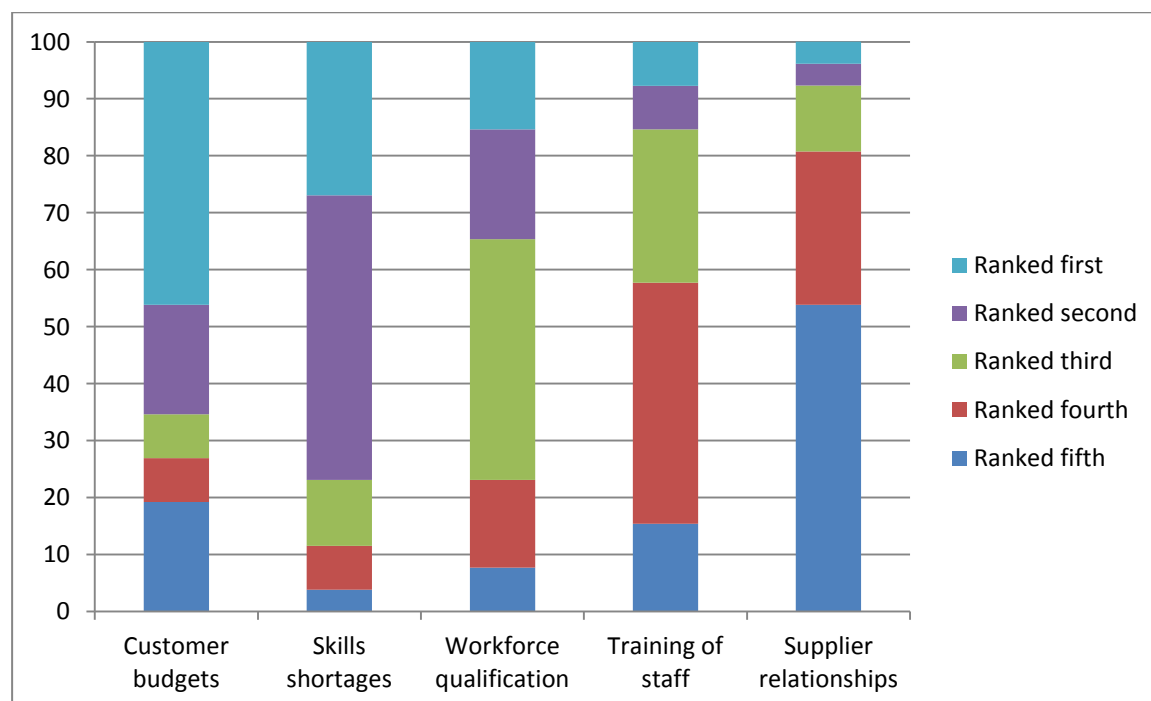


Figure 5.15 Weaknesses of Company A

Twelve (46,15%) respondents ranked 'meeting customer budgets' as the main weakness of Company A, while seven (26,92%) respondents ranked shortages in specialised workforce as the main weakness. Four respondents regard the qualifications of the workforce as a possible weakness to Company A, while two respondents are of the opinion that not providing training for staff is a possible weakness. One respondent ranked 'maintaining relationships with suppliers' as the last possible weakness.

Opportunities

Respondents were asked to rank five possible opportunities that Company A might have. Table 5.3 and Figure 5.16 present a summary of the data collected on items relating to the opportunities of Company A. Percentages highlighted in grey refer to the most selected item according to the ranking. The detailed information can be found in Appendix 3.9.

Table 5.3 Opportunities of Company A

Criteria	Ranked first	Ranked second	Ranked third	Ranked fourth	Ranked fifth
	%	%	%	%	%
New business via referrals from current clients	34,62	23,07	23,07	7,69	11,54
Increase in company awareness both nationally and internationally	30,77	34,62	15,38	15,38	3,85
New market niches	11,54	15,38	19,23	38,46	15,38
Increase in government spending on aviation infrastructure	19,23	11,54	26,92	15,38	26,92
Merging with company in same industry	3,85	15,38	15,38	23,08	42,31

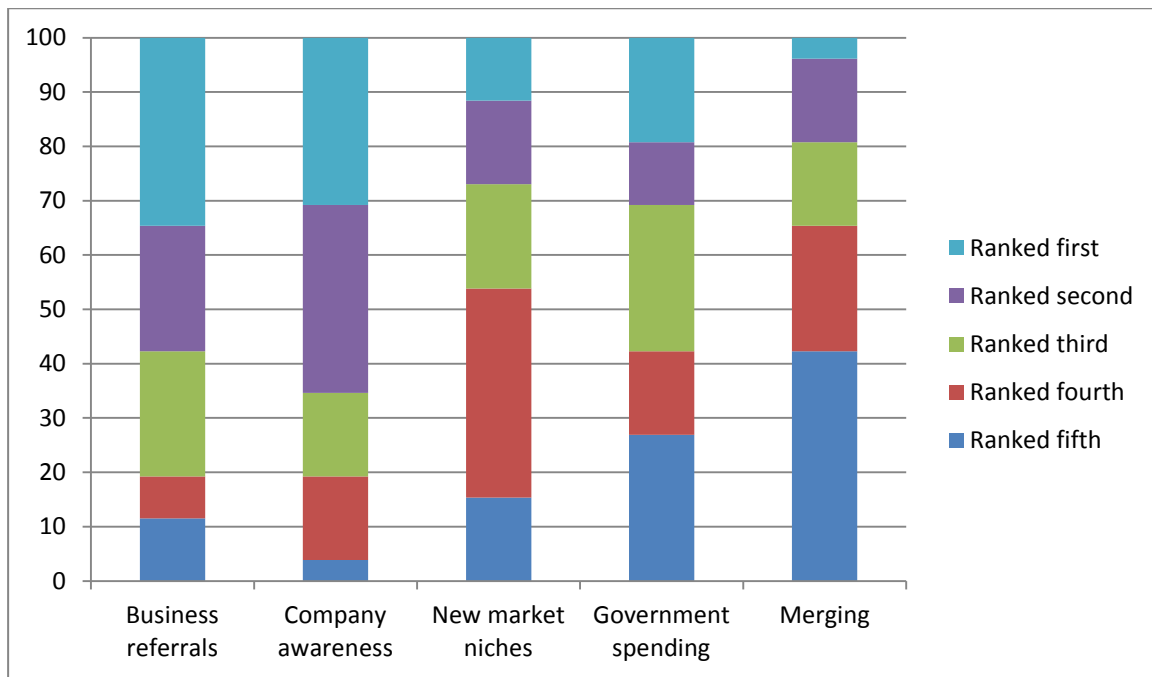


Figure 5.16 Opportunities of Company A

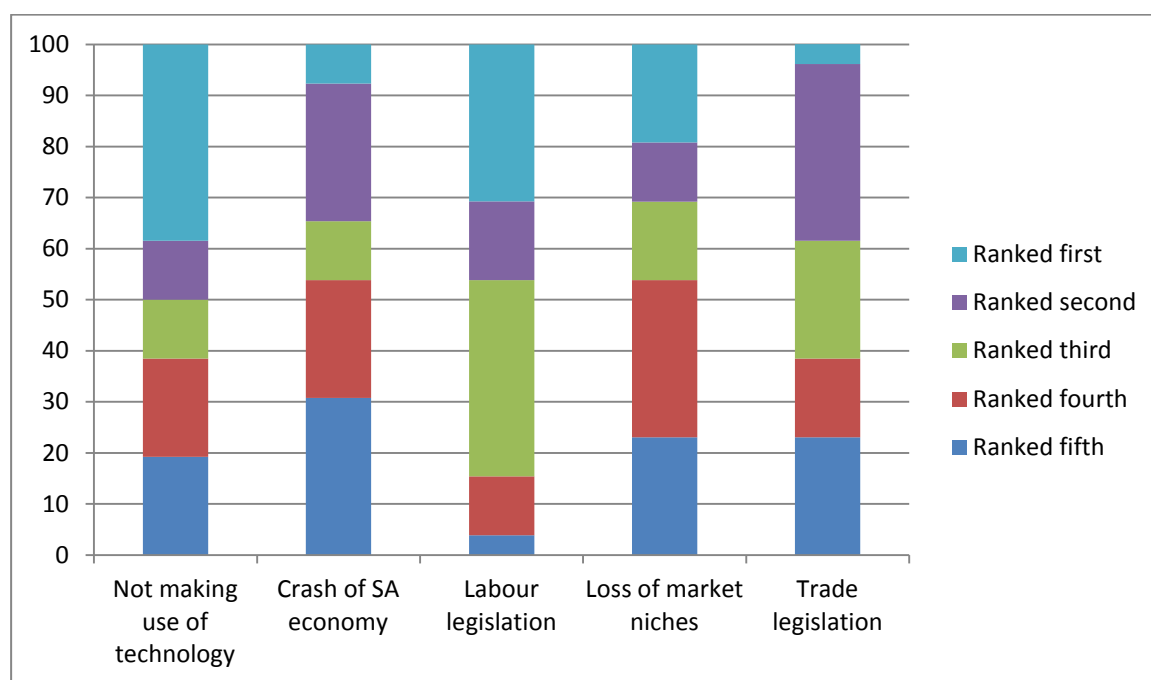
Nine (34,62%) respondents ranked the possibility of new business referrals from clients as the biggest opportunity for Company A, while eight (30,77%) respondents believe that an increase in the awareness of the company both nationally and internationally is a big opportunity. Five (19,23%) respondents ranked an increase in government spending on aviation infrastructure as a possible opportunity, with three (11,54%) respondents arguing that new market niches opening up are a possible opportunity. One (3,85%) respondent believe that merging with a company in the same industry is a possible opportunity to Company A.

Threats

Respondents were asked to rank five possible threats that Company A might have. Table 5.4 and Figure 5.17 present a summary of the data collected on items relating to the threats of Company A. Percentages highlighted in grey refer to the most selected item according to the ranking. The detailed information can be found in Appendix 3.10.

Table 5.4 Threats of Company A

Criteria	Ranked first	Ranked second	Ranked third	Ranked fourth	Ranked fifth
	%	%	%	%	%
Not making full use of technology	38,46	11,54	11,54	19,23	19,23
Crash of South African economy	7,69	26,92	11,54	23,08	30,76
More stringent labour legislation	30,77	15,38	38,46	11,54	3,85
Loss of market niches	19,23	11,54	15,38	30,76	23,08
More stringent trade legislation	3,85	34,62	23,08	15,38	23,08

**Figure 5.17** Threats of Company A

Ten (38,46%) respondents ranked 'not making use of technology' as the biggest threat facing Company A, with eight (30,77%) respondents ranking 'more stringent labour legislation' as a possible threat. Five (19,23%) respondents are of the opinion that a loss of market niches is a possible threat to the operations of Company A, with two (7,69%) respondents believing that the possible crash of the South African economy will be a possible threat. One (3,85%) respondent ranked 'more stringent trade legislation' as the biggest possible threat facing Company A.

5.2.2 Results of the semistructured interviews

The interviews with five senior employees of Company A have resulted in the following (the question framework is presented in Appendix 2):

- The respondents were asked what they believed to be the main strengths of Company A. Three respondents indicated that the good relationship with big suppliers is the biggest strength of the company, with two respondents indicating that the success of the company is attributable mainly to management and its management style.
- The respondents were asked what they believed to be the main weakness of the company. Four respondents communicated that not meeting customer budgets are the main weakness in the company with one respondent indicating that no training is provided to staff.
- The respondents were asked what they believed to be the main opportunity of the company. Four respondents indicated the possibility of new markets opening up, while one respondent indicated that an increase in government spending is the biggest opportunity in the company.
- The respondents were asked what they believed to be the main threat in the company. Four respondents indicated that if the company was not using its available technology to the best of its abilities it would be a threat, with one respondent indicating that new competitors or entrants into the market will be the main threat.
- The respondents were asked what aspect of, or developments in, the political environment will have the greatest effect on Company A in the near future. Three respondents communicated that government interference will have a great effect, with two groups of one respondent each indicating that the upcoming elections and the political instability of neighbouring countries will have the greatest effect.
- The respondents were asked what aspect of, or developments in, the economic environment will have the greatest effect on Company A in the near future. Two groups of two respondents each indicated that high labour cost and the weakening of the rand will have the biggest effect on Company A. One respondent communicated that a further increase in the inflation rate will have an impact on operations.

- The respondents were asked what aspect of, or developments, in the social environment will have the greatest effect on Company A in the near future. Three respondents communicated that the diversity of staff within the company can lead to a possible problem, with two respondents indicating that cultural and demographic differences with suppliers and clients can have an impact on operations of Company A.
- The respondents were asked what aspect of, or developments in, the technological environment will have the greatest effect on Company A in the near future. All five respondents indicated that new technology and the development thereof will have the greatest effect on the company in the near future.

5.3 SUMMARY

The results of the empirical study are explained and presented in this chapter. The sample of the study that was conducted included 70 subjects of whom 26 subjects responded. Of these respondents, 14 respondents were female and 12 respondents were male. The majority of respondents came from the Aerospace department, followed by the Program Management department. Twenty respondents have obtained a post-matric qualification and eleven respondents have been employed in the aviation industry for more than ten years. Stringent employment laws was seen as the biggest possible obstacle in the political environment, while respondents predicted that crime and the high unemployment rate will have the biggest influence on the South African economy. The respondents also indicated that they believe the staff of Company A to be very diverse, and they were undecided on whether the company was doing enough to improve the social structure within the company. Within the technological field the respondents indicated that technological developments are of great importance to the future of the company and that they are of the opinion that the company is currently using the available technology to the best of its ability.

The key relationship with big suppliers was seen as the main strength of the company with the difficulty in meeting customer budgets as the main weakness of Company A. New business via referrals from current clients was seen as the main opportunity of the company, while the possibility of not making full use of the available technology was seen as the main threat of the company.

In the following chapter, the limitations of this research will be discussed and highlighted.

CHAPTER 6

6. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This study has analysed and has evaluated the competitive environment of Company A. In the preceding chapters the important factors that Company A should consider when evaluating strategy were highlighted. In this chapter a summary is presented and conclusions are drawn regarding the findings of the study that have given rise to certain recommendations for future research. A discussion of the limitations of the research study is also presented.

6.2 SUMMARY OF RESEARCH

The twofold research problem was to establish the competitive environment of Company A and to determine what techniques currently are used to analyse strategy. Based on this, recommendations can be made to ensure that decisions will be taken which will maintain a competitive environment. The objectives stated in Chapter 1 are discussed in this chapter. A survey questionnaire was designed and presented to employees of Company A and five semistructured interviews were conducted to address the research objectives and questions in this study. The sample selected consisted of 70 employees of Company A, of which 26 responses were received, thereby achieving a 37% response rate.

6.3 DISCUSSION OF THE STUDY BASED ON THE OBJECTIVES

The key objectives of this study were to analyse the macro-economic factors within the competitive environment by conducting a PEST analysis, and to determine key performance indicators of Company A by means of a SWOT analysis. Both techniques were researched, analysed and discussed in the literature study, and a practical analysis was conducted by preparing a survey questionnaire and conducting semistructured interviews.

The third objective was to identify the understanding of the competitive environment by the employees of Company A. To address this objective, a survey questionnaire was designed and completed by employees of Company A, and five semistructured interviews were conducted with selected employees of Company A. During the practical analysis of the SWOT technique, the aim was to determine the threats and weaknesses

Company A faces and to determine its strengths and weaknesses. With regard to the PEST analysis, the aim was to determine what factors in the relevant environments employees believe would have a significant influence in the future on the South African economy.

The fourth objective of this research study was to develop recommendations for improving a sustainable competitive environment based on the conclusions of the above three objectives. These will be discussed below.

6.4 CONCLUSIONS AND RECOMMENDATIONS

Based on the preceding results, certain conclusions can be drawn. These conclusions are as follows:

- The research has shown that the external environment is complex and dynamic, which makes it difficult to investigate. However, numerous variables of the external environment have been identified and investigated in the PEST analysis of Company A. Currently there is uncertainty as to whether the company has someone (either internally or outsourced) that evaluates the competitive environment on a regular basis, as a large proportion of employees are not aware that such activities existed.
- The research revealed that the key strength of the company is the good relationship with big suppliers. This means that management is actively involved in the decision process and understands the role that suppliers will have in the success and growth of the company, ensuring a competitive advantage over competitors. The main weakness of the company is that it seems to find it difficult to meet customer budgets. This can cause problems as customer satisfaction is a crucial factor and it can have a direct impact on the profits and reputation of Company A. Another weakness is the shortages in specialised workforce. Key staff often gets poached by competitors and other employers and as a result valuable skills are lost.
- The research has shown that the company not making full use of technology is the main threat. This threat becomes even more important when compared to the weakness of shortages in specialized workforce, especially if these employees have difficulty in adapting to innovative techniques and advanced methods of manufacturing. The main opportunities were new business referrals

from current clients and the increase in company awareness, both nationally and internationally.

- The research has shown that the management of Company A is actively involved in the day-to-day operations of the company and that the management style is contributing to the success of the company.
- The research has shown that the employees of Company A are very diverse, and that there was uncertainty as to whether the management of Company A was doing enough to improve the social structure within the company.

Based on the aforementioned, the following recommendations are presented:

- A PEST and SWOT analysis should be conducted on a regular basis to ensure that Company A understands its competitive environment and that strategic decisions are taken based on this understanding.
- The above analysis should form part of a fully documented competitive analysis process, which in turn should form part of a fully documented strategic planning process.
- The company needs to embark on a training programme to ensure that all employees are capable of adapting to the technological innovations in the future. Alternatively, Company A should embark upon employing more employees with the specialized skills needed for the industry.
- The management should apply their skills and management style to provide the employees with the necessary resources that will enable them to meet customer budgets. If managed correctly, this will ensure that customer satisfaction will increase which can improve and sustain a competitive advantage over competitors.
- The company should evaluate and strategize about the possibilities and advantages that can be gained from employing additional staff and expanding current manufacturing operations, to enable them to capitalise on the opportunity of new business from referrals from current clients. In addition to this, increased manufacturing activities can assist in increasing the awareness of the company, both nationally and internationally, and this should be included in the strategic evaluation of these opportunities.

6.5 SCOPE FOR FURTHER RESEARCH

After Company A has applied the above recommendations, another detailed study can be done between the competitive environment analyses (as found in the preceding chapters) and the future analyses, with the subjects possessing more knowledge and skills in the specific area. Future research can also be done between competitors, a competitor analysis can be formulated and a comparison can be made between the different competitive environments of the respective competitors.

6.6 LIMITATIONS OF RESEARCH

The following shortcomings were identified during the research and should be kept in mind:

- The sampling frame of 70 and the response rate of 26 subjects may be considered too small in size to allow for inferential statistical examination of the reliability and validity of the survey instrument;
- The study assumes that the subjects have a relatively good understanding of the competitive environment of Company A, which may not be the case;
- The external environment is constantly changing and it is difficult to measure all the variables that would influence the operations of Company A;
- There was difficulty in comparing and benchmarking Company A versus its competitors because of the lack of competitor information and the fact that Company A does not have direct competitors within South Africa. The cost of obtaining such information would have been too substantial to obtain globally for a study of this size.

6.7 SUMMARY

In this chapter the results of the research are explained and summarized; based on the data obtained from the survey questionnaire and the semistructured interviews that were conducted. The objectives that were formulated in Chapter 1 were addressed, while conclusions, recommendations and limitations relevant to this study has been evaluated and discussed.

APPENDIX 1: SURVEY OF COMPANY A AND ITS INTERNAL AND EXTERNAL COMPETITIVE ENVIRONMENT

PART A: INDIVIDUAL INFORMATION OF STAFF

1. What is your gender?
 - a. Male
 - b. Female

2. In which department or business unit are you employed?
 - a. Aerospace
 - b. Supply Chain
 - c. Product Development
 - d. Support
 - e. ITC
 - f. Manufacturing Engineering
 - g. Quality Assurance
 - h. Holdings
 - i. Program Management
 - j. Inventory Management
 - k. Fabrications
 - l. Other

3. What is your highest qualification obtained?
 - a. High School/Matriculation certificate
 - b. College diploma
 - c. Bachelor's degree
 - d. Honours degree
 - e. Master's degree
 - f. Other

4. How long have you been in the aviation industry?
 - a. Less than one year
 - b. One to five years
 - c. Five to ten years
 - d. Ten years or more

PART B: INTERNAL AND EXTERNAL COMPETITIVE ENVIRONMENT OF COMPANY A ACCORDING TO THE KNOWLEDGE OF THEIR STAFF

General

5. To your knowledge, is Company A currently doing external environmental analysis to gain insight into the competitive environment?
- a. Yes
 - b. No
 - c. I do not know

Political environment

6. Do you think the political environment of the country will have a positive or a negative impact in the next five years on the future operations of Company A?
- a. Positive/Optimistic
 - b. Negative/Pessimistic
7. Please rank the following possible obstacles that Company A might face in the political environment (**1** most likely to have an impact and **4** least likely to have an impact):

a. Political instability of neighbouring countries, for example, Zimbabwe	
b. Government interference	
c. More stringent employment laws	
d. Upcoming elections in the country	

8. Will government regulation affect your work function directly?
- a. Yes
 - b. No

Economic environment

9. What do you expect will happen with the South African economy in the next three years?
 - a. Positive growth
 - b. Negative growth
 - c. No change
10. What affect do you think the future economy will have on Company A's operational profit?
 - a. Increase operational profits
 - b. Decrease operational profits
 - c. No change
11. What do you expect the rand to do over the next three years?
 - a. Strengthen
 - b. Weaken
 - c. Stay consistent
 - d. Too difficult to predict
12. The inflation rate today is approximately 6%. What do you think will happen with the inflation rate over the next three years?
 - a. Increase
 - b. Decrease
 - c. Stay consistent
13. What impact do you think crime will have on the economy of South Africa?
 - a. High impact
 - b. Low impact
 - c. No impact
14. What do you think will happen to the unemployment rate over the next three years?
 - a. Increase
 - b. Decrease
 - c. Stay consistent

15. What affect do you think the increase in labour costs will have on Company A's operational profit?
- Increase operational profits
 - Decrease operational profits
 - No change

Social environment

16. Do you think government is doing enough to improve the social environment within South Africa?
- Yes
 - No
17. Do you think Company A's staff is very diverse?
- Yes
 - No
18. Do you think that Company A is doing enough to improve the social culture within the organisation?
- Yes
 - No

Technology environment

19. Is Company A currently making use of the following technology?

	YES	NO
a. Internal communication (Intranet)		
b. Virtual meetings (Skype with video)		
c. Office packages		
d. VOIP (internal and external calls)		
e. Databases (Internal)		
f. Databases (External)		
g. Accounting/auditing packages		

20. Do you think that Company A is using the available technology to the best of its ability?
- a. Yes
 - b. No
21. Will keeping pace with technological developments be of great importance to the future of Company A?
- a. Yes
 - b. No

Strengths of Company A

22. Please rank the following possible strengths that Company A has in order of importance (**1** being very important and **6** not important):

a. Key relationships with big suppliers	
b. Industry-critical skills	
c. Management and their management style	
d. Upcoming elections in the country	
e. Customer satisfaction	

Weaknesses of Company A

23. Please rank the following possible weaknesses that Company A has in order of importance (**1** being very important and **6** not important):

a. Meeting customer budgets	
b. Shortages in specialised workforce	
c. Qualifications and skill of general workforce	
d. Providing training for staff	
e. Maintaining relationships with suppliers	

Opportunities of Company A

24. Please rank the following possible weaknesses that Company A has in order of importance (**1** being very important and **6** not important):

a.	New business via referrals from current clients	
b.	Increase in company awareness both nationally and internationally	
c.	New market niches opening up	
d.	Increase in government spending on aviation infrastructure	
e.	Merging with company in same industry	

Threats of Company A

25. Please rank the following possible threats that Company A has in order of importance (**1** being very important and **6** not important):

a.	Not making full use of technology	
b.	Crash of South African economy	
c.	More stringent labour legislation	
d.	Loss of market niches	
e.	More stringent trade legislation	

APPENDIX 2: SEMISTRUCTURED INTERVIEW

The objectives of both the study and the interview were explained to the respondent. The following questions were asked:

1. What are the main strengths of the company?
2. What are the main weaknesses of the company?
3. What are the main opportunities of the company?
4. What are the main threats of the company?
5. What aspect of, or developments in, the political environment will have the greatest effect in the near future on Company A?
6. What aspect of, or developments in, the economic environment will have the greatest effect in the near future on Company A?
7. What aspect of, or developments in, the social environment will have the greatest effect in the near future on Company A?
8. What aspect of, or developments in, the technological environment will have the greatest effect in the near future on Company A?

APPENDIX 3: SURVEY QUESTIONNAIRE RESULTS

Appendix Table 3.1 Summary of the respondents' characteristics

Variable	Description	Frequency	%
Gender	Male	12	46,15
	Female	14	53,85
Department / business unit	Aerospace	5	19,23
	Supply Chain	3	11,54
	Product Development	1	3,85
	ITC	3	11,54
	Manufacturing Engineering	2	7,69
	Holdings	3	11,54
	Program Management	4	15,38
	Inventory Management	1	3,85
	Fabrications	1	3,85
	Other	3	11,54
Highest qualification obtained	High School / Matriculation	6	23,08
	Certificate	6	23,08
	College diploma	7	26,92
	Bachelor's degree	3	11,54
	Honours degree	1	3,85
	Master's degree	3	11,54
	Other		
Experience in aviation industry	Less than one year	3	11,54
	One to five years	5	19,23
	Five to ten years	7	26,92
	Ten years or more	11	42,31

Appendix Table 3.2 General

Variable	Description	Frequency	%
Does Company A do environmental analysis?	Yes	7	26,92
	No	7	26,92
	I do not know	12	46,16

Appendix Table 3.3 Political environment

Variable	Description	Frequency	%
Impact of political environment on Company A	Positive	13	50
	Negative	13	50
Will government regulation affect your work directly?	Yes	7	26,92
	No	19	73,08
Possible obstacles for Company A in the political environment			
Definitely	Political instability of neighbouring countries	2	7,69
	Government interference	9	34,62
	Stringent employment laws	14	53,85
	Upcoming elections	1	3,85
Most likely	Political instability of neighbouring countries	7	26,92
	Government interference	12	46,16
	Stringent employment laws	5	19,23
	Upcoming elections	2	7,69
Likely	Political instability of neighbouring countries	5	19,23
	Government interference	2	7,69
	Stringent employment laws	5	19,23
	Upcoming elections	14	53,85
Least likely	Political instability of neighbouring countries	12	46,16
	Government interference	3	11,54
	Stringent employment laws	2	7,69
	Upcoming elections	9	34,62

Appendix Table 3.4 Economic environment

Variable	Description	Frequency	%
Expectancy of South African economy	Positive growth	10	38,46
	Negative growth	6	23,08
	No change	10	38,46
South African economy and the effect on Company A's operational profit	Increase operational profits	11	42,31
	Decrease operational profits	10	38,46
	No change	5	19,23
Expectancy of the rand over the next three years	Increase	3	11,54
	Decrease	14	53,85
	Stay consistent	3	11,54
	Too difficult to predict	6	23,08
Expectancy of the inflation rate over the next three years	Increase	18	69,23
	Decrease	1	3,85
	Stay consistent	7	26,92
Impact of crime on South African economy	High impact	22	84,62
	Low impact	3	11,54
	No impact	1	3,85
Expectancy of the unemployment rate over the next three years	Increase	20	76,92
	Decrease	1	3,85
	Stay consistent	5	19,23
Impact of increase in labour costs on Company A's operational profit	Increase operational profits	4	15,38
	Decrease operational profits	17	65,38
	No change	5	19,23

Appendix Table 3.5 Social environment

Variable	Description	Frequency	%
Is government doing enough to improve the social environment within South Africa?	Yes	2	7,69
	No	24	92,31
Is Company A's staff very diverse?	Yes	22	84,62
	No	4	15,38
Is Company A doing enough to improve the social culture within the organisation?	Yes	13	50
	No	13	50

Appendix Table 3.6 Technology environment

Variable	Description	Frequency	%
Is Company A using technology to the best of its ability?	Yes	17	65,38
	No	9	34,62
Are technological developments of great importance to Company A?	Yes	26	100
	No	0	
Is Company A making use of the following technology?			
Internal communication	Yes	23	88,46
	No	3	11,54
Virtual meetings	Yes	17	65,38
	No	9	34,62
Office packages	Yes	23	88,46
	No	3	11,54
VOIP (internal, external calls)	Yes	22	84,62
	No	4	15,38
Databases (Internal)	Yes	26	100
	No	0	
Databases (External)	Yes	20	76,92
	No	6	23,08
Accounting / auditing packages	Yes	24	92,31
	No	2	7,69

Appendix Table 3.7 Strengths of Company A

Variable	Description	Frequency	%
Ranked first	Relationships with suppliers	17	65,38
	Industry-critical skills	2	7,69
	Management and its management style	3	11,54
	Upcoming elections in the country	0	—
	Customer satisfaction	4	15,38
Ranked second	Relationships with suppliers	2	7,69
	Industry-critical skills	12	46,15
	Management and its management style	6	23,08
	Upcoming elections in the country	0	—
	Customer satisfaction	6	23,08
Ranked third	Relationships with suppliers	3	11,54
	Industry-critical skills	8	30,77
	Management and its management style	11	42,31
	Upcoming elections in the country	0	—
	Customer satisfaction	4	15,38
Ranked fourth	Relationships with suppliers	4	15,38
	Industry-critical skills	4	15,38
	Management and its management style	5	19,23
	Upcoming elections in the country	1	3,85
	Customer satisfaction	12	46,15
Ranked fifth	Relationships with suppliers	0	—
	Industry-critical skills	0	—
	Management and its management style	1	3,85
	Upcoming elections in the country	25	96,15
	Customer satisfaction	0	—

Appendix Table 3.8 Weaknesses of Company A

Variable	Description	Frequency	%
Ranked first	Meeting customer budgets	12	46,15
	Shortages in specialised workforce	7	26,92
	Qualifications and skill of workforce	4	15,38
	Providing training for staff	2	7,69
	Maintaining relationships with suppliers	1	3,85
Ranked second	Meeting customer budgets	5	19,23
	Shortages in specialised workforce	13	50
	Qualifications and skill of workforce	5	19,23
	Providing training for staff	2	7,69
	Maintaining relationships with suppliers	1	3,85
Ranked third	Meeting customer budgets	2	7,69
	Shortages in specialised workforce	3	11,54
	Qualifications and skill of workforce	11	42,31
	Providing training for staff	7	26,92
	Maintaining relationships with suppliers	3	11,54
Ranked fourth	Meeting customer budgets	2	7,69
	Shortages in specialised workforce	2	7,69
	Qualifications and skill of workforce	4	15,38
	Providing training for staff	11	42,31
	Maintaining relationships with suppliers	7	26,92
Ranked fifth	Meeting customer budgets	5	19,23
	Shortages in specialised workforce	1	3,85
	Qualifications and skill of workforce	2	7,69
	Providing training for staff	4	15,38
	Maintaining relationships with suppliers	14	53,85

Appendix Table 3.9 Opportunities of Company A

Variable	Description	Frequency	%
Ranked first	New business	9	34,62
	Increase in company awareness	8	30,77
	New market niches	3	11,54
	Increase in government spending on aviation infrastructure	5	19,23
	Merging with company in same industry	1	3,85
Ranked second	New business	6	23,07
	Increase in company awareness	9	34,62
	New market niches	4	15,38
	Increase in government spending on aviation infrastructure	3	11,54
	Merging with company in same industry	4	15,38
Ranked third	New business	6	23,07
	Increase in company awareness	4	15,38
	New market niches	5	19,23
	Increase in government spending on aviation infrastructure	7	26,92
	Merging with company in same industry	4	15,38
Ranked fourth	New business	2	7,69
	Increase in company awareness	4	15,38
	New market niches	10	38,46
	Increase in government spending on aviation infrastructure	4	15,38
	Merging with company in same industry	6	23,08
Ranked fifth	New business	3	11,54
	Increase in company awareness	1	3,85
	New market niches	4	15,38
	Increase in government spending on aviation infrastructure	7	26,92
	Merging with company in same industry	11	42,31

Appendix Table 3.10 Threats of Company A

Variable	Description	Frequency	%
Ranked first	Not making full use of technology	10	38,46
	Crash of South African economy	2	7,69
	More stringent labour legislation	8	30,77
	Loss of market niches	5	19,23
	More stringent trade legislation	1	3,85
Ranked second	Not making full use of technology	3	11,54
	Crash of South African economy	7	26,92
	More stringent labour legislation	4	15,38
	Loss of market niches	3	11,54
	More stringent trade legislation	9	34,62
Ranked third	Not making full use of technology	3	11,54
	Crash of South African economy	3	11,54
	More stringent labour legislation	10	38,46
	Loss of market niches	4	15,38
	More stringent trade legislation	6	23,08
Ranked fourth	Not making full use of technology	5	19,23
	Crash of South African economy	6	23,08
	More stringent labour legislation	3	11,54
	Loss of market niches	8	30,76
	More stringent trade legislation	4	15,38
Ranked fifth	Not making full use of technology	5	19,23
	Crash of South African economy	8	30,76
	More stringent labour legislation	1	3,85
	Loss of market niches	6	23,08
	More stringent trade legislation	6	23,08

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