

**ENVIRONMENTAL SCANNING PRACTICES IN SOUTH
AFRICAN TOP PERFORMING COMPANIES**

BY

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DECLARATION

I, **Tanneh Tarpeh**, student number 14337152, hereby declare that this dissertation titled, “**Environmental Scanning Practices in South African Top Performing Companies**”, is my own work, and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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SIGNATURE

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DATE

DEDICATION

I dedicate this dissertation to my mentor, Dr. Namane Magau, who believed in me and helped made my dream of obtaining my Master in Commerce degree possible.

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ABSTRACT

ENVIRONMENTAL SCANNING PRACTICES IN SOUTH AFRICAN TOP PERFORMING COMPANIES

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Degree: Magister Commercii (Mcom Business Management)

The environment in which companies operate is becoming more competitive and complex, and companies are searching for ways to ensure their success while remaining sustainable. Environmental scanning is an important element of strategic planning. Companies today are facing major challenges to be successful and to survive. In order to be successful, companies need to understand the environment in which they operate. In this light, information becomes a strategic asset because companies are able to obtain information through environmental scanning, which is a fundamental aspect of strategic planning.

A knowledge gap exists on the environmental scanning practices of top performing South African companies, in terms of how environmental information is being captured and used for strategic planning in these companies. In fact, it is not clear whether top performing South African companies practice environmental scanning at all.

The present study investigated the environmental scanning practices of top performing South African companies. The main purpose of this study was to investigate the nature of environmental scanning, the way companies acquire environmental information and the way this information supports strategic planning. Moreover, the study investigated the dimensions of the external environment that are of specific relevance to the companies'

business environments. The study specifically investigated how these companies use information acquired through environmental scanning to make informed strategic decisions.

The study followed a convergent parallel mixed methods research design, which involves the simultaneous collection and analysis of qualitative and quantitative data. In the qualitative phase of the study, semi-structured interviews were used to gather data from 16 participants, including one chairman, four vice-presidents, and 11 senior managers of 11 top performing companies in South Africa. In the quantitative phase, data was collected from 33 senior managers representing 33 companies listed in the Financial Mail's 2014 list of the 200 top performing South African companies.

The study reveals that 56.3% of the participating companies have formal environmental scanning offices or units, indicating a formal search mode of environmental scanning. This environmental scanning mode entails a deliberate attempt to gather environmental information during which companies scan the external environment in a broad and comprehensive way. Some of these companies are actively searching for information so as to influence events in the external environment, which is known as enacting. Only a few companies use a conditioned viewing mode of environmental scanning in which they tend to follow standard procedures when scanning the external environment. Although their environmental scanning practices differ, the participating companies all use environmental information for strategic planning purposes to make informed strategic decisions.

The findings from this study provide an in-depth understanding of the environmental scanning practices of top performing South African companies and the influence of these practices on these companies' strategic planning activities. The results of the study are useful in developing the skills needed to perform effective environmental scanning in other companies.

Keywords: Environmental scanning, information as a strategic asset, strategic decision making, strategic planning

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CHAPTER 1: OVERVIEW AND STUDY BACKGROUND

Chapter outline:

The purpose of this chapter is to:

- Provide an overview of environmental scanning;
- Furnish the problem statement and the purpose of the study;
- Present the research questions that guided this study;
- Outline the demarcation and assumptions of this study;
- Discuss the contribution and benefits of this study;
- Give a brief summary of the research methodology used in the study; and
- Provide an overview of the chapters included in this dissertation.

1.1 INTRODUCTION AND BACKGROUND

The external environment in which companies operate is getting more competitive and complex, and companies are searching for ways to ensure their success while remaining sustainable. Companies today are facing major challenges to be successful and to survive (Agbim, Oriarewo & Zever, 2014:249; Bhardwaj & Kumar, 2014:638; Zhang, Majid & Foo, 2011:66). The external environment is a composite of the market and macro-environments. In order to be successful, companies need to understand the environment in which they operate. In this light, information becomes a strategic asset because companies are able to obtain information through environmental scanning, which is a fundamental aspect of strategic planning (Cancellier, Blageski, José & Rossetto, 2014:613; Lau, Liao, Wong & Chiu, 2012:1230).

Environmental scanning is regarded as a critical step in a deliberate strategy approach where a rational and sequential process is followed to formulate strategy. It is, however, not only critical for the deliberate approach but also for the emergent strategy approach (Maritz, Pretorius & Plant, 2011:9; Pretorius & Maritz, 2011:3). Environmental scanning can assist dynamic strategies that evolve as a result of environmental pressures (Maritz *et*

al., 2011:11). Emergent strategy is opposed to deliberate strategy. In emergent strategy, strategy formulation and implementation happen simultaneously. In a deliberate strategy process there is a distinct formulation process during which environmental scanning is done, followed by an implementation phase (Maritz *et al.*, 2011:10-11). Environmental scanning is regarded as a design element and a very rational step in strategy-making (Maritz *et al.*, 2011:11; Mintzberg, 1994:25). However, environmental scanning can also aid in the emergent strategy where the focus is on strategy for a dynamic environment and where changes in the environment give rise to strategies that evolve, without being formally and previously planned.

Environmental scanning is an important aspect of strategic planning. Strategic planning is concerned with environmental scanning, strategy formulation, strategy implementation and strategic control (Cheng, Kadir & Bohari, 2014:439). These tasks are also part of strategic management (Hill & Jones, 2012:7-8), which involves the formulation of a strategic plan to achieve the mission and objectives of a company, and the implementation and evaluation of this strategic plan (Hill & Jones, 2012:7; Nag, Hambrick & Chen, 2007:942-943). Strategy formulation is a conceptual process through which senior managers scan the external environment and then develop and select appropriate strategies (Hill & Jones, 2012:8). Whereas strategic formulation deals with thinking, strategy implementation is the action phase of the strategic planning process and is concerned with implementing the selected strategies. Strategic control deals with evaluating the progress of these strategies (Hill, Jones & Schilling, 2015:405; Hill & Jones, 2012:8).

It has been asserted that the value of strategic planning lies in identifying and understanding the complexity of the factors affecting the company (Albright, 2004:40). As such, strategic planning enables senior managers to view the company as a whole. Hence, information on the company's external environment is also required (Cheng *et al.*, 2014:439; Li, 2014:305).

The ability to "look to the future" is indeed important in the contemporary business environment. The emergence of large multinational companies operating globally, characterised by technological innovation, has compelled companies to pay attention to the environment in which they do business (Ford, Huerta, Menachemi & Babik, 2013:32;

Vecchiato & Roveda, 2010:1527). The complexity and volatility of the external environment have shaped and will continue to shape the way companies view the future. The changes and uncertainties that occur in the business environment are usually associated with signals to which the company needs to be alert (Pallapothu & Krause, 2013:28). It has been argued that some signals may be difficult to identify, while others may be difficult to determine and yet others may not be authentic, that is, may falsely indicate a change. Therefore, seeking and managing relevant information are crucial for a company to achieve a sustainable competitive advantage (Albright, 2004:40; Babatunde & Adebisi, 2012:26).

Environmental scanning is the collection of useful information about events, trends and links in the company's market and macro-environment, knowledge of which would help senior managers in planning the course of action for the future (Albright, 2004:40; Bhardwaj & Kumar, 2014:638; Cheng *et al.*, 2014:439; Haase & Franco, 2011:1642). It is a process through which senior managers obtain both factual and subjective information so as to make informed decisions (Babatunde & Adebisi, 2012:26; Cancellier *et al.*, 2014:613).

Information obtained through environmental scanning is not only a strategic asset; it also enables a company to outperform its rivals in the marketplace and gain a sustained competitive advantage. Environmental scanning is therefore essential (Bhardwaj & Kumar, 2014:638). Environmental scanning, which can also be referred to as browsing, is necessary for companies as a result of the external pressure placed on them. External pressure may include environmental instability, dependency on resources, the nature of the business and information. In addition, environmental scanning can be regarded as a means by which senior management obtains relevant information about events taking place outside the company so as to take action for the future (Bhardwaj & Kumar, 2014:638; Cancellier *et al.*, 2014:613). In this light, it is important to understand what environmental scanning means and what it entails.

It has been maintained that the information obtained through environmental scanning is used to craft strategy in the strategic planning process by private and public sector companies in most developed and developing countries (Cancellier *et al.*, 2014:612; Choo,

2001:7). In this dissertation South Africa is regarded as a developing country (Sako, 2015:29).

Senior managers must be able to make use of information in the strategic planning process. Environmental scanning is a crucial part of strategic planning because the success of companies relies heavily on the information obtained from outside their boundaries (Albright, 2004:40; Cheng *et al.*, 2014:438).

1.2 PROBLEM STATEMENT

A knowledge gap exists concerning the environmental scanning practices of top performing South African companies. Only a few studies have been conducted on environmental scanning in South Africa. Du Toit (2016:16) examined the use of environmental scanning to collect strategic information. Hyde (2000:101) investigated the environmental scanning practices of firms in the financial services industry. Jansen van Vuuren (2002:1) focused on environmental scanning by South African tertiary institutions. It is not clear if and how environmental scanning is being practiced by large, top performing South African companies, hence the need for the study.

1.3 PURPOSE STATEMENT

The current study investigated the environmental scanning practices of companies listed in the Financial Mail's 2014 list of top performing South African companies (Financial Mail, 2014:88-92). The main purpose of this mixed methods study was to investigate the nature of environmental scanning, the way in which companies acquire information and the way in which environmental scanning supports strategic planning. Moreover, the study investigated the dimensions of the external environment that are of specific relevance to the participating companies' business environments. The study specifically investigated how these companies use environmental scanning to make informed strategic decisions.

1.4 RESEARCH QUESTIONS

The study was guided by the following research questions:

1. What is environmental scanning?
2. What is strategic planning and how does environmental scanning relate to it?
3. Which dimensions of the external environment are of specific relevance to the companies' business environments?
4. Which modes of environmental scanning do companies use to acquire environmental information?
5. Which sources do companies use to acquire environmental information?
6. How, if at all, do companies use environmental information for strategic planning?

1.5 DEMARCATION OF THE STUDY

This study was demarcated in terms of the target population from which the participating companies were selected and in terms of the characteristics of the participants. These two main demarcations are discussed below.

The Financial Mail, a South African business publication, produces a list of top performing South African companies annually. The 200 top performing companies listed in the Financial Mail's 2014 list (hereafter referred to as the 2014 Financial Mail list) (Financial Mail, 2014:88-92), were initially used as the target population for this study.

The Financial Mail provides business insights on top performing companies and is focused on reaching the country's top business people (Financial Mail, 2014:10). From the magazine's perspective, top performing companies are likely to perform well again financially, offering investors value and having significant investment potential. Other characteristics of top performing companies include corporate governance, commitment to empowerment, strength of management, value buy and tradability, as well as industry company profit prospects (Financial Mail, 2014:10).

The qualitative phase of the study included five top performing South African companies listed in the 2014 Financial Mail list. The researcher conducted semi-structured interviews with eight participants from these five companies. While the researcher initially planned to recruit participants from at least 10 of the companies included in the 2014 Financial Mail list, this target proved to be impossible to achieve, primarily because representatives of these top performing companies were not willing to participate for different reasons. To overcome this problem, the researcher later recruited six additional large South African companies whose characteristics were similar to the top performing companies although they had not been included in the 2014 Financial Mail list.

Companies with more than 200 employees are regarded as large companies in South Africa (Du Toit, 2016:18). The researcher conducted semi-structured interviews with eight participants of six such companies. The study did not include small and medium enterprises (SMEs). The sampling design of the qualitative phase of this study is discussed in more detail in Section 4.7.2 in Chapter 4.

The quantitative phase of the study also focussed on the top performing South African companies listed in the 2014 Financial Mail list. This phase of the study ultimately involved 33 of these companies (see Section 4.8.2 in Chapter 4).

Since environmental scanning is an essential aspect of strategic planning that usually involves senior managers, the study was limited to several senior managers and chief executive officers (CEOs) and one chairman, of a large top performing South African company. Employees who were not involved with environmental scanning or in senior positions in the company were excluded.

1.6 IMPLICIT ASSUMPTIONS OF THE STUDY

Several basic assumptions are fundamental to this study. It was assumed that:

- all top performing South African companies engage in some form of environmental scanning, whether formal or informal;
- environmental scanning is a recognisable phenomenon within companies;

- top performing South African companies operate in the external environment;
- participants in the qualitative phase of this study were competent and willing to share their views about their companies' environmental scanning practices verbally;
- respondents in the quantitative phase of this study were competent and willing to provide their responses electronically regarding the way environmental scanning is being practised in their companies;
- a convergent parallel mixed methods research design was appropriate to explore the phenomenon of environmental scanning; and
- both semi-structured interviews and surveys gathered the required data from senior managers and CEOs regarding their companies' environmental scanning practices.

1.7 CONTRIBUTIONS OF THE STUDY

From a theoretical perspective, the study contributed to the extant body of knowledge on environmental scanning by investigating how top performing companies in South Africa obtain information, and, more specifically, the way in which they practise environmental scanning. Most international and local studies on environmental scanning were conducted using a quantitative research approach (Aldehayyat, 2015:467; Babatunde & Adebisi, 2012:30; Cancellier *et al.*, 2014:617; Du Toit, 2016:18; Haase & Franco, 2011:1647; Jansen van Vuuren, 2002:192; Yoo & Sawyerr, 2014:36). Very few studies on environmental scanning were conducted using a qualitative research approach (Hyde, 2000:102; Jiang & Gallupe, 2015:4). In this study, the researcher investigated environmental scanning using a convergent parallel mixed methods research design, which involved the collection and analysis of *both* qualitative and quantitative data.

The findings of this study are expected to provide an in-depth understanding of the environmental scanning practices in top performing South African companies and the influence of these practices on the companies' strategic planning initiatives. The results of the study are useful in developing the skills needed to perform effective environmental scanning in other companies.

The study specifically contributes to knowledge of the way top performing South African companies practise environmental scanning by describing the specific mode of environmental scanning these companies used. For example, in the qualitative phase of this study, 6 of the 11 participating companies adopted a searching mode of environmental scanning. In terms of the quantitative phase, 33 respondents who answered to this statement, “We scan the environment in a broad and comprehensive way”, indicated that 0.0% (0) strongly disagreed, 6.1% (2) disagreed, 12.1% (4) were neutral, 63.6% (21) agreed and 18.2% (6) strongly agreed.

The study further reveals that 56.3% of the participating companies have a formal environmental scanning office, which is an indication that these companies adopt a formal search mode of environmental scanning. A formal search mode entails scanning the environment in an extensive manner. While their environmental scanning practices differ, all the participating companies use environmental information to make informed strategic decisions.

1.8 DEFINITION OF KEY TERMS

The key concepts involved in this study are ***mixed methods research, convergent parallel mixed methods design, deliberate strategies, dynamic strategies, emergent strategies, environmental scanning, external environment, senior management, strategic asset (in terms of information), strategic decision making and strategic planning***. These key terms are defined below:

This study used a mixed methods research design; more specifically, a convergent parallel mixed methods design. ***Mixed methods research*** is conducted when a researcher collects and analyses both qualitative and quantitative data and integrates the findings using qualitative and quantitative approaches (Creswell & Plano Clark, 2011:63). There are six different types of mixed methods research, including a convergent parallel mixed method design (Creswell & Plano Clark, 2011:69). A ***convergent parallel mixed methods design*** is used when the researcher collects and analyses qualitative and quantitative data simultaneously to investigate a phenomenon. This design aims to provide

triangulation and in-depth understanding of the phenomenon being studied (Creswell & Plano Clark, 2011:77).

Deliberate strategies: Deliberate strategies entail senior managers crafting strategies with a clear vision; the ends and means being stipulated in a strategic plan and there are processes and systems in place for achieving the company's goals (Maritz *et al.*, 2011:11).

Dynamic strategy: The concept of dynamic strategy is employed in order to become proactive, enabling companies to cope with the increasing pace of technological innovation and other rapid changes in the external environment (Ke & Diao, 2016:272-273).

Emergent strategies: Emergent strategies come into being in response to changes in the company's external environment as the need arises. Emergent strategies are adaptive in nature, which allow companies to learn through trial and error (Dess, Lumpkin, Eisner & McNamara, 2014:10; Pretorius & Maritz, 2011:3-4).

Environmental scanning: The term environmental scanning is defined as a process that entails the collection of useful information about events, trends and links in the company's market and macro-environments, knowledge of which would help senior managers in planning the course of action for the future (Aldehayyat, 2015:461; Fabbe-Costes, Roussat, Taylor & Taylor, 2014:667; Haase & Franco, 2011:1642).

External environment: The external environment is regarded as factors outside the boundaries of a company over which the company has no control. Broadly the external environment constitutes the general or **macro-environment** and the **market** or task environment (Agbim *et al.*, 2014:252; Ford *et al.*, 2013:34; Zhang *et al.*, 2011:68). The macro-environment constitutes political, economic, socio-cultural, technological, legal and ecological factors that have a direct impact on the market environment. The market environment is considered more important because it includes competitors, customers, suppliers and relevant stakeholders of a company and their actions have a direct influence on a company's strategy (Agbim *et al.*, 2014:252; Ford *et al.*, 2013:34; Yoo & Sawyerr, 2014:30).

Senior management: Senior management, which can also be regarded as top level management, is a team of individuals who are involved with strategic initiatives and daily running of the company (Iden & Eikebrokk, 2015:530; Li, 2014:303).

Strategic asset (in terms of information): The term strategic asset refers to an asset that has value and that is needed in a company in order to maintain its capability to accomplish its overall goals (Mulvey & Holen, 2016:49). Information is a crucial strategic asset because it enables a company to align its business strategy with the external environment (Du Toit, 2016:16; Karami, 2008:2).

Strategic decision making: Strategic decision making is a rational process involving senior managers who make complex and long-term decisions that affect the entire direction of a company (Wollmann & Steiner, 2017:1).

Strategic planning: Strategic planning is an open process that includes environmental scanning as a vital source of information and assists senior management in developing strategic plans and strategies that assist a company to achieve its overall goals (Albrechts & Balducci, 2013:19; Cheng *et al.*, 2014:439; Klag & Langley, 2014:274).

Table 1.1 lists the abbreviations and abbreviated terms used in this dissertation.

Table 1.1: List of abbreviations used in the research study

Abbreviation	Meaning
ABSA	Amalgamated Banks of South Africa
AIDS	Acquired Immuno-deficiency Syndrome
ARV	Antiretroviral
BBBEE	Broad-Based Black Economic Empowerment
BRICS	Brazil Russia India China South Africa
CEO	Chief Executive Officer
CSIR	Council of Scientific and Industrial Research
CSR	Corporate Social Responsibility
ECOWAS	Economic Community of West African States
EFA	Exploratory Factor Analysis
EU	European Union
FNB	First National Bank

Abbreviation	Meaning
GIBS	Gordon Institute of Business Science
HIV	Human Immuno-deficiency Syndrome
ICASA	Independent Communications Authority of South Africa
ISO	International Organisation for Standardization
IT	Information Technology
JSE	Johannesburg Stock Exchange
LEED	Leadership in Energy and Environmental Design
MIT	Massachusetts Institute of Technology
PA	Personal Assistant
PWC	Price Waterhouse Coopers
SME	Small Medium Enterprise
SPSS	Statistical Package for Social Sciences
SWOT	Strength Weakness Opportunity Threat
WHO	World Health Organisation
WWW	World Wide Web
USA	United States of America

1.9 SUMMARY OF RESEARCH DESIGN AND METHODS

The study followed a convergent parallel mixed methods design. This design entails collecting and analysing both qualitative and quantitative data concurrently during the research process and giving both methods equal priority (Creswell & Plano Clark, 2011:77).

The target population for the qualitative phase of this study consisted the 200 top performing South African companies included in the 2014 Financial Mail list. Five participating companies were sampled from this list. In addition, six large South African companies not included in the 2014 Financial Mail list were also sampled for reasons explained in Section 4.7.2 of Chapter 4. A purposeful sampling method was used to select the participants for the qualitative phase of the study. Purposeful sampling entails intentional selection of participants and sites to understand the central phenomenon being studied (Creswell, 2012:206). Semi-structured interviews were used to gather data from 16 participants including one chairman, four vice-presidents, and 11 senior managers of the companies chosen.

No incentives were given to persuade participants to participate in the semi-structured interviews. Before the commencement of semi-structured interviews, the researcher explained the ethical procedures addressed in the informed consent form to participants who all expressed their willingness to participate on a voluntary basis. Each participant was asked to sign the informed consent form and all participants signed the forms and entered the date on which the interview occurred. Thematic analysis was used in the qualitative phase of the study.

The target population of the quantitative phase of the study consisted of 137 of the 200 top performing companies included in the 2014 Financial Mail list. In total, 33 companies were surveyed in the quantitative phase. The specific sampling method used in the quantitative phase of this study was self-selection sampling (i.e., convenience sampling). This sampling strategy means that the respondents who participated chose to be part of the study by accepting the survey invitation (Bethlehem, 2010:162). For the quantitative phase of the study, data was collected from the responses provided by senior managers representing 33 top performing South African companies included in the 2014 Financial Mail list.

Similarly, no incentives were given to respondents to complete the questionnaire. Respondents were sent e-mail invitations to participate in this study which included a link to the online questionnaire hosted in Qualtrics. Responses were received electronically from those respondents who accepted the survey invitation. Univariate descriptive statistics was used in the quantitative phase of the study. This study research design is described in more detail in Chapter 4.

1.10 CHAPTER OUTLINE

Chapter 1 introduces the study and provides background on environmental scanning. This chapter includes the study's problem statement, provides a justification for the importance of this study and lists the research questions the study attempted to answer. Next, the study's demarcations and assumptions as well as the contributions are discussed. This is followed by the definition of the key terms used in this study and a brief description of the study's research design. The chapter concludes with an outline of each chapter's contents.

Chapter 2 examines the concept of strategic planning and how it relates to environmental scanning. The chapter opens with a discussion of the evolution of strategic planning. This is followed by a discussion on the strategic issues in the company's business environment, namely globalisation, emerging markets, corporate governance, corporate social responsibility, sustainability and change in the business environment. Next, an overview of the strategic planning process is discussed. This chapter concludes with a discussion of the benefits and limitations of strategic planning.

Chapter 3 focuses on the nature of environmental scanning. The chapter begins with a definition of the concept of environmental scanning and reasons for conducting environmental scanning. This is followed by a discussion of Choo's (2001:2) conceptual framework for environmental scanning. Next, the four modes of environmental scanning, namely undirected viewing, conditioned viewing, enacting and searching, are reviewed. Thereafter, the three types of environmental scanning classified in terms of frequency, namely irregular, periodic and continuous environmental scanning, are discussed. The dimensions of the external environment are also discussed in detail. Emphasis is also placed on the industry analysis and the contributions of Porter's (2008:80) five forces model for industry analysis. This is followed by a discussion of management use of environmental information. Considerations of establishing a formal environmental scanning unit are summarised. The chapter ends with a discussion of the benefits and limitations of environmental scanning.

In **Chapter 4**, the study's research methodology is discussed. The chapter describes the study's overall research methodology and research design, namely a convergent parallel mixed methods design. The reasons for selecting a mixed methods research methodology and the characteristics of mixed methods research are discussed. Reasons are also given to motivate the choice of a convergent parallel mixed methods design. Included in this chapter is a discussion of the sampling procedures for the qualitative and quantitative phases. Furthermore, the data collection and data analysis methods for both the qualitative and quantitative phases of this study are discussed. Finally, the ethical procedures that were followed by the researcher are described.

Chapter 5 describes the data analysis approach used in the qualitative phase of the study and presents the findings of this phase. A brief profile of the companies that participated in the qualitative phase of this study is highlighted. The emerging themes identified during the qualitative data analysis phase are presented. Firstly, the discussion addresses the dimensions of the external environment that are relevant to the participating companies when they conduct environmental scanning. Secondly, the chapter shows the qualitative findings of the empirical research, which describes the environmental scanning practices of these companies in their respective industries. These include the specific modes of environmental scanning and sources from which the participating companies acquire environmental information. Lastly, the chapter concludes with a discussion of the way the participating companies in the qualitative phase of this study use the information acquired through environmental scanning for strategic purposes.

Chapter 6 describes the data analysis approach used in the quantitative phase of the study and presents the findings of this phase. In the first section of the quantitative analysis, background information relating to the top performing South African companies that participated in the quantitative phase of the study is discussed. The second section of the analysis provides information relating to the competitive situation of these companies. The chapter also provides quantitative results of empirical research that investigates the environmental scanning practices of the participating companies in their respective industries and shows how it supports their corporate strategic planning processes. Emphasis is also placed on the description of the specific modes of environmental scanning and sources from which the participating companies acquire information. The chapter concludes with the way the participating companies in the quantitative phase monitor the dimensions of the external environment.

Chapter 7 presents the interpretations of the qualitative and quantitative findings of the convergent parallel mixed methods design. The main purpose of the study and the research questions as well as the contributions of this study is reaffirmed. Included in this chapter, is a discussion of the integration of the qualitative and quantitative research findings. The findings confirm the results of several previous studies that were conducted on environmental scanning. The environmental scanning practices of the participating companies, with emphasis on the four modes of environmental scanning, are discussed.

Furthermore, the use of environmental information for strategic planning is highlighted. This is followed by a discussion of managerial implications regarding the importance of environmental scanning. The chapter concludes by highlighting limitations of the study and presenting recommendations for further research.

CHAPTER 2: STRATEGIC PLANNING

Chapter outline:

The purpose of this chapter is to:

- Review the evolution of strategic planning in the business world;
- Discuss the strategic issues facing companies in the contemporary business environment;
- Provide an overview of the strategic planning process;
- Indicate the way strategic planning relates to environmental scanning; and
- Outline the benefits and limitations of strategic planning.

2.1 INTRODUCTION

Strategic planning is a business tool used by a company's executive management to look at the company's own resources and study the environment in which the company operates in order to achieve the company's overall goals (Albrechts & Balducci, 2013:19; Cheng *et al.*, 2014:439). All this information is then used to formulate and implement the major goals that are pursued. This chapter deals with the evolution of the strategic planning concept. This is followed by a discussion of the strategic issues companies face in the contemporary business environment. These strategic issues include globalisation, emerging markets, corporate governance, issues of corporate social responsibility, sustainability and changes in the business environment. Next, an overview of what the strategic planning process entails and the way strategic planning relates to environmental scanning is discussed. The chapter concludes with the benefits and limitations of strategic planning.

The five main topics to be discussed in this chapter and their associated sub-topics are illustrated in Table 2.1 to guide the reader through the content in the chapter.

Table 2.1: Main topics and associated sub-topics discussed in Chapter 2

SECTION NUMBERS AND MAIN TOPICS	SECTION NUMBERS AND ASSOCIATED SUB-TOPICS
2.2 The evolution of strategic planning	2.2.1 From business policy to classical planning
	2.2.2 Competitive advantage: industry structures and the resource-based view
	2.2.3 Contemporary strategy
2.3 Strategic issues facing companies in the contemporary business environment	2.3.1 Globalisation
	2.3.2 Emerging markets
	2.3.3 Corporate governance
	2.3.4 Corporate social responsibility
	2.3.5 Sustainability
	2.3.6 Change in the business environment
2.4 The process of strategic planning	2.4.1 Environmental scanning as an aspect of strategic planning
	2.4.2 Strategy formulation and selection
	2.4.3 Strategy implementation
	2.4.4 Strategic evaluation and control
2.5 Benefits of strategic planning	
2.6 Limitations of strategic planning	

2.2 THE EVOLUTION OF STRATEGIC PLANNING

In this section, the emergence of strategy and the contemporary views of strategy, as well as other critical constructs in strategic planning, are first reviewed because these concepts are important in business practices. Strategic planning is sometimes referred to as only strategy formulation in the deliberate strategy approach (David & David, 2015:39; Maritz *et al.*, 2011:11; Mintzberg, 1994:25). On the other hand, strategic planning is regarded as a process that includes (a) environmental scanning, (b) strategic formulation and selection, (c) strategy implementation and (d) strategic evaluation and control (Cheng *et al.*, 2014:439).

In the business world, strategic management is more commonly referred to as strategic planning (David & David, 2015:39). Any definition of strategic management must emphasise that it involves integrating all aspects of a company's business, including management, financial issues, production, marketing, information systems as well as

research and development to achieve the company's goals (David & David, 2015:39). This study focused on the environmental scanning practices of top performing South African companies operating in the business world. Therefore, the term strategic planning which includes environmental scanning is used (David & David, 2015:39; Haan, 2014:136; Hitt, Ireland & Hoskisson, 2011:6). The following discussion looks at the evolution of the concept of strategic planning as described by various scholars. Although these scholars use the concept strategic management, however, in this study, the concept of strategic planning is used.

In order to fully comprehend strategic planning, one has to grasp the meaning of the word 'strategy' (Furrer, Thomas & Goussevskaia, 2008:3; Ronda-Pupo & Guerras-Martin, 2012:162). Strategy is an important concept in strategic planning (David & David, 2015:39; Nag *et al.*, 2007:941; Ronda-Pupo & Guerras-Martin, 2012:162). The word 'strategy' is derived from the Greek word *strategos*, which means to lead the army. A military strategist, Sun Tzu, wrote one of the most well-known strategy texts, *The Art of War*. **Strategy as a plan** entails giving direction in companies. **Strategy as a position** refers to a means of positioning a company in the marketplace. **Strategy as a perspective** implies the way the company conducts its business by developing strategies at the outset of business operations as well as strategies that emerge later. **Strategy as a pattern** is concerned with behaviours of the company that are used consistently (Louw & Venter, 2010:16). When **strategy is viewed as a ploy**, it means outmanoeuvring the company's competitors (David & David, 2015:39). **Strategy as a practice** also means the way staff in the company perform their work. This view focuses on staff in companies being flexible and adaptable to change (David & David, 2015:41; Whittington, 2014:89). Strategy is also viewed as the way companies integrate their internal environment with their external environment (Ronda-Pupo & Guerras-Martin, 2012:165). It has been widely used in the military over the centuries by generals to lead, provide direction and use resources effectively (Ronda-Pupo & Guerras-Martin, 2012:164). Nowadays, senior managers employ similar strategies in their companies to achieve their companies' overall goals (Barney & Hesterly, 2015:26; Dess *et al.*, 2014:7; Furrer *et al.*, 2008:4-5). Strategic thinking is essential for senior managers to develop their companies' strategy. Senior managers need a holistic view of the environment in which their companies operate in

order to develop appropriate strategies, which requires the process of environmental scanning (Chrusciel, 2011:7; Nag *et al.*, 2007:943-944; Simon & LaCava, 2014:45).

2.2.1 FROM BUSINESS POLICY TO CLASSICAL PLANNING

The Harvard Business School was the first business school to teach senior management to think strategically, instead of being purely functional (Furrer *et al.*, 2008:3). During the 1950s, the Harvard Business School introduced strategic planning as a course called Business Policy, although strategy as a specific course was only developed later in the 1960s. In addition, the emphasis was placed on strategic managers developing clear goals to direct their companies in achieving these goals (Ronda-Pupo & Guerras-Martin, 2012:164). During this period strategy stressed the importance of companies identifying and aligning their strengths and weaknesses with opportunities and threats in the industry. Hence, the concept of competitive thinking was initiated in Business Policy courses (Furrer *et al.*, 2008:3; Nag *et al.*, 2007:935).

Later, in 1965, Ansoff contributed to the field of strategic planning by introducing the concept of *corporate strategy*, characterised by expanding companies' business operations into other markets while maintaining a strategic focus (Louw & Venter, 2010:19). A key point for companies to consider when adopting corporate strategy is the product, mission and growth strategies to be pursued. The concept of corporate strategy remains widely used in companies today (Furrer *et al.*, 2008:3; Kenny, 2013:33).

In contrast to Ansoff's concept of corporate strategy, Chandler referred to strategy as a way in which companies develop long-term goals and allocate resources in order to achieve their goals. In this manner, strategy was regarded as classical planning (Furrer *et al.*, 2008:3). The focus of the classical planning approach is that both structures and resources are aligned to ensure a company's success. The school of thought of the classical approach is sometimes referred to as deliberate strategy where companies use rational processes and efficient resource allocation to implement their long-term goals (Ronda-Pupo & Guerras-Martin, 2012:165).

The mid-1960s was a period during which most Western companies employed classical planning and many management consulting companies were established. These consulting companies came to contribute to the development of strategic thinking. For instance, the Boston Consulting Group, in association with the Harvard Business School, contributed to the development of the learning curve, which is the way a company progresses in learning new skills (David & David, 2015:39; Louw & Venter, 2010:14).

In the 1970s there was a paradigm shift from the classical planning approach to corporate planning, where companies were concerned with long-range planning and with efforts to reduce costs and to minimise the threat of financial risks. Quantitative analysis became a vital tool in making decisions (Furrer *et al.*, 2008:4; Louw & Venter, 2010:14). This shift was due to the increase in oil prices on international markets, accompanied by general economic instability, which normal classic planning could not accommodate. As a result, competitiveness among companies and in industries gained significance and emerged in strategic planning. During this period, senior managers became concerned about the competitiveness of the environment and sources of competitive advantage (David & David, 2015:39; Louw & Venter, 2010:14).

2.2.2 COMPETITIVE ADVANTAGE: INDUSTRY STRUCTURES AND THE RESOURCE-BASED VIEW

Competitive advantage refers to a company's resources and capabilities that allow it to overcome the competitive forces in its industry (Dess *et al.*, 2014:7). The emergence of competitive advantage and the need to earn profits compelled companies to identify their sources of competitive advantage and the manner in which they competed (David & David, 2015:42; Dess *et al.*, 2014:7). The main focus of strategic planning during the 1980s was on companies understanding their relationships with their external environment in order to improve their performance (Guerras-Martin, Madhok & Montoro-Sánchez, 2014:71; Parnell, 2010:26). The concept of competitive advantage is referred to as the positioning school in strategic planning thinking (Furrer *et al.*, 2008:4).

Early in the 1990s, there was a shift from the positioning school to the resource-based view. The resource-based view theory postulates that a company possesses a group of unique resources. These resources constitute intangible assets, skills and capabilities. Unlike the positioning school where the source of competitive advantage is found in the industry, the resource-based view regards the company's own resources as the source of competitive advantage (Guerras-Martin *et al.*, 2014:73; Peppard, Galliers & Thorogood, 2014:3). For instance, information acquired through environmental scanning and senior managers' skills are viewed as sources of competitive advantage because they are scarce, difficult to imitate and take a long time to accumulate. When these resources are difficult to substitute, they may offer a substantial and sustainable competitive advantage (Barney & Hesterly, 2015:86; Dess *et al.*, 2014:7). In essence, the resource-based view theory indicates that companies operating in the same industry or marketplace, having similar resources and following the same strategies in their respective businesses, will not all perform the same because each company uses its own particular resources differently (Barney & Hesterly, 2015:86; David & David, 2015:191).

2.2.3 CONTEMPORARY STRATEGY

In strategic planning, it is essential to discuss contemporary views of strategy relating to deliberate versus emergent strategies. Deliberate strategy is linked with a well-defined process of formulating strategy. Here, strategy formulation, implementation and evaluation occur in distinct phases. This approach involves senior managers crafting strategy with a clear vision; the ends and means are stipulated in a strategic plan and there are processes and systems in place for achieving the company's goals (Maritz *et al.*, 2011:11). However, it is argued that strategy formulation and implementation cannot really be separated. Emergent strategy is adaptive in nature; it allows companies to learn through trial and error. This approach to strategy-making does not require predefined strategy; formulating and implementing strategy occur simultaneously. Emergent strategies come into being in response to changes in the company's external environment as the need arises. When a company achieved its plans, this is referred to as the *realised* strategy, it is a combination of the original (deliberate) and new (emergent) strategies (Dess *et al.*, 2014:10; Pretorius & Maritz, 2011:3-4).

Although strategic intent is a more elusive and less well-defined concept, it remains a guiding purpose to every company's members, as it makes a strong statement as to the path the company has chosen to take towards its long-term goals. However, it creates a challenge to evaluate the implementation of strategy. Nonetheless, whether a company employs a deliberate or emergent strategy, strategic intent provides the reason and vision that can be pursued over the long term in a turbulent business environment (Maritz *et al.*, 2011:15). Strategic thinking in contemporary times is regarded as a very distinct construct in strategy and is associated with the emergent strategy approach (Dess *et al.*, 2014:11; Furrer *et al.*, 2008:4). Strategic thinking is an essential tool because it enables senior managers to assess and construct concepts that are employed to design a desire future. In essence, the design can be used in companies when senior managers utilise the concepts thus developed to determine what competencies must be improved in order to achieve the kind of results envisaged for the ideal future (Liedtka, 2000:197). This approach to strategy asserts that strategic planning is not a 'once-off' act comprising strategic formulation , implementation, and control, but is instead a continuous process (Dess *et al.*, 2014:11; Kim, 2015:106). In terms of environmental scanning, this approach reflects the company activities internally, as well as the complexity of the external environment, and is aimed at devising a strategy to adapt to changes in the external environment (Kim, 2015:106; Klag & Langley, 2014:274; Simon & LaCava, 2014:45).

The most important component of the recent developments in strategic planning is the concept of *dynamic strategy* or disruptive innovation. During the 1990s, the emergence of globalisation, the increasing pace of technological innovation and other rapid changes in the external environment required companies to implement a dynamic strategy in order to cope with change and become proactive; strategic thinking and practices adopted a dynamic strategy (Ke & Diao, 2016:272-273).

In the 2000s, the focus of strategic planning was on innovation where companies needed to be flexible and adapt to changes in their external environment. During this period companies began to seek partnerships and alliances. Up to the present, the concept of innovation and being flexible has remained highly relevant (Guerras-Martin *et al.*, 2014:74).

Another contemporary concept in strategic planning is the *blue ocean strategy*. “Blue oceans” represent the *unknown* markets and industries not yet in existence. In a competitive business environment, companies employ strategies to outwit their competitors, as in the case of the red ocean strategy. All *known* businesses are referred to as “red oceans”, and competition exists among companies operating in the market. In contrast, the blue ocean strategy renders the competition immaterial by constructing or forming a new market space where there are no competitors (Kim & Mauborgne, 2005:105-106). Blue oceans are constructed from untapped markets, even though some blue oceans are formed within existing boundaries (Kim & Mauborgne, 2005:106). Constructing blue oceans entails reducing a company’s costs while increasing the value for customers and enhancing the value of a company (Kim & Mauborgne, 2005:109).

In the 21st century, strategic planning thinking focuses on strategy that includes corporate social responsibility, sustainability and companies’ stakeholders (Guerras-Martin *et al.*, 2014:74). To be successful, companies are nowadays expected to include stakeholders’ views in their strategies (Kenny, 2013:39; Klag & Langley, 2014:280).

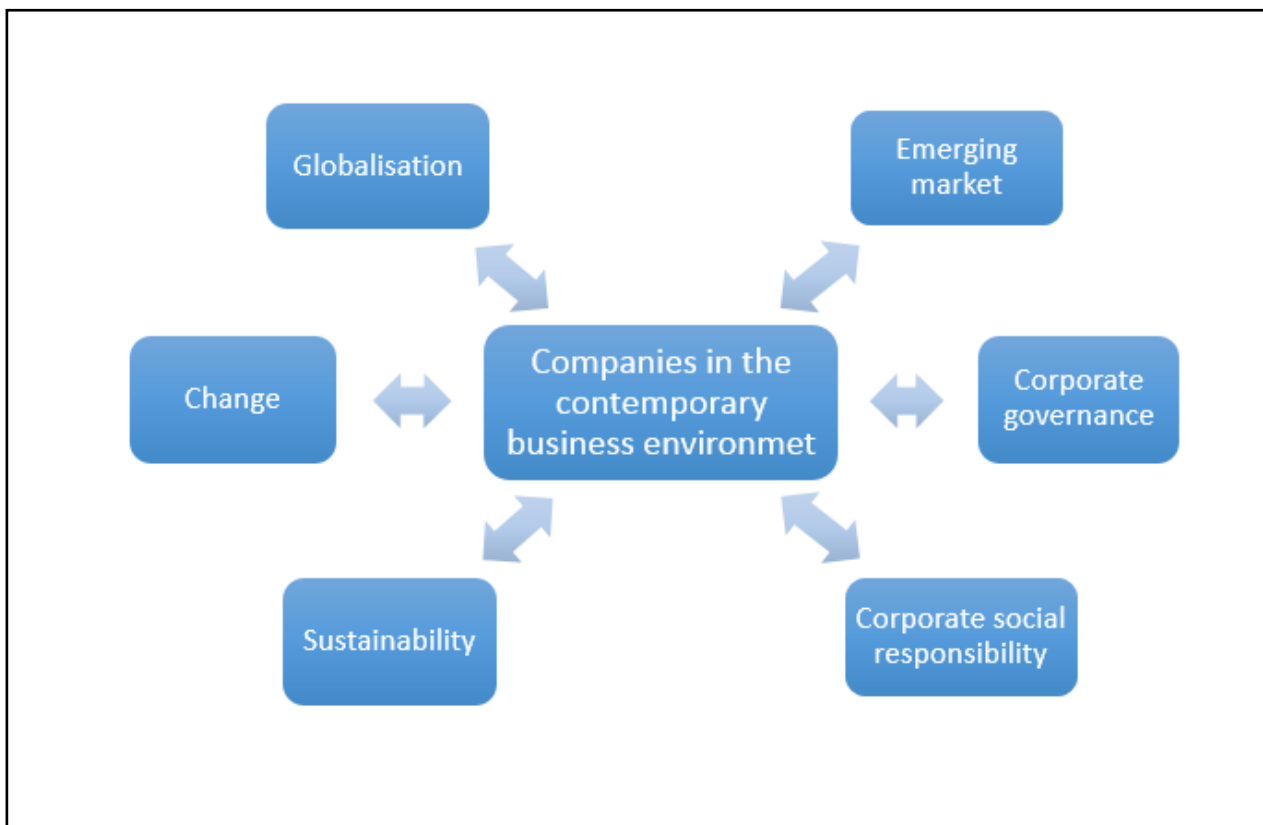
It is maintained that there is not one approach to strategy and that companies can implement strategies to respond effectively to the complexity and uncertainty in today’s business environment (Furrer *et al.*, 2008:3). Nag *et al.* (2007:943-944) suggest that a combination of deliberate and emergent strategies is necessary because this enables companies to align their strategies with the internal and external environment. Environmental scanning is primarily associated with the deliberate strategy approach, but it can also be valuable to the emergent strategy approach.

The emergence of strategy and the different schools of thought relating to strategic planning were discussed above. The next section focuses on the strategic issues that companies face in the contemporary business environment, because these are some of the issues that senior management need to consider during corporate strategic planning.

2.3 STRATEGIC ISSUES FACING COMPANIES IN THE CONTEMPORARY BUSINESS ENVIRONMENT

Companies are open systems and are consequently influenced by trends and events in the external environment. It is, therefore, necessary to explore the strategic issues in the contemporary business environment and the possible influence they may have on companies' business activities (Cancellier *et al.*, 2014:612). These strategic issues are globalisation, emerging markets, corporate governance, corporate social responsibility (CSR), sustainability and change. These six issues, summarised in Figure 2.1, are discussed below.

Figure 2.1: Strategic issues facing companies in the contemporary business environment



Source: Adapted from Jansen van Rensburg, Davis and Cronjé (2013:60).

The strategic issues facing companies in the contemporary business environment are discussed below, starting with globalisation.

2.3.1 GLOBALISATION

The term globalisation means the global integration of companies in their business activities. Although globalisation has dramatically speeded up in recent times, it has actually been in existence for some time, albeit in a different form to that of today (Hitt *et al.*, 2011:10). In ancient times companies traded in different parts of the world, to which the sea-going voyages of the Vikings and Phoenicians can attest. In the 21st century, globalisation presents opportunities for companies to export their products, invest in foreign countries and interact with other companies globally. For example, in South Korea, foreign direct investment (which is an aspect of globalisation) played a critical role in transforming the country's economy (Min & Smyth, 2014:373).

Globalisation entails shifting from national economies to a more interdependent economic system (Neuland, 2010:387). As such, companies are developing global or international strategies in order to reduce costs and enter new markets (Min & Smyth, 2014; Neuland, 2010). In line with this thinking, environmental scanning in top performing South African companies can assist senior managers to take advantage of the opportunities that globalisation presents. However, these companies also have to contend with the threat posed by global competitors.

2.3.2 EMERGING MARKETS

In the 1980s, Van Agtmael first mentioned the term emerging market as it is known today (Sako, 2015:27). *Emerging markets* or emerging market countries are considered countries that are enhancing their economies for the purpose of improving performance relative to more developed countries (Ioana-Cristina & Gheorghe, 2014:41). Developed countries are regarded as countries whose economies are advanced. Emerging market countries are in a transitional stage from developing countries to developed countries, are engaging in political transformation, innovation and economic restructuring and provide new opportunities for investors (Ioana-Cristina & Gheorghe, 2014:40; Kalasin, Dussauge & Rivera-Santos, 2014:77; Sako, 2015:27).

Emerging market countries have an immense influence on neighbouring countries. Economic prosperity in these countries will drive development in the countries that adjoin them (Ioana-Cristina & Gheorghe, 2014:41). In 2012 Argentina, Brazil, China, India, Estonia, Hungary, Indonesia, Poland, Russia, South Africa, South Korea, and Turkey were regarded as emerging market countries (Ioana-Cristina & Gheorghe, 2014:42). The leading of these are considered to be Brazil, Russia, India, China and South Africa, a group known as BRICS (Sako, 2015:29). The largest emerging market countries are China and India (Ioana-Cristina & Gheorghe, 2014:41).

China's economic growth has had a significant impact on the world economy (Ioana-Cristina & Gheorghe, 2014:42; Kalasin *et al.*, 2014:76). It has been estimated that by 2025, China's economy will take first place in the world economy with the United States of America (USA) in second place (Ioana-Cristina & Gheorghe, 2014:41). Further estimates indicate that Russia's economy will overtake Germany's economy by 2050 (Ioana-Cristina & Gheorghe, 2014:44). With this in mind, emerging market countries need to be seriously considered when exploring strategic issues in the contemporary business environment. In terms of environmental scanning, senior managers in top performing South African companies need to be aware of these analyses and the available information.

It is relevant to highlight that the various emerging market countries are in different phases of development and the pace of development is different from one country to another. Therefore, all emerging markets cannot be expected to behave in the same manner. Nonetheless, emerging market countries have some characteristics in common. All emerging markets are geographically large, they have large populations and their markets have potential for growth. In addition, they are considered to have the capacity to produce or purchase a wide range of products. These markets will lead to further growth expansion in the countries that surround them (Ioana-Cristina & Gheorghe, 2014:40).

2.3.2.1 Challenges facing emerging markets

Even though emerging market economies offer economic growth, they may have a negative impact on investors' funds. For instance, in the financial sector, emerging market countries are exposed to large fluctuations on the foreign exchange market. Such

fluctuations could negatively affect investors' funds (Ioana-Cristina & Gheorghe, 2014:41; Kalasin *et al.*, 2014:76). Research reveals that emerging market countries are unstable and highly unpredictable (Sako, 2015:29). These countries are associated with political instability as well as high market risk. However, for investors who believe the adage that the “higher the risks, the higher the returns”, there is no hesitation in investing in these countries (Ioana-Cristina & Gheorghe, 2014:42; Kalasin *et al.*, 2014:76).

In many emerging market countries, the government plays a major role in influencing the economy. Corporate transparency and enforcement of the legal rights of investors remain problematic (Kalasin *et al.*, 2014:77; Sako, 2015:29). Corruption is an issue that many emerging market countries still have to address, as this can quickly drive investors away. Therefore, there is a need for emerging market countries to restructure their financial, political and legal systems. Such restructuring will enhance the political and economic stability of these countries (Kalasin *et al.*, 2014:78).

2.3.2.2 Importance of emerging market countries

Emerging market countries are very important. Firstly, emerging markets are regarded as the “future markets” (Sako, 2015:28). The decline of markets in developed countries will compel companies to seek new markets for their products and services and, as such, businesses in developed countries will look to emerging market countries; at least because of their large population sizes they will become the largest group of customers or clients in the world (Ioana-Cristina & Gheorghe, 2014:40; Sako, 2015:29).

Secondly, emerging market economies are growing rapidly and contributing immensely to the world's growth of trade. It is estimated that by 2020, the five largest emerging market economies (China, Brazil, India, Russia and South Africa) will be the largest buyers of goods and services (Ioana-Cristina & Gheorghe, 2014:42).

Thirdly, emerging market countries are becoming prominent globally in the world's major political, economic and social podiums (Sako, 2015:28). For instance, South Africa as an emerging market country was approved as a non-permanent member of the United Nations Security Council in 2006. Although South Africa might not have a strong political

influence on developed countries, its role is increasingly being recognised by developed countries (Oloo, 2016:3).

2.3.3 CORPORATE GOVERNANCE

Before examining the issues of corporate governance, it is necessary to consider stakeholder theory because much of corporate governance is concerned with stakeholders. Stakeholders are groups or individuals who can affect or be affected by the senior management's decisions and, therefore, have expectations from a company (Carroll, 2015:92; Mayfield, 2014:69).

Stakeholder theory is viewed as the way in which a company interacts with its stakeholders while achieving the company's overall goals (Carroll, 2015:92). There are two categories of stakeholders, namely primary and secondary stakeholders. Primary stakeholders are directly involved with the company and have legal claims in the company. They include staff, customers, shareholders, managers or owners. On the other hand, secondary stakeholders, which include government, regulators, competitors and society at large, do not have legal claims in the company and are not directly involved in the company's business activities (Carroll, 2015:92; Smith, 2015:89). In this light, companies are compelled to address the following two important aspects (Kenny, 2013:37):

- Identify their key stakeholders' interests.
- Identify the threats and opportunities stakeholders present.

The above-mentioned aspects are critical and senior managers have to decide on and implement the most appropriate strategies to address these challenges, thus satisfying their stakeholders (Carroll, 2015:92; Kenny, 2013:38; Kirat, 2015:3).

Governance originated from the Latin word *gubernare*, which means to steer. In business terms, it refers to the direction and mechanisms that are applied to the stewardship of a company's assets in pursuance and delivery of sustainable value creation (Min & Smyth, 2014:373). Prior to the 1990s, the issue of corporate governance was not a central phenomenon in most companies. However, in the 21st century it has gained major

attention and does influence the ways companies perform their business (Carroll, 2015:89). Corporate governance refers to the manner in which companies implement and evaluate their actions in relation to their stakeholders with the aim of minimising negative effects or managing reputational risks (Min & Smyth, 2014:373). Corporate governance is a universal concept in both international and local companies. The sole purpose of corporate governance is to integrate as nearly as possible the interests of individuals, society and the company (Min & Smyth, 2014:373; Zalewska, 2014:2).

In South Africa, the King II Report on Corporate Governance was revised in 2009 when the King III Report on Corporate Governance was compiled. This report was compiled based on amendments to the Company Act, with rigorous legislation incorporating international corporate standards as well as stakeholders' expectations. More recently, the King IV Report on Corporate Governance was published, refining the philosophy of the King III Report. The rationale of this report focuses on good leadership, sustainability and good corporate governance (Institute of Directors, 2016:3).

It is important to highlight that the King Reports are mere guidelines and that they are not promulgated as acts like the Cadbury Act in England. Association legislation (e.g. Insider's Trading Act) based on principles of corporate governance served as basis for the development of the King Reports in South Africa (Muswaka, 2013:68). The JSE requires that listed public companies report on their corporate governance and adhere to the King Report guidelines (Doni, Gasperini & Pavone, 2016:188).

Practising good corporate governance in South African companies is vital for various reasons. Firstly, it is a good indication of a company's image. Hence, it attracts investors and serves as a countermeasure to corruption and poor or unethical corporate governance. As a result, it attracts global capital into a country (Hitt *et al.*, 2011:286).

Secondly, companies cannot sustain concealment of unethical business practices from their stakeholders and especially their shareholders, because nearly all transactions the companies carry out are captured on their systems. Good corporate governance prevents corporate disasters such as the case of Enron and WorldCom in the 2000s and the recent

Fidentia crisis in South Africa, where corporates enriched themselves through poor governance or plain malpractice (Carroll, 2015:89).

Lastly, corporate governance is expected to add value to the companies' identified stakeholders; thus enhancing the sustainability of companies (Hitt *et al.*, 2011:286; Zalewska, 2014:2). In essence, corporate governance is concerned with integrating the goals of individuals, society and companies and focuses on internal control systems in a company. Above all, it is about exhibiting responsible leadership in companies; leadership that is transparent, ethical and accountable to the company's stakeholders (Zalewska, 2014:4).

Corporate governance is predominantly the responsibility of the board of directors (Carroll, 2015:89). The board of directors is the highest decision-making body in companies. These directors include non-executive members as well as executive members and may include senior managers of other companies (Min & Smyth, 2014:373). It is suggested that the inclusion of non-executive members on the board is a good indicator of commitment to corporate governance, as this enhances corporate transparency. Furthermore, these directors are highly experienced, very knowledgeable and, therefore, add value to the company (Min & Smyth, 2014:375; Zalewska, 2014:2).

On the other hand, senior management is charged with the responsibility of managing the company and implementing the decisions made by the board. It is argued that corporate governance facilitates bringing everyone on to the 'same page' and thus preventing misunderstandings and potential conflicts between stakeholders (Hitt *et al.*, 2011:287; Zalewska, 2014:3).

2.3.4 CORPORATE SOCIAL RESPONSIBILITY

Corporate social responsibility (CSR) is a strategic issue in the contemporary business environment, which is associated with the image and reputation of companies. Linked to the King Report on corporate governance, companies are required to report on the triple bottom line, which includes CSR. CSR is regarded as the manner in which a company combines economic, social and environmental concerns into its core value operations and

strategies, thus reflecting transparency and accountability. It entails the following (Kirat, 2015:3):

- Responsibility of companies to influence their communities positively;
- Ethics in behaviour that considers the interests of stakeholders;
- Conforming to legal requirements while achieving the overall goals of their companies; and
- Complying with international standards of behaviour.

Key focus areas of CSR are doing business that is free of corruption, showing concern for the environment and promoting the rights of staff. It further includes satisfying clients, legally competing with competitors in the marketplace and implementing systems to provide transparent business practices, accountability and reporting (Kirat, 2015:4).

CSR is a largely self-regulated set of principles that controls the way a company interacts with its employees, other members of the industry and society at large (Carroll, 2015:88; Kirat, 2015:4). Corporate governance, on the other hand, is a system of rules and regulation that govern the way companies conduct their business in an ethical manner (Institute of Directors, 2016:4). The relationship between corporate governance and CSR is that they both encompass sustainability, as is described below.

2.3.5 SUSTAINABILITY

The word 'sustainability' is based on the principle of sustainable development, which emphasises that development today may not prevent future generations from meeting their own needs (Carroll, 2015:92). Since the 1990s, the importance of sustainability in companies has been increasing, especially when Elkington coined the idea of the triple bottom line (Carroll, 2015:92). The triple bottom line is concerned with companies improving their social, environmental and economic performance (Carroll, 2015:93; David & David, 2015:120).

In South Africa, the JSE undertook a project called the Social Responsibility Index in 2004, which serves as an indicator for investors to identify companies that incorporate

sustainability practices in their business operations. For example, for the purpose of promoting sustainability, plans were made to improve South Africa's long-term climate policy. It was pointed out that the country's climate policy had to be changed because gas emissions would quadruple by 2050 if not revised, which would have an enormously adverse effect on the country (Institute of Directors, 2009:10-11).

In recent times, over 90% of international companies, including those in South Africa, have been publishing their sustainability performance results (Carroll, 2015:93; David & David, 2015:120; Kirat, 2015:5). Sustainability reporting has become a generally accepted practice and South Africa is known to be an emerging leader in the field. These reports are particularly important for top performing South African companies practising environmental scanning to monitor and assess such trends in the environment.

2.3.6 CHANGE IN THE BUSINESS ENVIRONMENT

The environment in which companies operate in the 21st century is often characterised by revolutionary and unpredictable change (Lynch, 2015:71). Before describing the types of change in the external environment, it is important to explore the changes that transform society and companies. When revolutionary change occurs, traditional ways of doing things are replaced with contemporary or modern ones.

Early in the 1800s, steam factories formed the backbone of the industrial age, while later, in the 1990s, there was a paradigm shift with the advent of information technology (IT). The period emphasised information as well as IT and is referred to as the information and knowledge age. The development of micro-computers and the Internet were the main drivers of the information age (Peppard *et al.*, 2014:2). As a result, many companies began to search for information and created ways to manage this information (Raju, 2014:165). Information remains relevant and thus serves as a source of competitive advantage for most companies (Peppard *et al.*, 2014:3).

The information age led to electronic commerce. Electronic commerce is a form of economic activity that entails distributing, marketing, purchasing and selling goods and services via the Internet (Goswami, 2014:82; Popescu, 2015:80). Companies employing

electronic commerce aim to provide effective and efficient services to clients and improve revenue (Popescu, 2015:84). It is maintained that to benefit fully from this form of business activity, companies need to determine and analyse the factors that influence clients' decision to participate in e-commerce (Goswami, 2014:81). In this light, environmental scanning plays a key role because it enables companies to identify and analyse relevant information about their clients (Chrusciel, 2011:7).

Knowledge is a main component of the computer age (Wu, Li, Yu & Wang, 2014:184). Information is a valuable asset and a source of competitive advantage for companies (Peppard *et al.*, 2014:3). Another vital attribute of the knowledge age is the combination of technology. Earlier in the 1990s, for instance, mobile phones, video and Internet were distinct devices intended to perform separate and unique functions. However, technological platforms have converged into a single platform. Mobile phones can be used to access the Internet, send and receive e-mails, take photos and videos, communicate telephonically and so forth. Such dramatic changes make knowledge even more vital. Technological changes have transformed the ways in which companies do business (Raju, 2014:163; Wu *et al.*, 2014:184).

The 21st century is called the digital age, with manufacturing moving from developed countries to developing countries where labour and costs are cheaper, while automation and the advance of artificial intelligence will affect the workplace dramatically and cause social upheaval (Sawicki, 2016; Walsh, 2016:4).

Change in the contemporary business environment can be viewed in terms of predictable and unpredictable change. It can further be viewed as incremental or discontinuous change. Incremental change occurs slowly and is usually predictable, while discontinuous change occurs rapidly and is associated with unpredictability. Discontinuous change is usually revolutionary. For instance, the emergence of the Internet has dramatically changed the ways companies conduct their businesses (David & David, 2015:42; Hitt *et al.*, 2011:42).

Six strategic issues in the contemporary business environment were explored in this section. It is important to understand how senior managers address these issues. This brings the process of strategic planning to the fore.

2.4 THE PROCESS OF STRATEGIC PLANNING

The strategic planning process entails environmental scanning, strategy formulation, strategy implementation and strategic evaluation and control (Cheng *et al.*, 2014:439). These activities are discussed in more detail in Sections 2.4.1 to 2.4.4 below.

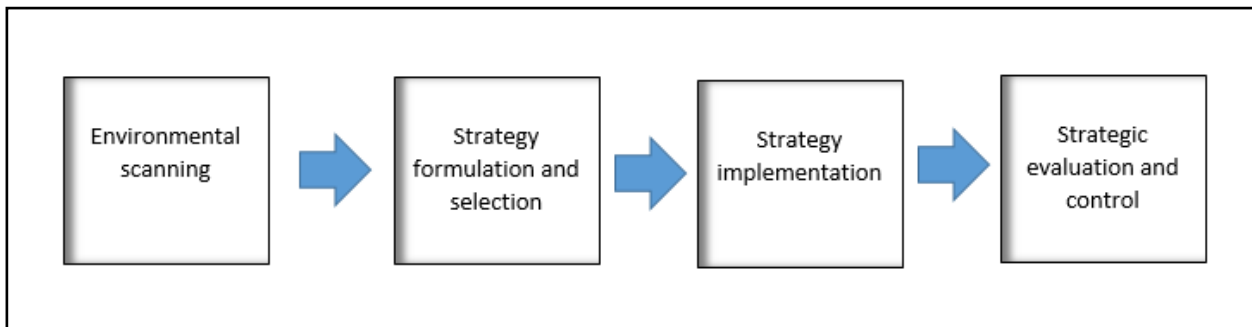
Before discussing these activities, the key terms used in Chapter 2 are defined and presented in Table 2.2.

Table 2.2: List of key terms and definitions used in Chapter 2

Author	Key terms and definitions
Barney and Hesterly (2015:26),	Strategy is defined as a company's commitments and actions designed to acquire competitive advantage.
Lynch (2015:9), Nag <i>et al</i> (2007:943); Furrer <i>et al</i> (2008:4)	Strategic management deals with the major intended and emergent strategies employed by senior managers, involving the utilisation of resources to enhance companies' performance in their marketplace.
Cheng (2014:440)	Strategic planning is a process involving environmental scanning, through which senior managers develop a strategy that assists companies to achieve their goals.
David and David (2015:332)	Strategy implementation entails all the necessary actions taken to implement a company's strategy.
Hill and Jones (2013:423)	Strategic evaluation and control involves evaluating and monitoring the performance and success of a company's strategy.

Figure 2.2 depicts the strategic planning process as identified by Cheng *et al.* (2014:439).

Figure 2.2: The strategic planning process



Source: Adapted from Cheng *et al.* (2014:439).

2.4.1 ENVIRONMENTAL SCANNING AS AN ASPECT OF STRATEGIC PLANNING

Environmental scanning: Environmental scanning is a fundamental aspect in the strategic planning process. It has been regarded as the first task in the strategic planning process, through which senior managers obtain relevant information about the company's external environment (Cheng *et al.*, 2014:440). Information obtained through environmental scanning assists senior managers in planning the company's future course of action. Effective strategic planning occurs only if a company conducts environmental scanning (Aldehayyat, 2015:461; Cheng *et al.*, 2014:440; Du Toit, 2016:16). Environmental scanning is discussed in detail in Chapter 3.

2.4.2 STRATEGY FORMULATION AND SELECTION

Strategy formulation is the phase in the strategic planning process, where strategic plans are developed. It includes careful consideration of stakeholders as well as indicating the company's strategic direction (Albrechts & Balducci, 2013:18; Dibrell, Craig & Neubaum, 2014:2000; King, Case & Premo, 2014:22; Klag & Langley, 2014:274). Strategic direction communicates and guides a company in defining its distinctive strategic objectives and image (Ingenhoff & Fuhrer, 2010:84; Kunc & Bhandari, 2011:1345). It further includes the company's vision, mission and long-term goals (Haan, 2014:142; Hirota, Kubo, Miyajima, Hong & Park, 2010:1135).

Vision: Vision portrays a company's intention in terms of the path the company will follow and sets out the company's strategic course of action in preparing for the future (Hitt *et al.*, 2011:6). A vision statement is concerned with questions such as: What is the company's identity? Where is it going? This statement needs to be put in writing and communicated to staff, so that they know what needs to be done in order to enable the company to achieve its overall goals (Albrechts & Balducci, 2013:19; Shu-Hsiang, Jaitip & Ana, 2015:3710). It is important that the company has a clear vision and articulates it throughout, because this enables the company to define its strategic choices (Haan, 2014:142; Shu-Hsiang *et al.*, 2015:3710).

Mission: The mission addresses the company's reason for being. A mission statement delineates the business scope of the company and comprises the purposes and value statements. It also describes the scope of an organisation in terms of the nature of the business, values, beliefs, moral principles and its behavioural standards and culture (Barney & Hesterly, 2015:27; Chrusciel, 2011:8). The mission can influence the ways in which a company sets its goals. Therefore, it is important that the company's mission is well articulated so that staff understands it and help in achieving these goals (Barney & Hesterly, 2015:27; King *et al.*, 2014:22).

The mission is an integral element of strategic planning. Its main role is to address two significant questions (Babnik, Breznik, Dermol & Nada Trunk, 2014:614; Barney & Hesterly, 2015:27; King *et al.*, 2014:23), namely:

- What is the company's core business?
- What business should the company be in?

In the context of intended and emergent strategies, a good mission statement aligns a company's strategies, goals and tactics (Babnik *et al.*, 2014:613). Intended strategies are planned before business operations. Emergent strategies are crafted when the business is in operation and adapting to changes in the external environment. This means the mission statement can be altered in the light of environmental trends (Leitner, 2015:177). A good mission statement indicates the company's distinct character and is acquired through learning and knowledge of staff (Hirota *et al.*, 2010:1136; Ingenhoff & Fuhrer, 2010:84).

An effective mission statement focuses on three main components: products or services, market and technology. Additional components include profitability, growth and survival, company philosophy, public image, the self-concept of the company, customers and quality (Babnik *et al.*, 2014:614; Hill *et al.*, 2015:13).

The vision and mission statements are important aspects of strategic planning, as they are vital in communicating the company's intention, image and unique character to its stakeholders (Babnik *et al.*, 2014:614; Hill *et al.*, 2015:14; Phaniel Kofi Darbi, 2012:186).

Stakeholders: It is important that companies identify their key stakeholders and clearly indicate their responsibilities towards them. These responsibilities should be considered when formulating the mission of companies. Companies that consider their stakeholders are in a better position to earn their support (King *et al.*, 2014:29; Klag & Langley, 2014:274). Engaging with stakeholders is important in the strategic planning process (Albrechts & Balducci, 2013:18; Kenny, 2013:37; Klag & Langley, 2014:274; Smith, 2015:89). This involves the following:

- **Identifying key stakeholders:** Strategic planning requires the development of strategies. For these strategies to be successful, senior managers in companies must identify their key stakeholders, so as to have an understanding of what these stakeholders expect from them (Kenny, 2013:37; Mayfield, 2014:72).
- **Identifying what the stakeholders want:** This refers to stakeholders' claims. If senior managers do not have information with regard to what it is their stakeholders are looking for, or want, it is almost a guarantee of a company's failure (Kenny, 2013:38; Mayfield, 2014:70). In line with this thinking, environmental scanning becomes relevant, because it enables companies to acquire the relevant information on customers' needs and wants.
- **Developing strategies to accomplish the company's goals:** This phase entails developing strategies to meet stakeholders' needs and expectations (Kenny, 2013:38).

It is a challenge to engage with stakeholders because each stakeholder has conflicting claims and expectations (Carroll, 2015:92). For instance, staff might expect increases in

salaries or personal development. Customers might expect quality products and services. In a marketplace characterised by competition, companies that fail to deliver quality products and services are at risk of losing customers. Fewer customers generally imply reduced revenues. Hence, creating a balance among various stakeholders' expectations is not easy (Carroll, 2015:92). However, when stakeholders are identified, their claims are understood, priorities are assigned to these and these claims are integrated into the mission statement and strategic planning process, it is possible to reconcile stakeholders' expectations (Carroll, 2015:92; Kenny, 2013:38).

Long-term goals: These are referred to as strategic goals. These goals, like the mission statement, focus on areas such as the market in which the company's products will be sold, customer services, employee efficiency and innovation (David & David, 2015:45). These goals are broad and need to be translated into specific, measurable and achievable objectives with time lines (David & David, 2015:45; Shu-Hsiang *et al.*, 2015:3711).

Strategic planning entails defining the company's strategic direction, vision and mission statements. Furthermore, it includes consideration of stakeholders in developing strategies to accomplish the company's overall goals (Albrechts & Balducci, 2013:18; Kim, 2015:107; Klag & Langley, 2014:274). Strategy selection including the four main levels of strategy is discussed below.

Strategy selection forms part of the overall strategy formulation phase and also part of strategic planning. It is an aspect in the strategic planning process, where senior managers choose a particular strategy after careful consideration of the company's vision, mission and long-term goals and identification of opportunities and threats in the external environment (Barney & Hesterly, 2015:27). Senior managers can select several types of strategies at various levels; the four main strategies are briefly outlined below (Hill *et al.*, 2015:19).

Corporate-level strategy refers to multi-business strategy or a strategy concerned with a conglomerate. It looks at which business activity a company should be involved in to produce the best long-term profitability and growth of the company. Corporate-level strategies provide direction that the company can use to achieve its strategic goals. These

strategies are concerned with the company's selection of products and markets (Hill *et al.*, 2015:19; Hitt *et al.*, 2011:158). Corporate-level strategies indicate the action a company takes to acquire competitive advantage in more than one industry. These strategies enable the company to produce above-average returns, thus creating value (Barney & Hesterly, 2015:29).

Business-level strategy deals with a company's total operating paradigm, namely its place in the industry to be as competitive as possible (Hitt *et al.*, 2011:100). Business-level strategies enable a company to gain a competitive advantage in its industry. These strategies consider all a company's plans and strategies to compete successfully (Hitt *et al.*, 2011:105). Business-level strategies are concerned with the company's planned choices on how to provide for its customer's needs, to counteract activities of competitors and to cope with current market conditions. Furthermore, it enables the company to sustain its competitive advantage in the marketplace (Barney & Hesterly, 2015:124; Hill *et al.*, 2015:19).

Global strategy entails a local company expanding its business operations into a foreign market. The main reason for companies to pursue a global strategy is to exploit global opportunities in the marketplace. It enables companies to benefit from economies of scale by expanding their current market size. The companies' structure, the culture of people in the foreign market, marketing and financial strategies are key considerations when intending to pursue this strategy, which enables companies to succeed in foreign markets (Hill & Jones, 2013:266; Hill *et al.*, 2015:248).

Functional-level strategy aims to enhance the effectiveness of a company's existing operations and attributes. Functional-level strategies are concerned with activities such as improving the company's marketing strategy, product development and being responsive to customers. These strategies are therefore aimed at enhancing the efficiency of a company's business activities (Hill *et al.*, 2015:19; Hill & Jones, 2012:93).

2.4.3 STRATEGY IMPLEMENTATION

Strategy implementation is the second phase in the strategic planning process, which entails action to implement the planned strategy. This introduces the concept of the balanced scorecard. Kaplan and Norton (2006:6) initiated the four-perspective framework of the balanced scorecard. The term 'balanced scorecard' was coined at the beginning of the 1990s and it emphasises short-term performance as well as long-term results (Möller & Schaltegger, 2005:74; Wanyutu, 2014:6). It is a method used to measure financial and non-financial performance. It measures companies' success using four perspectives, namely a financial perspective, a customer perspective, an internal business process perspective and a learning and growth perspective (Kaplan & Norton, 2006:6; Upadhaya, Munir & Blount, 2014:855; Wanyutu, 2014:6). The balanced scorecard plays a key role in strategy implementation, as it is used to translate long-term goals into short-term achievable goals. It links strategic goals with companies' strategies, enhances learning and provides feedback to senior managers (Kaplan & Norton, 2006:6; Wanyutu, 2014:22).

Strategy formulation and selection of the company's strategy are conceptual processes, whereas strategy implementation is an *actionable* aspect of strategy (Barney & Hesterly, 2015:30; David & David, 2015:332). The implementation of strategy requires the strategy to be explained to all staff throughout the company who must know their responsibility in implementing the strategy (David & David, 2015:335; Speculand, 2009:169). Furthermore, there must be alignment between the strategy and the way a company manages its activities, integrating the company's culture with its strategy. Senior management must also put in place evaluation processes through which the strategy is evaluated, allowing adjustments to the strategy to address or respond to changes in the external environment (Barney & Hesterly, 2015:30; Speculand, 2009:171).

Strategy implementation poses a number of challenges. Firstly, not all senior managers and staff understand the required vision to implement the strategy. Secondly, approximately 85% of senior managers allocate their time to daily activities, while only 15% spend time on strategic issues. Thirdly, most companies do not align rewards to the chosen strategy. Lastly, inadequate resource allocation could hinder successful implementation of the strategy (Speculand, 2009:171). However, strategy implementation

can be enabled by the following six key drivers: policies, leadership, the company's culture, reward systems, resources and the company's architecture (Barney & Hesterly, 2015:30; Hill *et al.*, 2015:397). These six drivers of strategy implementation are briefly discussed below.

Policies are set rules and procedures established by a company under which its business is conducted. Policies will be concerned with the activities of the staff and cover all aspects of the way a company carries out its business. Obviously a company strategy must take cognisance of, and not be at odds with, the company's policies (Barney & Hesterly, 2015:30; David & David, 2015:338).

Leadership is crucial in the strategic planning process. Leaders guide, inspire and motivate staff in implementing strategy (Dess *et al.*, 2014:346; Hill *et al.*, 2015:411). Leadership plays a key role, ensuring that companies adapt to changes in the external environment, thus enabling companies to become successful (Dess *et al.*, 2014:350). It is argued that most staff members do not resist change, especially when leaders communicate the change to them in the right manner (Hill *et al.*, 2015:411; Lawler & Worley, 2006:2; Speculand, 2009:168).

Culture is the values and beliefs of a company – basically 'the way things are done'. A company's culture is defined as the specific collection of symbols, values, beliefs and norms that are shared by staff in an organisation and that influence the way they interact with internal and external stakeholders (Hill *et al.*, 2015:397; Hitt *et al.*, 2011:23). Organisation theory postulates that culture is a unique way in which staff in a company influence the way the strategy is implemented (Wei, Samiee & Lee, 2014:51).

Every company exhibits a unique culture. One such culture is an organic culture, where companies adapt and respond more quickly to changes in the external environment. Apple and Google are two companies that demonstrate a culture of adapting to changes in the external environment very quickly (Speculand, 2009:171; Wei *et al.*, 2014:51). A company's culture is so influential that it reflects the way the company rewards its staff (Lawler & Worley, 2006:4; Sisk, 2005:3).

Reward systems refer to policies that provide certain rewards, cash or other incentives, to staff members whose performance have been above expectations and need to be rewarded above their normal remunerations (Dess *et al.*, 2014:283; Hill & Jones, 2013:429). It is maintained that a good strategy may fail when staff are not motivated to implement it. Consequently, companies use both financial and non-financial rewards to sustain staff members' commitment and motivate them in implementing the company's strategy (Dess *et al.*, 2014:283; Hill & Jones, 2013:429; Lawler & Worley, 2006:2). Financial rewards are tangible forms of reward and consist of a combination of bonuses, shares or monetary payments. Non-financial rewards are intangible rewards and include job satisfaction from having a challenging job and a work environment that is pleasant and safe (Zalewska, 2014:4). Non-financial rewards could also include recognition for a job well done (Muczyk & Adler, 2014:44).

Resources are assets that provide added value to a company (Hitt *et al.*, 2011:78; Lynch, 2015:113). Senior managers can allocate resources and use a combination of resources to implement the company's strategy (David & David, 2015:339). A company has two main categories of resources. *Tangible resources* are physical and include financial, human and technological resources, which contribute to a company's added value (Lynch, 2015:113). *Intangible resources* encompass a company's brand identity, culture, information and knowledge. These resources do not merely enable companies to acquire a competitive advantage in the marketplace, but are vital for implementing strategies (Hitt *et al.*, 2011:78; Lynch, 2015:114).

Company architecture, sometimes referred to as organisation design, encompasses all the strategies, structures, systems, and management processes of the company. It is vital because it aligns policies, leadership, culture, resources, reward systems and strategy in a way that enhances successful strategy implementation (Hill & Jones, 2013:416; Hill & Jones, 2012:227).

The company's architecture considers stakeholders, the knowledge, skills and capabilities of staff, as well as processes for the purpose of implementing the strategy. Staff must be able to perform their tasks and possess the required knowledge and skills to implement the strategy. Processes are instrumental in bringing out capabilities. Systems, such as

reward systems, are all geared towards achieving the company's overall goals. Therefore, the company's architecture is viewed as the most significant driver because it combines all the other drivers to ensure successful strategy implementation (Hill & Jones, 2013:416; Hill & Jones, 2012:227).

It is important for companies to check if their strategy is being implemented successfully, therefore there is a need for strategic evaluation and control.

2.4.4 STRATEGIC EVALUATION AND CONTROL

Strategic evaluation and control comprise the final stage in the strategic planning process. In this stage, senior managers evaluate and monitor the performance, progress and success of the company's strategy (Dess *et al.*, 2014:278; Hill *et al.*, 2015:405). There are several types of strategic control systems that can be used in a company. Five of these strategic control systems, namely special alert control, implementation control, the balanced scorecard, behavioural control and informational control, are briefly described below.

Strategic alert control requires swift re-evaluation of a strategy in the light of abrupt and unforeseen events. Such events require immediate review of the company's strategy and its present strategic situation. For instance, the tsunami that occurred in 2004 elicited total re-evaluation of companies' strategies in the travel and tourism industries (Pearce & Robinson, 2007:394).

Implementation control involves breaking down large projects into smaller sub-projects. Each of these sub-projects must provide information on their implementation to assist management to check if the strategy is being implemented successfully. It could involve taking incremental action to ensure the strategy is successfully implemented. In a case where the project greatly exceeds the initial costs associated with it, the strategy will need to be re-evaluated (Pearce & Robinson, 2007:395).

The balanced scorecard, as mentioned earlier in Section 2.4.3, is used in strategy implementation and is a vital strategic control system. The balanced scorecard is used to

measure economic targets, which include strategies to satisfy shareholders (financial perspective). In addition, it focuses on key internal processes that enhance the business performance (internal business processes perspective). The balanced scorecard is also concerned with the required human capital, technology and skills that drive the strategy (learning and growth perspective). Finally, it deals with the company's vision in satisfying its customers (customer perspective) (Hill *et al.*, 2015:407).

Behavioural control involves the manner in which a company implements the strategy by providing a set of rules by which it reaches the goals that have been set. This control system places emphasis on getting employees doing things right in order to achieve the company's goals (Dess *et al.*, 2014:279; Hill *et al.*, 2015:408).

Informational control is concerned with gathering and analysing information from within and outside the boundaries of a company so as to acquire the most appropriate strategy that is aligned with the company's external environment. Informational control determines if the assumptions on which the selection of the strategy was based are still valid. Depending on the company's business activity, such assumptions could require technological change to improve performance (Dess *et al.*, 2014:279). In line with this thinking, environmental scanning becomes essential, because it is a process through which senior managers gather relevant information about the external environment. Such information is vital for strategic control.

2.5 BENEFITS OF STRATEGIC PLANNING

Strategic planning specifies the strategic direction of a company. It outlines the vision and mission, which serve as the purpose of the company's existence (Chrusciel, 2011:8; Kim, 2015:107; Klag & Langlely, 2014:280).

Strategic planning is a means of communicating with stakeholders. Companies that communicate the right information to their stakeholders attract funding (Kim, 2015:110; Klag & Langlely, 2014:280).

Strategic planning enhances change, where senior managers search outside the boundaries of their companies and identify new ideas and new markets. Hence senior managers are able to redefine current strategies to ensure their companies' success (Kim, 2015:109). This benefit describes the essence of environmental scanning (Dibrell *et al.*, 2014:2001).

Strategic planning drives a learning culture within the company, which enhances the capacity of staff to learn and grow (Kim, 2015:109). Strategic planning involves effective leadership; leaders are influential in driving change, which enhances the sustainability of a company (Kim, 2015:109; Klag & Langley, 2014:279). Moreover, it assists senior managers in the selection of appropriate strategies (Albrechts & Balducci, 2013:20). Research reveals that strategic planning also enhances a company's financial performance (David & David, 2015:49). Nonetheless, strategic planning has drawbacks (Kim, 2015:108) which are discussed below.

2.6 LIMITATIONS OF STRATEGIC PLANNING

Strategic planning focuses on strategic initiatives and little attention may be paid to operational issues related to strategic directions (Kim, 2015:109).

Strategic planning is usually associated with a top-down management approach, where senior managers develop intended or planned strategies (Dibrell *et al.*, 2014:2001). These strategies must be flexible enough to allow new emergent factors to be included to avoid losing out on potential business or innovation (Balogun, Jacobs, Jarzabkowski, Mantere & Vaara, 2014:179-180; Klag & Langley, 2014:275).

Strategic planning requires the knowledge and intelligence of senior managers. Should these managers lack knowledge about strategic issues in the environment, this could negatively influence the strategy that is developed. Strategic planning is expensive and time-consuming (Kim, 2015:110).

Previously, strategic planning was carried out by concentrating on the views of the senior management team, without soliciting the views of other stakeholders. Consequently, a

great deal of potentially relevant information was not utilised, with an ensuing negative impact on the strategic planning process (Klag & Langley, 2014:279).

2.7 SUMMARY

The evolution of strategic planning in the business world was discussed. Next, the strategic issues facing companies in the contemporary business environment was reviewed. Thereafter, the literature reviewed the process of strategic planning. This chapter concluded with a discussion of the benefits and limitations of strategic planning.

In the next chapter, environmental scanning, which is the first step in strategic planning, is discussed in detail. The next chapter provides a discussion of the dimensions of a company's external environment. The reasons for environmental scanning as well as the benefits of environmental scanning are explained.

CHAPTER 3: ENVIRONMENTAL SCANNING

Chapter outline:

The purpose of this chapter is to:

- Present a conceptual framework of environmental scanning;
- Describe the four modes of environmental scanning;
- Describe the frequency of environmental scanning;
- Discuss environmental scanning of the company's external environment;
- Highlight Porter's five forces model for industry analysis;
- Explain management's use of the information obtained through environmental scanning;
- Outline the considerations when establishing a formal environmental scanning unit;
- Discuss the benefits of environmental scanning; and
- State the limitations of environmental scanning.

3.1 INTRODUCTION

Environmental scanning is discussed in detail in this chapter. This chapter considers 9 main topics, starting with a definition of the concept of environmental scanning. The reasons for conducting environmental scanning are also highlighted, followed by a discussion of Choo's (2001:2) conceptual framework of environmental scanning. The steps in environmental scanning are also explained. Next, the four modes of environmental scanning – undirected viewing, conditioned viewing, enacting and searching – are reviewed. Thereafter, three types of environmental scanning, classified in terms of frequency, namely irregular, periodic and continuous environmental scanning, are discussed. The focus is next placed on an extensive discussion of the scanning of the external macro-environment; the section covers seven macro-environmental dimensions, namely political-legal, economic, socio-cultural, demographic, technological, ecological and global environments. The focus then shifts to an analysis of the industry environment.

In this regard, literature on industry analysis and Porter’s five forces model of industry analysis is reviewed. This is followed by a discussion of management’s use of the information obtained through environmental scanning. Thereafter, the considerations of establishing a formal environmental scanning unit are outlined. The chapter concludes with a discussion of the benefits and limitations of environmental scanning. These 9 main topics and their associated sub-topics are summarised in Table 3.1, which also guides the reader through the content in this chapter.

Table 3.1: Main topics and associated sub-topics discussed in Chapter 3

SECTION NUMBERS AND MAIN TOPICS	SECTION NUMBERS AND ASSOCIATED SUB-TOPICS
3.2 Concept of environmental scanning	3.2.1 Reasons for environmental scanning
	3.2.2 A conceptual framework of environmental scanning
	3.2.3 Steps in environmental scanning
3.3 Modes of environmental scanning	3.3.1 An undirected viewing mode
	3.3.2 A conditioned viewing mode
	3.3.3 An enacting mode
	3.3.4 A searching mode
3.4 Frequency of environmental scanning	3.4.1 Irregular environmental scanning
	3.4.2 Periodic environmental scanning
	3.4.3 Continuous environmental scanning
	3.4.4 Cross-country differences in the frequency of environmental scanning
3.5 External environmental scanning	3.5.1 Scanning the macro-environment
	3.5.1.1 Scanning the political-legal environment
	3.5.1.2 Scanning the economic environment
	3.5.1.3 Scanning the socio-cultural environment
	3.5.1.4 Scanning the demographic environment
	3.5.1.5 Scanning the technological environment
	3.5.1.6 Scanning the ecological environment
	3.5.1.7 Scanning the global environment
	3.5.2 Scanning the industry environment
	3.5.2.1 Scanning the competitors environment
	3.5.2.2 Scanning the customers environment
	3.5.2.3 Scanning the suppliers environment

SECTION NUMBERS AND MAIN TOPICS	SECTION NUMBERS AND ASSOCIATED SUB-TOPICS
3.6 Porter's five forces model for industry analysis	3.6.1 The degree of rivalry between existing competitors
	3.6.2 The threat of new entrants
	3.6.3 The threat of substitute products
	3.6.4 The bargaining power of buyers
	3.6.5 The bargaining power of suppliers
3.7 Management's use of information obtained through environmental scanning	
3.8 Considerations for establishing a formal environmental scanning unit	
3.9 Benefits of environmental scanning	
3.10 Limitations of environmental scanning	

3.2 THE CONCEPT OF ENVIRONMENTAL SCANNING

Environmental scanning is the process by which senior managers obtain meaningful information about issues outside the company so as to direct the decisions of the company (Cancellier *et al.*, 2014:613; Cheng *et al.*, 2014:439; Yoo & Sawyerr, 2014:29). Scanning the environment is concerned with identifying current problems as well as events in the company's external environments (Albright, 2004:40; Babatunde & Adebisi, 2012:27). The contemporary business environment in which companies operate has become more complex and uncertain (Aldehayyat, 2015:459; Asdullah & Ahmad, 2015:30; Fabbe-Costes *et al.*, 2014:665; Leaptrott & McDonald, 2015:4; Zhang *et al.*, 2011:66). Today, companies are faced with unprecedented challenges, which pose threats to their survival. Because of the rapid changes occurring in the external environment and emerging business practices, it is easy for a company to fall behind, not keeping abreast with these changes (Babatunde & Adebisi, 2012:25; Bhardwaj & Kumar, 2014:638; Zhang *et al.*, 2011:66). Hence, environmental scanning becomes essential for senior managers to understand their external environment and cope with these changes and uncertainties (Babatunde & Adebisi, 2012:25; Bhardwaj & Kumar, 2014:638; Zhang *et al.*, 2011:66). Environmental scanning involves collecting useful information about trends and links in the company's external environment; the information obtained helps senior managers in planning the

course of action for the future (Bhardwaj & Kumar, 2014:638; Cheng *et al.*, 2014:439; Haase & Franco, 2011:1642). It is a process whereby senior managers obtain both factual and subjective information so as to make informed decisions (Babatunde & Adebisi, 2012:26; Cancellier *et al.*, 2014:613).

Companies have no influence over their external environment and it is impossible for senior managers to control the factors in this environment (Agbim *et al.*, 2014:252; Babatunde & Adebisi, 2012:27). However, when companies conduct environmental scanning, they are able to gain understanding of this external environment which enables them to cope with environmental uncertainties, enhance their competitive positions, adapt to changes in the environment and develop proactive conducts in order to succeed in the long term (Aldehayyat, 2015:459; Bhardwaj & Kumar, 2014:638; Fabbe-Costes *et al.*, 2014:668).

The internal or micro-environment is found within the company and the company has direct control over this environment (Agbim *et al.*, 2014:252; Babatunde & Adebisi, 2012:27; Yüksel, 2012:52). The company's external environment is divided into two categories: the macro-environment and the industry environment (Agbim *et al.*, 2014:252; Yoo & Sawyerr, 2014:30; Yüksel, 2012:52). The macro-environment is extensive and includes factors such as government policies, economic conditions, as well as international and local laws. On the other extreme is the industry environment, which constitutes the company's customers, suppliers and competitors, and which does have a direct influence on the company (Agbim *et al.*, 2014:252; Ford *et al.*, 2013:34; Yoo & Sawyerr, 2014:30). As such, the information obtained through scanning the environment includes events, activities and links that are outside the boundaries of the company. Indeed, the prime function of environmental scanning is to help senior management in planning their company's future course of action. Environmental scanning specifically deals with obtaining information about conditions and changes in the company's macro- and industry environments. In addition, environmental scanning enables a company to identify threats and exploit external opportunities (Albright, 2004:40; Babatunde & Adebisi, 2012:27).

The reasons for environmental scanning and the conceptual framework of environmental scanning this study followed, as well as the steps in environmental scanning are next discussed.

3.2.1 REASONS FOR ENVIRONMENTAL SCANNING

There are several reasons why companies engage in environmental scanning, namely to support the strategic planning process, to enhance strategic decisions, to adapt to changes in the external environment and to achieve the company's goals. Ultimately, the main reason for scanning the environment is to ensure the success of a company (Albright, 2004:40).

Environmental scanning is at the core of strategic planning (Albright, 2004:39; Aldehayyat, 2015:460). Environmental scanning enhances corporate strategic planning and assists management to better prepare for the future (Cheng *et al.*, 2014:439). It has been asserted that the worth of strategic planning relies on identifying and understanding the complexity of the factors affecting the company (Albright, 2004:40). Environmental scanning enhances strategic decisions. For example, a company can, by means of environmental scanning, make informed decisions about entering a new market. By scanning the external environment, senior managers can develop strategic plans that are flexible in response to dynamic market pressures. Hence, successful companies are flexible and always learning (Albright, 2004:40; Lau *et al.*, 2012:1230; Taherkhani, Saleh, Nekooie & Mansur, 2012:67; Yoo & Sawyerr, 2014:32).

Environmental scanning is not a once-off process. Continuous scanning and monitoring of the environment help companies to make adjustment in their strategies, enhance performance and ultimately, achieve their goals (Albright, 2004:40; Babatunde & Adebisi, 2012:27; Cancellier *et al.*, 2014:613).

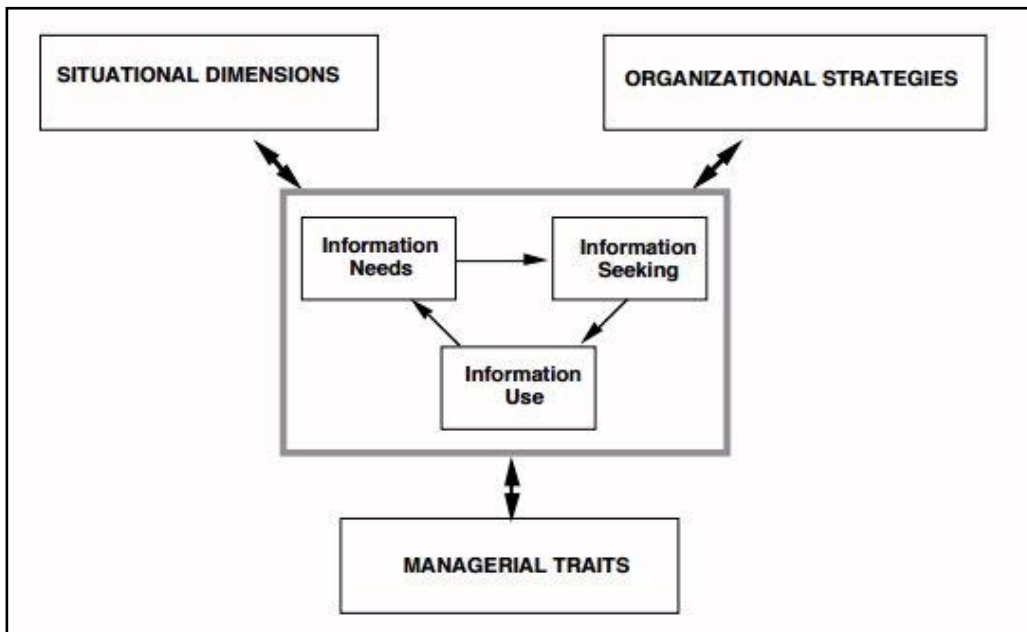
Environmental scanning enables companies to keep abreast of technological changes and external trends, hence enabling companies to become proactive and respond to uncertainties that may arise. For this reason, environmental scanning has been viewed as

the cornerstone that defines the success of a company (Albright, 2004:40; Ford *et al.*, 2013:32).

3.2.2 A CONCEPTUAL FRAMEWORK OF ENVIRONMENTAL SCANNING

This study follows Choo's (2001:2) conceptual framework of environmental scanning shown in Figure 3.1. This framework ties together various aspects of the environmental scanning process and how the information obtained from this process is used in the company's strategic planning process (Choo, 2001:2).

Figure 3.1: Choo's (2001) conceptual framework of environmental scanning



Source: Choo (2001:2).

The six elements of the framework shown in Figure 3.1 are discussed below.

Situational dimensions: The unpredictability of the external environment is one aspect companies must take cognisance of when scanning the external environment. If senior management feel there is less certainty about trends in the external environment, they are likely to perform more frequent formal environmental scanning (Agbim *et al.*, 2014:251; Choo, 2001:2; Yoo & Sawyerr, 2014:38). Unpredictability is characterised by the rate of change of factors in the macro-environment. Since companies do not operate in isolation,

but as open systems, seeking resources to remain in charge of their environments, the companies' strategies are of vital importance (Cancellier *et al.*, 2014:612).

Organisational strategies: Strategy is closely aligned with areas that companies regard as most important. Therefore, information obtained through environmental scanning must assist companies to develop strategies that match their external environment (Cancellier *et al.*, 2014:614; Choo, 2001:2). In line with this thinking, it is clear that senior management play a critical role when designing strategies and conducting environmental scanning enables them to develop appropriate strategies to accomplish the company's overall goals (Li, 2014:305-306).

Managerial traits: It appears that senior managers are actively involved with scanning the environment, because they are responsible for directing the future course of action of their companies (Cheng *et al.*, 2014:439; Choo, 2001:2; Li, 2014:305-306). Consequently, environmental scanning is an essential management tool, which yields relevant information for making strategic decisions (Cheng *et al.*, 2014:439; Yoo & Sawyerr, 2014:29). Therefore, it will make sense to know which particular areas of the industry and macro-environments senior managers pay particular attention to.

Information needs: Senior managers scan many variables and explore different environmental dimensions. These include the political-legal, economic, social, technological as well as industry environments (Albright, 2004:41; Babatunde & Adebisi, 2012:27; Choo, 2001:2; Pallapothu & Krause, 2013:28). Businesses will, of course, focus their scanning on sectors related to their particular industry.

Information seeking: This aspect of the framework is concerned with different methods of environmental scanning. The knowledge and experience of senior managers involved in environmental scanning activities can influence the scanning process (Choo, 2001:2; Courtright, 2007:274). Furthermore, information search could focus on the sources of information. Though information could be available in large volumes, senior managers choose primary sources from individuals and published secondary sources (Albright, 2004:43; Choo, 2001:2). The framework will be complete when information is used.

Information use: Senior managers use the information obtained through environmental scanning for strategic planning. Moreover, companies use the information obtained from environmental scanning to make strategic decisions. The information is further used to enhance learning and to improve the company's performance (Albright, 2004:44; Choo, 2001:2).

3.2.3 STEPS IN ENVIRONMENTAL SCANNING

It has been argued that a formal environmental scanning procedure includes five steps (Albright, 2004:44; Lau *et al.*, 2012:1242). These five steps are explained as follows:

Identifying the company's scanning areas: This is the first step. Senior managers must identify the main dimensions of the external environment to be scanned and decide on who will participate in and on the amount of resources required for the company's environmental scanning practices (Albright, 2004:42; Zhang *et al.*, 2011:66).

Gathering the information: This involves choosing specific sources of information that are used before conducting the actual environmental scanning process; hence making the process more effective (Albright, 2004:42; Zhang *et al.*, 2011:66). A company can choose to collect information from both internal and external sources or from impersonal and personal sources of information. Internal sources of information exist within a company and include the company's employees. External sources of information are not from within a company and include customers' feedback and consultant reports (Leaptrott & McDonald, 2015:5; Lin, Cole & Dalkir, 2014:158), while impersonal sources of information refer to sources that are not from people themselves, such as company reports (Aldehayyat, 2015:463; Haase & Franco, 2011:1644). Table 3.2 lists severely internal and external sources of environmental scanning information and classifies each source as either personal or impersonal in nature.

Table 3.2: Sources of environmental scanning information

INTERNAL SOURCES	CLASSIFICATION	EXTERNAL SOURCES	CLASSIFICATION
Board members	Personal	Customers	Personal

INTERNAL SOURCES	CLASSIFICATION	EXTERNAL SOURCES	CLASSIFICATION
Senior managers	Personal	Competitors	Personal
Employees	Personal	Suppliers	Personal
Internal reports	Impersonal	Government publications	Impersonal
Studies	Impersonal	Consultants	Personal

Source: Adapted from Aldehayyat (2015:463).

Analysing the information: After collecting the information, the next stage is to analyse the information collected, and identify the problems and trends that could affect the company. If there is inconsistency in the information, this procedure will need to be conducted again (Albright, 2004:42).

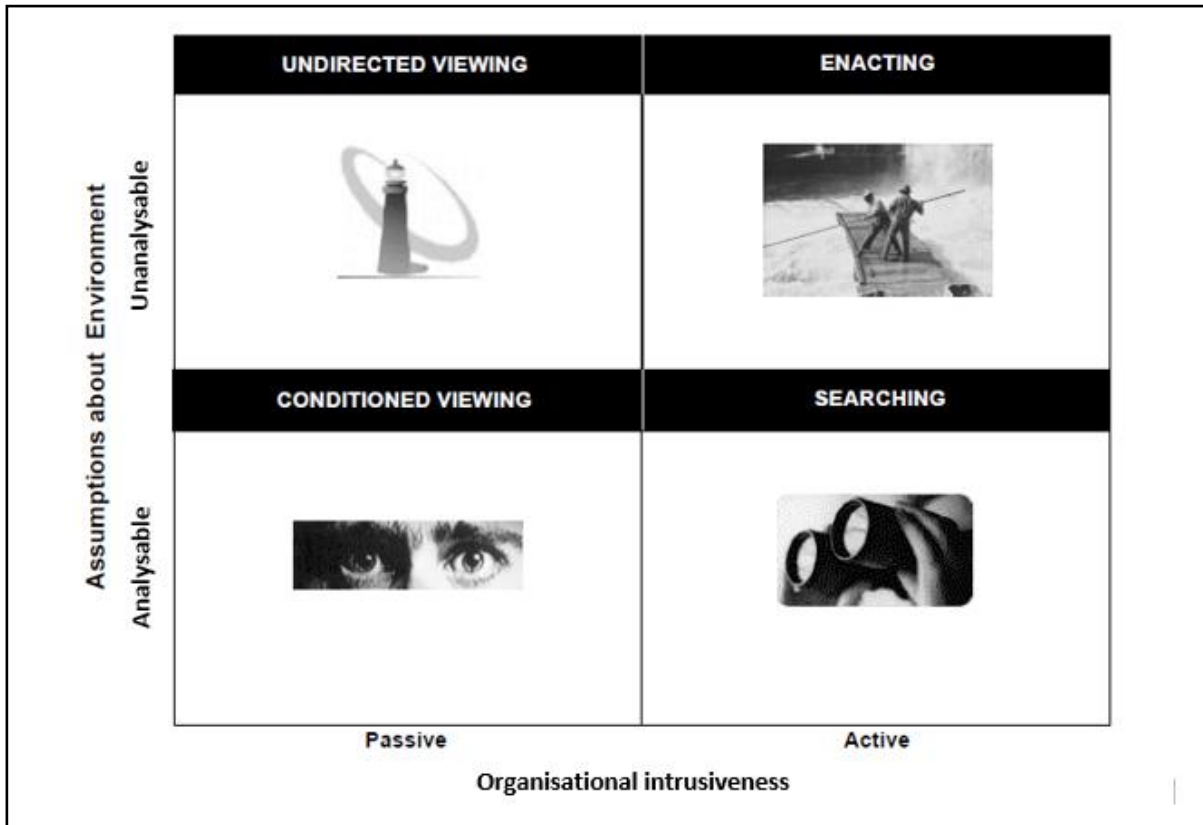
Communicating the results: Once the collected information have been analysed and interpreted, the results have to be reported to relevant users, specifically to senior managers. Because of information overload, senior managers prefer analysed information to unfiltered information (Albright, 2004:42; Xu, Ong, Duan & Mathews, 2011:189).

Making informed decisions: As the final step of the process, senior management can then decide on the most suitable action to be taken (Albright, 2004:43; Cancellier *et al.*, 2014:616).

3.3 MODES OF ENVIRONMENTAL SCANNING

Modes of environmental scanning entail the manner in which a company acquires environmental information. It is important to review the modes of environmental scanning because they indicate the information seeking behaviour of companies with regard to collecting information from the external environment (Choo, 2001:12; Lo, 2014:174; Mayer, Steinecke, Quick & Weitzel, 2013:514). In 1967, four modes of environmental scanning were first identified by Aguilar (Aguilar quoted by Choo, 2001:13). The four modes of environmental scanning are described as undirected viewing, conditioned viewing, enacting and searching (Choo, 2001:13; Du Toit, 2016:17; Hyde, 2000:58). These four modes are illustrated in Figure 3.2.

Figure 3.2: The four modes of environmental scanning



Source: Choo (2001:13).

The four modes of environmental scanning shown in Figure 3.3 are discussed below.

3.3.1 AN UNDIRECTED VIEWING MODE

Undirected viewing refers to the general awareness of trends in the external environment through chance encounters with people outside the company in an *ad hoc* manner (Choo, 2001:13; Jansen van Vuuren, 2002:39). Undirected viewing occurs when a company perceives the external environment to be complex that it is difficult to analyse. For this reason there is no requirement to search actively for information in the external environment or to make an effort to understand it and the information acquired is not well defined. Environmental scanning is done informally and the information obtained is ambiguous and can support several interpretations (Choo, 2001:13; Du Toit, 2016:17).

In terms of environmental scanning, interpretation involves translating data into knowledge, looking more closely at data obtained and providing more insights (Choo, 2001:13; Durst, Durst, Kolonko, Neef & Greif, 2015:93). The use of information is primarily concerned with reducing high levels of equivocality, which refers to the multiplicity of meanings that can be applied to any situation that a company has to deal with (Blomme, 2012:11). The higher the level of equivocality, the greater the difficulty in understanding how the information will be interpreted and used. In such circumstances, obtaining general understanding will require much discussion among senior managers (Choo, 2001:13). A typical case would be that of a company possibly lacking internal resources (such as a family business or partnership), which relies on contact with its immediate business associates, such as sales representatives or suppliers. This method thus has the benefit of not requiring the investment of a formal environmental scanning unit, but does produce poor quality information, leaving the business unprepared (Choo, 2001:14).

Undirected viewing is more dependent on the opinions and beliefs of the company's senior managers. Being entirely subjective, therefore, such information is intrinsically unanalysable (Choo, 2001:14). The company's senior managers and its staff share this belief in behaviours that are not spoken about or examined. Above all, the learning style in undirected viewing is a kind of stimulus and response; that is; the company maintains its status quo, until a powerful stimulus is acknowledged and requires action (Cancellier *et al.*, 2014:616; Choo, 2001:14).

3.3.2 A CONDITIONED VIEWING MODE

Conditioned viewing entails the search for information that is of specific interest to a company (Du Toit, 2016:17; Hyde, 2000:58). Conditioned viewing occurs when a company feels that the external environment is analysable, yet makes no real effort to gather information from the external environment. Such information that is collected usually aims to focus on what a company sees as recurring issues of interest to the business (Choo, 2001:16; Hyde, 2000:58). As such, decisions come to be based on attitudes and concepts that are generally accepted in a specific industry. The company generally uses both internal information and sources of information that are widely accepted within the industry (Choo, 2001:16). The viewing is conditioned in a sense, because its sources of information

are limited to familiar sources, which have accumulated in the industry over time. Moreover, as the company believes the environment is analysable, such data can produce a greater number of rules, which are used to construct a possible interpretation (Choo, 2001:16).

Cultural knowledge is essential in conditioned viewing, because it provides the presumptions and beliefs regarding the business and the environment in which a company is. These beliefs, in turn, lead to questions of who the company's customers and stakeholders are, which environmental areas need particular attention, and what the sources of information are. From these presumptions, companies derive knowledge about their environment. As a result, companies' decisions are influenced by standard industry practices, as well as knowledge acquired from their own experiences (Choo, 2001:16).

The advantage of conditioned viewing is that it provides established processes and shapes the environmental scanning process. However, a limitation is that these established industry norms could prevent companies from detecting emerging opportunities or potentially disruptive technologies and developments (Choo, 2001:17). A case where conditioned viewing was amiss is reflected in the analysis of the computer disk drive industry. Some companies that produced computer disk drives concentrated on dealing with the needs of their existing clients rather than embracing new technologies that found favour with different customers in new markets (Choo, 2001:17). Above all, the learning style in conditioned viewing is that the company uses its current knowledge about what is perceived to be important in its external environment. This shapes the company's environmental scanning activity (Choo, 2001:16).

3.3.3 AN ENACTING MODE

The term enactment refers to an activity that enables people to focus on the world, hence creating experiences (Blomme, 2012:12). *Enacting* occurs when companies perceive the environment to be un-analysable, yet actively search for information so as to influence events in their external environments. Information needs are solicited for the purpose of experimentation and testing the environment. This could entail the identification of fruitful areas that need to be examined (Choo, 2001:17). Companies involved with the enacting

mode of environmental scanning construct their own environment. These companies obtain information by attempting new ways of doing things and seeing the outcomes (Choo, 2001:17).

When companies enact, they disregard conventional rules and expectations and are, rather, concerned with experimenting, testing and stimulating. Information use centres on actions that have been taken. This information is used to minimise equivocality and to test current rules and standards (Choo, 2001:17). Apple is a powerful example. The company produced its range of iPods and iPhones for a market that did not exist at the time, but which has since developed to make Apple one of the world's most successful companies. Another example of enacting would be companies that actively influence their customers or other stakeholders by using the media to transmit information to their stakeholders. Today, companies use the World Wide Web (WWW) as a means of enacting with their environment. For example, companies that exhibit and give away free products or that create new web sites to disseminate information and to solicit feedback from their customers or other stakeholders are engaged in an enacting mode of environmental scanning (Choo, 2001:17; Mayer *et al.*, 2013:515).

When an enacting mode is adopted in a company, its decision-making is guided by its courses of action. Routine solutions are designed and if a solution does not work, it is recycled. Above all, the learning style in enacting is that a company learns by doing, thus implementing new actions to achieve its goals (Choo, 2001:18).

3.3.4 A SEARCHING MODE

Searching is a deliberate attempt to acquire environmental information (Du Toit, 2016:17). The premises of information needs are thoroughly stated and wide in scope. The company is ready for surprises and so it seeks unexpected findings (Cancellier *et al.*, 2014:616). Searching occurs when a company feels the external environment is analysable, so it enters the external environment and collects appropriate information about it (Choo, 2001:18; Lo, 2014:174). Information is sourced from a variety sources, including external sources, such as consultants and industry experts (Aldehayyat, 2015:471; Haase & Franco, 2011:1650; Jogaratnam & Law, 2006:183). Such investigations are quite thorough

(Choo, 2001:18). In most cases, the company tends to have a formal environmental scanning unit, whose senior managers systematically analyse data to identify new markets and produce forecasts and intelligence reports (Cancellier *et al.*, 2014:616; Choo, 2001:19). Searching entails broad, open-ended investigations and companies are prepared to modify and revise current information. Furthermore, searching is expensive because it requires huge resources to collect environmental information (Choo, 2001:19).

When searching occurs, obtaining data is relatively rigorous and could entail intrusive action that includes surveys and focus groups. The importance of searching is to develop and work with explicit knowledge. The company believes that knowledge of the external environment is available, which can be used, and conducts analysis that guides strategic planning. Finally, the learning style involved in searching demands that the company develops the necessary capacity to collect accurate and relevant information and analyse the external environment (Choo, 2001:20).

Table 3.3 summarises the main characteristics of the four modes of environmental scanning.

Table 3.3: Main characteristics of the four modes of environmental scanning

		Organisational intrusiveness	
		Passive	Active
Assumptions about the environment	Unanalysable	Mode 1: Undirected viewing	Mode 3: Enacting
		<ul style="list-style-type: none"> The objectives of environmental scanning are not well-defined. The company relies primarily on informal and personal contacts to acquire information about trends in the external environment. The company usually only becomes aware of issues in the external environment when these issues are raised by external stakeholders. 	<ul style="list-style-type: none"> Senior managers prefer qualitative information when conducting environmental scanning. The company learns by doing. Information obtained through environmental scanning is used to influence outcomes in the external environment.
	Analysable	Mode 2: Conditioned viewing	Mode 4: Searching
		<ul style="list-style-type: none"> The company follows routine procedure when scanning the external environment. The company relies primarily on secondary sources of information that are widely used in its industry Environmental scanning is based on a small number of well-defined issues. 	<ul style="list-style-type: none"> The company has a formal environmental scanning office. The search for information is relatively expensive. The company scans the external environment in a broad and comprehensive way.

Source: Adapted from Choo (2001:15).

3.4 FREQUENCY OF ENVIRONMENTAL SCANNING

The frequency of environmental scanning refers to how often senior managers acquire information about the external environment (Agbim *et al.*, 2014:252). There are basically three types environmental scanning classified in terms of frequency, namely irregular, periodic and continuous environmental scanning (Babatunde & Adebisi, 2012:26).

3.4.1 IRREGULAR ENVIRONMENTAL SCANNING

Irregular environmental scanning is an inconsistent means of performing environmental scanning. It is characterised by responding to a general crisis. When companies adopt an irregular environmental scanning approach, information is encountered by chance and

there is no clearly defined purpose for obtaining environmental information. Such companies are exposed to being caught by surprise for which they are not prepared (Babatunde & Adebisi, 2012:26; Choo, 2001:13; Jansen van Vuuren, 2002:139). The focus of irregular environmental scanning is to reduce uncertainty in the short term. Therefore, this form of frequency tends to fail in detecting radical solutions to potential problems in the long term (Babatunde & Adebisi, 2012:26; Jansen van Vuuren, 2002:140).

3.4.2 PERIODIC ENVIRONMENTAL SCANNING

Periodic environmental scanning occurs at a specific time (such as annually; every six months or at other regular intervals). This type of frequency is more sophisticated than the irregular frequency. Although its focus is on solving problems, it is associated with more proactive action. Companies that adopt a periodic frequency approach are relatively proactive and are forecast-driven. Nonetheless, their forecasts are limited in scope (Babatunde & Adebisi, 2012:27; Jansen van Vuuren, 2002:140).

3.4.3 CONTINUOUS ENVIRONMENTAL SCANNING

Continuous environmental scanning is characterised by a formal search for environmental information. Companies that employ continuous environmental scanning make deliberate efforts to obtain information on a continuous basis (Babatunde & Adebisi, 2012:27; Jansen van Vuuren, 2002:140). As indicated earlier, companies that are involved with the search mode of environmental scanning are inclined to conduct continuous environmental scanning in a detailed manner so as to identify emerging trends in the external environment (Babatunde & Adebisi, 2012:27; Choo, 2001:20). Continuous environmental scanning is characterised by more proactive activities than periodic environmental scanning and the companies adopting this approach invest resources to obtain information about their external environment. As a result, they tend to predict future events and threats in the external environment accurately (Choo, 2001:20; Jansen van Vuuren, 2002:140).

3.4.4 CROSS-COUNTRY DIFFERENCES IN THE FREQUENCY OF ENVIRONMENTAL SCANNING

It has been argued that senior managers conduct environmental scanning on all dimensions of the external environment (Jogarathnam & Law, 2006:174). However, studies investigating environmental scanning in different countries and across different industries suggest that the priorities according to which environmental dimensions are scanned vary depending on the circumstances in each country (Aldehayyat, 2015:465-466; Haase & Franco, 2011:1644-1645). For example, a previous study indicated that companies in developed countries scanned their customers, competitors and technological environment more frequently than any other factors in the external environment (Stewart, May & Kalia, 2008:87).

In Hong Kong, a third of respondents viewed the demographic and political environment as equally important, requiring frequent environmental scanning. Senior managers in Hong Kong companies viewed *customers* as the most important sources of information (Aldehayyat, 2015:462; Haase & Franco, 2011:1645). Countries in which the studies were carried out included Hong Kong (tourism) and Britain (electronics), where the first factor studied was technological change, followed by competition, economic trends, then socio-cultural issues and lastly political factors. In comparison, Greek companies prioritised scanning the economic environment, while, again, political issues were ranked very low (Aldehayyat, 2015:462). In developing countries political issues would seem to take first priority over other business considerations.

In a developing country, such as Nigeria, companies tend to conduct environmental scanning of the political environment using a continuous-frequency approach. Companies in Botswana perform environmental scanning of the industry environment with high frequency (Aldehayyat, 2015:462). As a particular case, and despite the external environment showing perhaps the highest strategic uncertainty of any of the countries studied, Russian senior managers did not perform frequent environmental scanning or adopted an irregular frequency approach (Aldehayyat, 2015:462). However, it is argued that in particular industries where information is accessible, Russian senior managers do,

in fact, conduct frequent environmental scanning (Haase & Franco, 2011:1644; Stewart *et al.*, 2008:87).

The next section offers an extensive discussion of the external environment.

3.5 EXTERNAL ENVIRONMENTAL SCANNING

The external environment can be assessed using two measures, namely changeability and predictability. Changeability is regarded as the extent to which the external environment is likely to change. For instance, changeability in the marketplace for staple food products such as bread and milk is low, unlike the market for mobile phones, which is characterised by rapid and constant technological advancement, including a high degree of changeability (Lynch, 2015:71). Changeability could also constitute novelty and complexity. Novelty refers to the extent to which the external environment presents a company with novel circumstances as well as unique opportunities. Complexity is the degree to which a company's external environment is influenced by globalisation, political and technological factors (Lynch, 2015:71; Van den Berg, 2014:8). Complexity is also defined as the heterogeneity of the external environment or the degree to which the numbers of variables in the environment are closely linked (Mishra, Allen & Pearman, 2015:664; Samsami, Hosseini, Kordnaeij & Azar, 2015:218; Van den Berg, 2014:8).

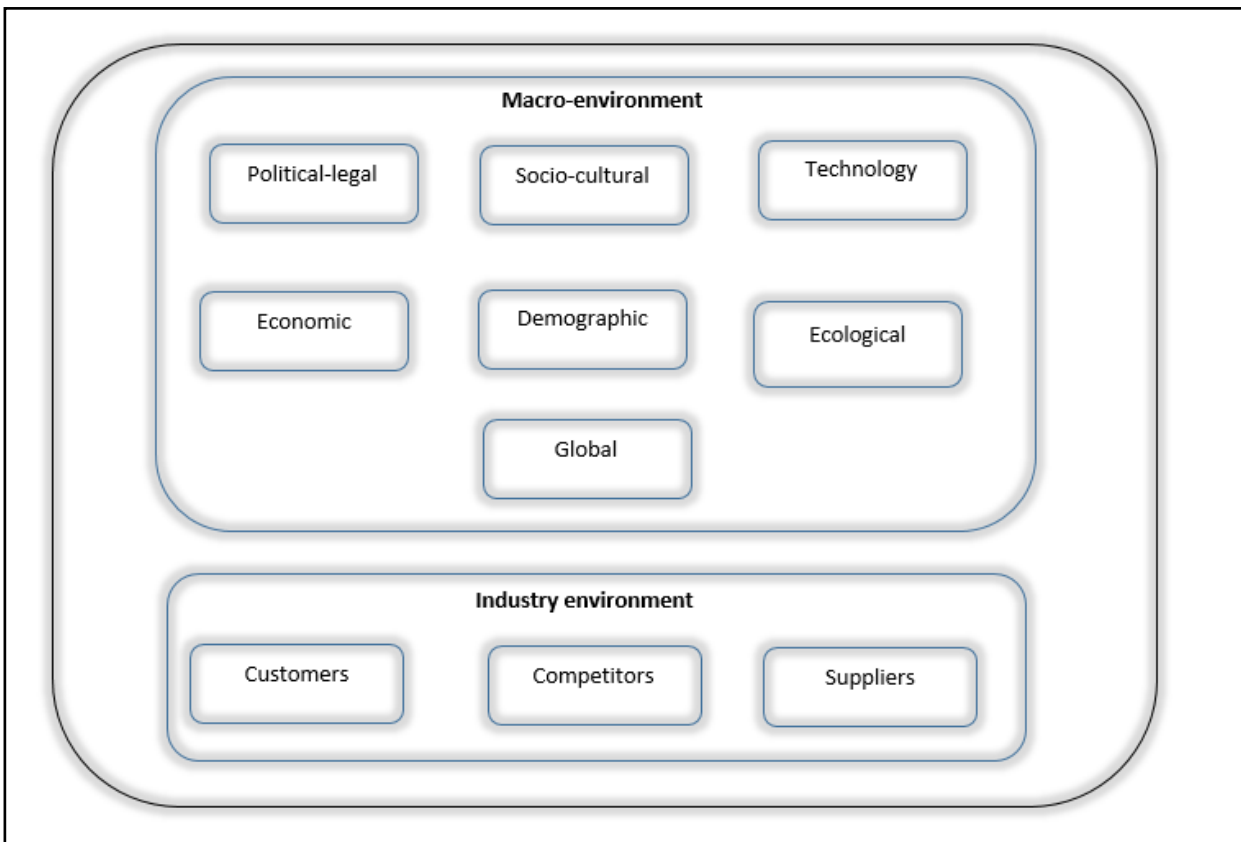
On the other hand, predictability entails the degree to which changes in the external environment can be predicted. For instance, change could be predicted in the automobile industry, but could be a challenge in biogenetics. Predictability can further be categorised into the rate of environmental change, which is either rapid or slow, and future visibility with regard to the availability and appropriateness of the information that is used to forecast future event (Lynch, 2015:71). It is maintained that the external environment is not highly predictable; instead, it is characterised by rapid change, complexity and unpredictability (Aldehayyat, 2015:459; Asdullah & Ahmad, 2015:30).

Environmental analysability is closely linked to the principle of perceived environmental uncertainty (Zhang, Majid & Foo, 2010:723; Zhang *et al.*, 2011:69). Perceived environmental uncertainty is based on the environmental scanner or senior manager's

perceptions of the environment. When senior managers feel that their understanding of the major trends and events in the external environment is incomplete, it triggers their scanning behaviour. Perceived environmental uncertainty occurs when senior managers are unable to determine the likelihood of future events, or lack information about events and trends in the external environment (Samsami *et al.*, 2015:215; Zhang *et al.*, 2010:723). Therefore, perceived environmental uncertainty measures the degree of two environmental characteristics, namely the rate of change and complexity (Choo, 2001:8; Louw & Venter, 2010:191; Zhang *et al.*, 2010:723).

Companies are open systems in a dynamic environment. Hence, understanding the variables or factors of the external environment is crucial. The external environment constitutes everything outside the boundaries of a company. This environment constitutes the macro- and industry environments described below. Figure 3.3 below illustrates the interrelationship between the macro- and industry (external) environments.

Figure 3.3: The dimensions of the external environment



Source: Adapted from Bhardwaj and Kumar (2014:642).

3.5.1 SCANNING THE MACRO-ENVIRONMENT

The *macro-environment*, also referred to as the general or remote environment, includes factors outside the boundaries of companies. These factors influence the way companies operate (Aldehayyat, 2015:461; Blackwell & Eppler, 2014:81). The dimensions of the macro-environment include the political-legal, economic, socio-cultural, demographic, technological and global environments (Aldehayyat, 2015:461; Pallapothu & Krause, 2013:28).

As indicated in Chapter 2, the overall strategic planning process can be guided by the information obtained through environmental scanning (Agbim *et al.*, 2014:252; Dibrell *et al.*, 2014:2001; Lau *et al.*, 2012:1240). Companies require relevant information about the macro-environment in order to develop appropriate strategies (Agbim *et al.*, 2014:252). Hence, the different dimensions of the macro-environment are discussed in detail below.

3.5.1.1 Scanning the political-legal environment

The reason for exploring *political-legal* factors in the macro-environment is to become aware of the political situation in the country in which a company operates. The government of a country can create either an enabling or a deterring business environment through its legislation, policies and regulations. As such, there is a link between the political and legal systems in a country and the business environment (Asdullah & Ahmad, 2015:31; Du Toit, 2016:18).

The political-legal system determines the legal frameworks and regulations that influence companies in an industry (Asdullah & Ahmad, 2015:31; Pallapothu & Krause, 2013:29). The legal system in a country is an important aspect for senior managers to be aware of, because a strong legal system is critical when they are developing corporate strategies and deciding to enter a new market (Khoury, Junkunc & Mingo, 2015:811). A weak legal system, where laws, rules and regulations fail to be enforced will require high investment costs and, consequently, become a barrier for investors to invest in a country. In contrast, a strong legal system is associated with low investment costs and attracts investors. For instance, the political-legal environment in Mauritius is strong. As a result, investors view

Mauritius as a country where they would want to invest (Neuland, 2010:175). Therefore, the potential impact of the political-legal factors is a key issue that needs to be considered when developing investment strategies (Khoury *et al.*, 2015:809).

Some political-legal factors can constrain or otherwise negatively impact companies strategies and operations. Example of political-legal factors that can have a constraining or negative influence include trade policies, tax programmes, labour laws, regulation of e-commerce, pricing policies, as well as safety standards (Babatunde & Adebisi, 2012:27; Taherkhani *et al.*, 2012:67). These factors serve as mechanisms to affect the labour force, consumers, competitors and the public in general. Companies have to conduct their business operations in the midst of these factors, which may have a negative impact on their businesses (Samnani, 2014:39; Taherkhani *et al.*, 2012:67).

On the other hand, some political-legal frameworks tend to protect and benefit companies. Legal systems that protect trademarks, government support and subsidies for businesses, training and development programmes for workers and funds for research and development in strategic areas are relevant examples in this regard (Pallapothu & Krause, 2013:33). Laws protecting the intellectual property of a company are also vital and must be monitored (Albright, 2004:41). Research reveals that some companies are actively involved in spying on other companies' business secrets. A classic example was when a staff member of one company posed as a prospective investor, in order to get information from the rival company's employees. Despite whatever legal protection exists, such unethical behaviour in environmental scanning is not acceptable procedure (Bressler & Bressler, 2014:6; David & David, 2015:239).

The role of government in a country's economy is critical, as it can deter or drive business development. One specific area in which government's role is very important is the way in which a country's laws and regulations stimulate foreign direct investments. Among African countries, the government of Mauritius (which is ranked first on the Ibrahim Index of African Governance) has provided incentives that attract investors. These incentives include the following (Neuland, 2010:176):

- There are no controls on foreign exchange.
- Residence permits for investors are issued within three days.

- The marginal corporate tax rate is 15%.

The above-mentioned incentives create a favourable business environment in Mauritius (Neuland, 2010:176).

Finally, senior managers conducting environmental scanning of the political-legal environment must assess possible political risks (Du Toit, 2016:18). These political risks include the way government intervenes in business operations, possible confiscation of private sector assets by government's inadequate protection of intellectual property and unfair competition from the public sector. In addition, barriers to international trade tend to have adverse economic implications for companies operating in a country, as do unexpected requirements, which tend to tighten foreign exchange controls (Neuland, 2010:176).

The above-mentioned risks are difficult to forecast, because they generally occur unexpectedly. During environmental scanning, aspects such as foreign exchange controls, tax policies, trade regulations and trade barriers need to be considered. Therefore, it is worthwhile for companies to do environmental scanning of the political-legal environment, as it creates an awareness of the political stability of the country in which they conduct business and assists senior managers to respond adequately to unexpected changes that may arise (Babatunde & Adebisi, 2012:27; Taherkhani *et al.*, 2012:67).

3.5.1.2 Scanning the economic environment

The economy of a country has a profound influence on companies and on the industries in which they operate. Economic trends, such as the shifting income and consumption levels of the main population groups in South Africa are significant trends for companies to take cognisance because these reflect the purchasing power of consumers (Du Toit, 2016:17).

The following **four major variables** in the economic environment were identified (Hill & Jones, 2013:71):

The rate of growth in an economy: Economic growth usually leads to an increase in customers' expenditure, business growth and higher profitability (Hill & Jones, 2013:71; Pallapothu & Krause, 2013:30; Samnani, 2014:38).

The level of interest rates: The level of interest rates affects the demand for a company's products and services, becoming a key criterion when consumers have to borrow money to facilitate their purchases, because higher interest rates could restrict the availability of funds needed to purchase luxury products, such as appliances (David & David, 2015:229; Hill & Jones, 2013:71; Samnani, 2014:38). For example, assessing the interest rates in the residential property market in South Africa is extremely important, as transaction costs of property are sensitive to higher level of interest rates (Neuland, 2010:178). Therefore, it is important for top performing South African companies to pay attention to the level of interest rates because it could pose a threat.

Currency exchange rates: Exchange rates are referred to as the value of one currency against another. The movements of exchange rates have an impact on the competitiveness of a company's products in a foreign marketplace (Hill & Jones, 2013:72; Hill & Jones, 2012:73).

Price inflation: Price inflation leads to slower economic growth, higher interest rates and depreciation of currency, which is associated with adverse fluctuation in exchange rates. When price inflation is high, it poses a challenge to predict the future. This, in turn, leads to higher uncertainty about long-term investment decisions. Because of this, foreign investors become hesitant to commit their funding to long-term investments when they perceive the external environment to be uncertain (Hill & Jones, 2013:72; Hill & Jones, 2012:74).

Besides the four major variables in the economic environment described above, companies need to take cognisance of the levels of disposable income, income levels in a country, gross domestic product, gross national product, unemployment rates and commodity market indices. Information on the economic situation can assist companies to prepare for the future (David & David, 2015:230; Du Toit, 2016:17; Samnani, 2014:38).

In terms of the commodity market indices, the movements in the JSE's all share index are aspects to be monitored when conducting environmental scanning on the economic environment. Changes in these figures provide insights into the performance of the economy as a whole, the performance of different business sectors and the performance of individual businesses in a sector – companies likely to be competitors (Alam & Uddin, 2009:44; Mouton & Smith, 2016:790).

Changing economic conditions influence the success of companies' strategies. These economic changes may arise from government policy. There is a link between government policy and economic conditions (Babatunde & Adebisi, 2012:27; Pallapothu & Krause, 2013:29). The terms and conditions for various categories of funding for companies are determined by the capital markets. A government's monetary policy has an influence on the level of interest rates and inflation, through its regulation of monetary supply. Furthermore, a government can influence the economic environment in a country through its fiscal policy, as it involves government revenue, taxation and expenditure, including expenditure on health, education and public infrastructure (Babatunde & Adebisi, 2012:27; David & David, 2015:230).

Regional economic integration has led to the establishment of trade blocks and free trade zones, including the European Union, the North American Free Trade Agreement, the Association of South East Asian Nations, the Economic Community of West African States (ECOWAS) and Southern African Development Community, as well as BRICS (Neuland, 2010:179).

3.5.1.3 Scanning the socio-cultural environment

The socio-cultural factors in a company's macro-environment are regarded as the manner in which changing social beliefs, values, lifestyles and other forms of culture-related aspects of a country influence companies and the industry in which they operate. These changes present opportunities and threats (Hill & Jones, 2013:73; Hitt *et al.*, 2011:46). An understanding of the changes in the social environment is always important, regardless of whether a company is planning to enter a new geographic market or trying to compete in existing markets (Pallapothu & Krause, 2013:30-31; Thompson & Martin, 2010:87).

Socio-cultural changes occur in response to religious, educational, ecological and demographic changes. As a result, consumers' traits change and so does the demand for various kinds of products and services. Similar to other factors in the macro-environment, socio-cultural factors continuously change owing to the evolving needs of consumers (David & David, 2015:231; Hitt *et al.*, 2011:46).

Changes in the socio-cultural environment influence companies' strategies, because these companies have to develop novel products for their emerging markets or have to change their current products so that the products meet the changing needs of their existing customers. In addition, these factors influence the market size as well as the competitiveness of companies operating in a specific marketplace (David & David, 2015:231; Hill & Jones, 2013:73).

Recently, six major social trends have been identified (Neuland, 2010:180). These six trends are discussed below:

Single-parent households: The different family patterns in South Africa include single-parent households (Nduna & Sikweyiya, 2015:536). In 2009, 32.7% of children stayed in a house with only their biological mothers without their biological fathers' presence (Nduna & Sikweyiya, 2015:538). In 2012, 39% of children lived with their biological mothers and only 4% with their biological fathers (Ntshongwana, Wright, Barnes & Noble, 2015:83). In the South African context, there are a growing number of single-parent households, which produce different purchasing and consumption patterns when compared to a typical nuclear family unit (Neuland, 2010:180).

The increasing percentage of women in the workplace: In recent times, there has been an increase in the percentage of women in the workplace as well as in leadership and senior management positions in companies globally and in South Africa. This has given rise to higher levels of disposable income, producing a more sophisticated lifestyle and a growing demand for new and different kinds of products and services (Neuland, 2010:180).

The changing demographics in education: “Education for all” has been the refrain in most developed countries, with varying results. In the USA, for instance, the number of women who are educated has exceeded that of their male counterparts. This leads to higher disposable income, a more sophisticated lifestyle and demands for various categories of products (David & David, 2015:232; Neuland, 2010:180). In South Africa, on the other hand, basic education is still failing the country and while tertiary education is available to more people, the current crisis at universities, with riots, burning of buildings and similar events suggest that all is not well. It is still a challenge for qualified and educated people to get jobs (Bosch, 2017:225; Cilliers & Aucoin, 2016:13-15). This, obviously, ultimately has an impact on their buying power and ability to purchase more sophisticated products.

There is an increasing trend towards health and wellness: This creates new opportunities but also drives a need for companies to provide fitness centres and exercise paraphernalia for their staff. In addition, this creates an opportunity for food-manufacturing companies to produce healthy organic food products (Neuland, 2010:180; Pearce & Robinson, 2007:86). Societies globally struggle with lifestyle-related problems, such as Type II diabetes and obesity, which is also an increasing trend in South Africa (Malhotra, Noakes & Phinney, 2015:967; Shaw, Sicree & Zimmet, 2010:7).

Age distribution: A key shift is the age distribution in the population. People generally are living longer, particularly in developed countries, leading to an increase of demands made by senior citizens, especially for healthcare. Such demands are often constrained by relatively low incomes. A greater challenge exists in Africa and developing countries in general, including South Africa is the ever increasing young population, which places great stress on the needs for education and job creation (Neuland, 2010:180). In developed countries the converse is the case, with an ever increasing aging population, which greatly affects the retirement and pension funds of some companies, as well as healthcare needs (Barney & Hesterly, 2015:51; Hill *et al.*, 2015:72).

The impact of HIV/AIDS: When conducting environmental scanning of the socio-cultural environment in South Africa and other African countries, human immuno-deficiency virus/Acquired immuno-deficiency syndrome (HIV/AIDS) must be considered, as it has

both socio-cultural and economic implications for companies (Meintjes, Hall, Marera & Boulle, 2010:40; Neuland, 2010:181). From a socio-cultural perspective, the impact of HIV/AIDS on the healthcare industry, as well as on family life styles, can be immense and traumatic. From an economic perspective, the epidemic has had a great impact on the young and economically active population of the country. In terms of business, companies are losing skills and expertise as a direct consequence of HIV/AIDS (Neuland, 2010:181; Pitpitan, Kalichman, Eaton, Cain, Sikkema, Watt, Skinner & Pieterse, 2013:153).

Like the other dimensions of the macro-environment, socio-cultural factors present both opportunities and threats. For instance, a new trend for many people is trying to increase their lifespan by engaging in health and wellness lifestyles. This presents opportunities to companies providing health and wellness services and manufacturing organic healthy food products (David & David, 2015:232; Hill *et al.*, 2015:72). Healthier employees in companies generally tend to be more productive and this is associated with lower levels of absenteeism and a higher number of skilled staff. At the other extreme, the tobacco industry would view this as a threat, because the more consumers become aware of the diseases associated with tobacco consumption, the fewer tobacco products they will purchase (Neuland, 2010:181).

It is maintained that it is difficult for companies to forecast social changes. However, estimates of social trends, income levels and shifts in populations can enhance the effectiveness of senior managers' decisions, hence improving their competitive strategies (Barney & Hesterly, 2015:51; David & David, 2015:232).

Although the demographic environment was mentioned above as a component of socio-cultural factors, it is discussed in more detail below as a separate component of the macro-environment.

3.5.1.4 Scanning the demographic environment

The *demographic* factors in the macro-environment are the cause of many changes that occur in the general society. Changes in provincial or national geography and ever increasing urbanisation present potential opportunities and threats (Barney & Hesterly,

2015:51; Hill *et al.*, 2015:72). The migration of people and cultural diversity can be an opportunity for the tourism industry; this is a major factor in the increase in tourism to South Africa, aided by the “cheap” rand (Ramukumba & Ferreira, 2016:2). The global process of urbanisation also takes place in South Africa, where many rural people, particularly the young, move into the cities in the hope of finding work and better prospects. This trend puts pressure on accommodation and job-seeking needs while having crime and unrest as social downsides (Cilliers & Aucoin, 2016:9-10). Attempts by business to utilise the large numbers of largely uneducated people is a considerable challenge (Cilliers & Aucoin, 2016:3-4).

Further demographic variables include age, life expectancy, gender, race, religion, social class, level of education and family size. A change in one or more of these variables over a specific period could have a profound impact on both companies and society at large, creating different opportunities and threats for them (Chand & Tung, 2014:412; David & David, 2015:231). In Africa and also in South Africa, there is a growing number of young graduates with few job prospects and little future, which creates immense socio-economic problems affecting society as a whole and business in general, since business looks to the young as a potential source of future labour and managers (Cilliers & Aucoin, 2016:2-3).

3.5.1.5 Scanning the technological environment

Technology is defined as the auxiliary means through which companies are able to enhance their productivity and provide better products and services in order to satisfy their customers' needs (Wolfe & Castroviovanni, 2014:183). Technology is an essential tool that helps companies to compete locally and globally; it could range from research and development to new technological processes (Babatunde & Adebisi, 2012:28; Pallapothu & Krause, 2013:31).

Technological factors have become critical in companies both locally and internationally, particularly in the past two decades (David & David, 2015:236; Samnani, 2014:39). The rate of technological change is moving at a fast pace. Therefore, it is essential that companies be aware of and informed about technological changes that could influence their industries (Asdullah & Ahmad, 2015:32; Barney & Hesterly, 2015:51).

Technological change is usually characterised by revolutionary change and it could be both creative and disruptive. Unexpected technological breakthroughs alter the way companies conduct their businesses, which subsequently has an influence on specific industries (Asdullah & Ahmad, 2015:32; Hayman & Smith, 2015:9).

Examples of disruptive technologies include Uber, which is completely changing the way the taxi industry operates in South Africa and globally, as do similar “on demand technologies” being produced. A similar disruptive technology has entered and altered the educational industry, specifically in terms of on-line courses. Students and lecturers do not have to meet physically for a discussion or lecture to be held. Lecturers can post courses and study materials via a university’s website where students can access their study materials. In South Africa, the University of South Africa is well known for its online distance learning, where a system called ‘*myUnisa*’ is used as a means through which students can access their courses and study material and interact with their lecturers and other students. The University of Pretoria has a similar system, known as ‘*clickUp*’. It is clear that technology has transformed the higher education sector in South Africa.

Novel technological products can provide unique opportunities for companies, or new products can lead to existing products becoming obsolete. Technological innovation brings about innovative ways in which companies operate (Asdullah & Ahmad, 2015:32; Du Toit, 2016:17). In South Africa, technological innovation creates new industries; one such being the cellular phone industry (Scheepers, Hough & Bloom, 2007:239). Technological innovation causing product obsolescence is highly evident in the use of film cameras and films, which became obsolete after more than 100 years of worldwide usage, because of the advent of digital cameras and with cameras on cellular phones even rendering simple digital cameras obsolete (Scheepers *et al.*, 2007:239; Seo, 2016:15-18).

The emergence of the global Internet and digital technology are dramatically changing the manner in which companies are transacting; beyond political and geographical limitations and thus entering industries globally. The Internet has had a profound influence in a myriad ways, perhaps chief of which is the democratisation of communication, which provides cheap and ready access to information, advertising and marketing of products, people and services (Barney & Hesterly, 2015:51; David & David, 2015:236).

Internet use in developing countries, such as South Africa, is expected to increase far more than in developed countries. This, in turn, implies that the Internet could provide unique marketing opportunities for companies exporting their products to developing countries (Lund, Turner, MacGilivray & Morales, 2014:23).

While technological advancement contributes greatly to society and enhances companies' productivity, it has its own disadvantages. For instance, technological advancement contributes to pollution and global warming (Barney & Hesterly, 2015:51; Hitt *et al.*, 2011:48). In line with this thinking, senior managers conducting environmental scanning must scan all the factors of the technological environment, which could pose a threat or present opportunities.

3.5.1.6 Scanning the ecological environment

Another important component of the macro-environment is the *ecological* or *natural* environment, as it concerns companies and the ecology. The term *ecology* refers to the interaction among human beings, other living things, the air, soil and water in the ecological environment that supports humans and other living things (Du Toit, 2016:18; Hitt *et al.*, 2011:49). The ecological environment is exposed to threats. The main threat to the life-supporting ecology stems predominantly from human activities and industrial activities; this is referred to as *pollution*. There are three kinds of pollution, namely air pollution, water pollution and land pollution. The afore-mentioned types of pollution, as well as global climate change, are of key importance to companies and to society at large (David & David, 2015:233; Neuland, 2010:185).

Air pollution: Air pollution is caused by dust particles and gases such as carbon monoxide and dioxide, which contaminate the air. In addition, rain polluted by sulphur dioxide can destroy living organisms and is believed to be the consequence of coal-burning factories, which constitute 70% of total cases. When the atmosphere traps carbon dioxide, produced by cars and factories, it creates a health-threatening layer (Neuland, 2010:185; Pearce & Robinson, 2007:89).

Water pollution: Water pollution occurs when industrial companies dump toxic waste or when there is a leakage of toxic waste into a country's watercourses (Pearce & Robinson, 2007:90). Untreated or partially treated sewage is another major concern, especially in South Africa. Preventing water pollution is a key challenge even for industrial companies that are conscious of the potential threat to the ecological environment (Neuland, 2010:185).

Land pollution: Land pollution is the deposition of solid and chemical waste into the ecological environment, particularly soils, caused by the increased amount of waste dumped. It can also be caused by the disposal of manufacturing toxic waste in underground sites. In addition, product packaging and shopping bags are a major contributor to land pollution in South Africa (Neuland, 2010:185; Pearce & Robinson, 2007:90).

Global climate change: The global climate has been changing naturally over the history of the planet. However, in recent times, climate change has been accelerated by human activities (Neuland, 2010:185; Pearce & Robinson, 2007:89). Changes in atmospheric radiation and, to some extent, ozone reduction are the causes of *global warming*. This occurs because solar radiation, which is usually absorbed into the atmosphere, extends into the air, water and soil (Pearce & Robinson, 2007:89). The ecological environment and global warming are crucial issues for everyone, including companies. The automobile manufacturing industry is one where global warming is a major issue being linked to the utilisation of fossil fuels (Neuland, 2010:185).

The International Organisation for Standardisation (ISO) has established classifications of quality standards for all categories of manufacturing and service processes. Customers are increasingly being environmentally conscious. They want to know that a company's products or services will meet their needs. For instance, in 1991, McDonalds had to change its packaging from polystyrene boxes to paper boxes in response to customers' demand for environmentally friendly packaging (Samnani, 2014:39).

Worldwide, environmental legislation influences corporate strategies and most companies comply with these international standards to avoid the consequences of the highly

restrictive and costly regulation (Hitt *et al.*, 2011:50). In South Africa, for instance, the eThekweni municipality in Durban has benefited from this environmental legislation. The eThekweni municipality constructed gas extraction and producing plants, which transform landfill gases, most of which are methane, into electricity. There are many instances of companies formulating environmental policies, indicating that environmental legislation relating to the ecological environment has a significant impact on companies' strategic decisions.

3.5.1.7 Scanning the global environment

The global environment or international environment is an important component of the macro-environment, especially when companies plan to expand into foreign markets. Factors such as basic human rights and international laws can hinder or enable companies' success. Companies worldwide are increasingly becoming involved in international business, especially through exporting, expanding their operations through foreign direct investment and establishing joint ventures and strategic alliances (Hill & Jones, 2013:72; Hill *et al.*, 2015:275). In recent times, many companies have increasingly been involved in international business, a trend enhanced by globalisation. Globalisation has been expedited by the decreasing barriers to international trade and investments and by means of technological advancement, specifically in communications and transportation (Hill & Jones, 2013:284; Hill & Jones, 2012:147). Globalisation refers to the shift towards an interdependent and integrated world economic activity (Min & Smyth, 2014:373).

It is maintained that the global economic environment does not affect the macro-environmental factors in all countries in the same way. For example, the global financial crisis, which occurred in 2006 and was expected to continue until 2010, had different impacts on different countries. Developed countries with sophisticated financial markets, like the USA, were greatly affected. A developing country such as South Africa was able to navigate the crisis, because the financial markets are not the same (Neuland, 2010:189).

Companies involved in international business need to analyse the global environment and their own domestic environments. Furthermore, these companies need to evaluate the same macro-environmental factors in each country in which they are involved (Hill &

Jones, 2013:266; Hitt *et al.*, 2011:49). While some domestic and global factors could appear the same, companies need to analyse and evaluate these factors in terms of the country's attractiveness, market size and intensity of competition, as well as the market potential for the companies' products and services for each country in which they operate (Hill *et al.*, 2015:266; Hitt *et al.*, 2011:49).

The seven macro-environmental dimensions of the external environment that are scanned when doing environmental scanning were discussed above. The following section is a discussion about scanning the market environment.

3.5.2 SCANNING THE INDUSTRY ENVIRONMENT

The industry environment is sometimes referred to as the market or task environment and is considered as the general conditions for competition, which influences companies providing similar products or services (Barney & Hesterly, 2015:55; Porter, 2008:80) (see Section.5.5.2). An industry is made up of companies that are similar in terms of their primary business activities in an environment regarded as a general condition for competition (Barney & Hesterly, 2015:54; Hill & Jones, 2013:47; Hill *et al.*, 2015:45). The industry environment is also regarded as the market environment and the most important environment, because companies interact with their customers and suppliers and compete with rivals in a specific industry. As a result, this environment has a direct influence on companies' performance (Agbim *et al.*, 2014:252; Albright, 2004:41; Yoo & Sawyerr, 2014:30).

Being aware of the industry environment and industry dynamics can enhance a company's ability to select the most appropriate strategies in dealing with the industry conditions. The industry conditions relate to all competitive forces influencing companies that offer similar products and services (Barney & Hesterly, 2015:55; Lynch, 2015:88).

Industry analysis - When examining the industry, it is necessary to define the industry and understand its structure. The reason for examining the industry environment is to understand the variables that affect a company's profit over time in order to possibly exploit these variables (David & David, 2015:244). In addition, it is essential to examine

the relationships that shape the industry and how these relationships affect profits (David & David, 2015:244; Hill & Jones, 2013:47).

Defining the industry - When planning a strategy, senior managers might well ask themselves 'what business are we in', leading to the probability that before analysis can be done on the industry in which the company is, the nature of the industry itself should be defined. As this normally requires knowledge and experience on the part of managers, this can be more of a challenge than one might think. In addition, it is also a challenge to decide whether to take a broad view of the industry or a narrower, more focused view. The former can produce too much information, while the latter can miss important details (David & David, 2015:237; Hill *et al.*, 2015:45).

As mentioned in Section 2.2.3, companies operating in a red ocean, which is the existing market, understand the rules of the industry. They know what strategy to employ in order to outwit their competitors and increase their profitability. Nonetheless, supply is exceeding demand; competition for market share is becoming more intense, hence this trend necessitates doing business in a blue ocean, which is an unexploited marketplace. This implies that companies need to create their own marketplace in order to increase their market share, initiating industries where they create and capture new demand for their products and services. In a blue ocean, the rules of the industry are not known (Kim & Mauborgne, 2005:106-107).

Successfully navigating in the red ocean will always be an important business activity (Kim & Mauborgne, 2005:106). To this point, the concept of a *strategic group* deserves attention. Strategic groups refer to a number of companies that place great importance on strategic dimensions, such as a company's position and product quality, and use a similar strategy. The concept of strategic groups can be valuable in an industry's competitive structure and its analysis. This type of analysis can assist in identifying competition and companies' positions in the market, as well as their profitability. It also indicates how some companies are competing. The establishment of strategic groups can be restricted by fierce competition and few resources within companies in an industry. However, when strategic groups are established, their membership becomes relatively stable over time

and this makes the analysis more appropriate, compared to a dynamic industry (Hitt *et al.*, 2011:59).

Furthermore, an industry's boundaries can become blurred where two diverse industries begin to behave as if they are linked, usually by the addition of services or products, a process known as convergence. In South Africa, for example, clients can book their airline tickets in a retail store such as Checkers Hyper rather than through an airline or travel bureau (Barney & Hesterly, 2015:55; Hill & Jones, 2013:49).

Many of the strategic decisions companies make form part of their interaction with individual competitors and customers in an industry. This is the reason for industry analysis, because its main focus is providing a framework for analysing customers, competitors and suppliers (Hill *et al.*, 2015:47; Lynch, 2015:83).

3.5.2.1 Scanning the customers environment

When conducting environmental scanning on customers, it is important to identify target customers, determine the needs of these customers and specify how the product satisfies these needs. Customer analysis (also called customer profiling or target analysis) is an essential aspect of a company's business plan. Customer analysis includes demographic criteria (gender, age and income) and behavioural criteria (Felcman, 2012:55; Lynch, 2015:99). Within the context of business to consumer marketing, a company needs to look at why people purchase a specific product and which would include preferences, loyalty and branding (Kolah, 2013:23). Business to business marketing uses similar techniques but buying decisions are based on price and profit potential. Business to business sales far outweigh sales to ordinary consumers (Habibi, Hamilton, Valos & Callaghan, 2015:2; Kolah, 2013:29).

Companies' success and failure are linked to the extent to which they understand their customers' needs and the extent to which they attend to these needs. This means that for companies to achieve success, information on the various segments in an industry and customers' commitment is essential and this requires environmental scanning (Lynch, 2015:98).

3.5.2.2 Scanning the competitors environment

Competitor analysis involves competitor profiling, a continuous process through which companies obtain information and become knowledgeable about how their competitors would react to strategic initiatives. Companies usually do competitor profiling on a few competitors or a range of competitors who they perceive as a competitive threat (Hitt *et al.*, 2011:59; Lynch, 2015:97). For these companies, detailed environmental scanning on their competitors is essential.

Competitor analysis entails the interaction between companies and their most significant competitors. Many companies operate in an environment where a few competitors or at times even a single competitor may dominate their actions (Hitt *et al.*, 2011:60). For instance, in the South African retail banking industry, ABSA, FNB and Standard Bank focus more on obtaining information about one another (Louw & Venter, 2010:232). Information about a company's competitors is readily available, as the Internet can provide annual reports, company profiles, staff information, product brochures, media information, presentations and information on trade shows and conferences (Aldehayyat, 2015:471; Begg, 2007:144).

3.5.2.3 Scanning the suppliers environment

Companies or individuals who provide an industry's needs such as textiles, labour and services are referred to as suppliers (Hill *et al.*, 2015:56). Suppliers have an effect on the logistics and supply chain management of a company. Choosing the right suppliers is important because their decisions have an influence on companies. When conducting environmental scanning, it is essential to assess which suppliers are effective and efficient in delivering the company's products and services. It is also important to assess, which suppliers offer low costs and high quality products and services (Osorio, Manotas & García, 2016:51). The increasing trend of companies to become more responsible towards the society and ecological environment requires the selection and analysis of green suppliers to business operations (Singh & Trivedi, 2016:266).

3.6 PORTER'S FIVE FORCES MODEL FOR INDUSTRY ANALYSIS

Once the above-mentioned factors have been determined and the industry is defined, it becomes necessary to consider the competitive forces to which a company is subjected in a particular industry and how these forces affect both the company and its competitors. The most profound contribution to the conceptual understanding of the industry structure is the framework of Porter's five competitive forces for industry analysis. This framework is premised on the notion that there are five forces interacting in any particular industry (Porter, 2008:80).

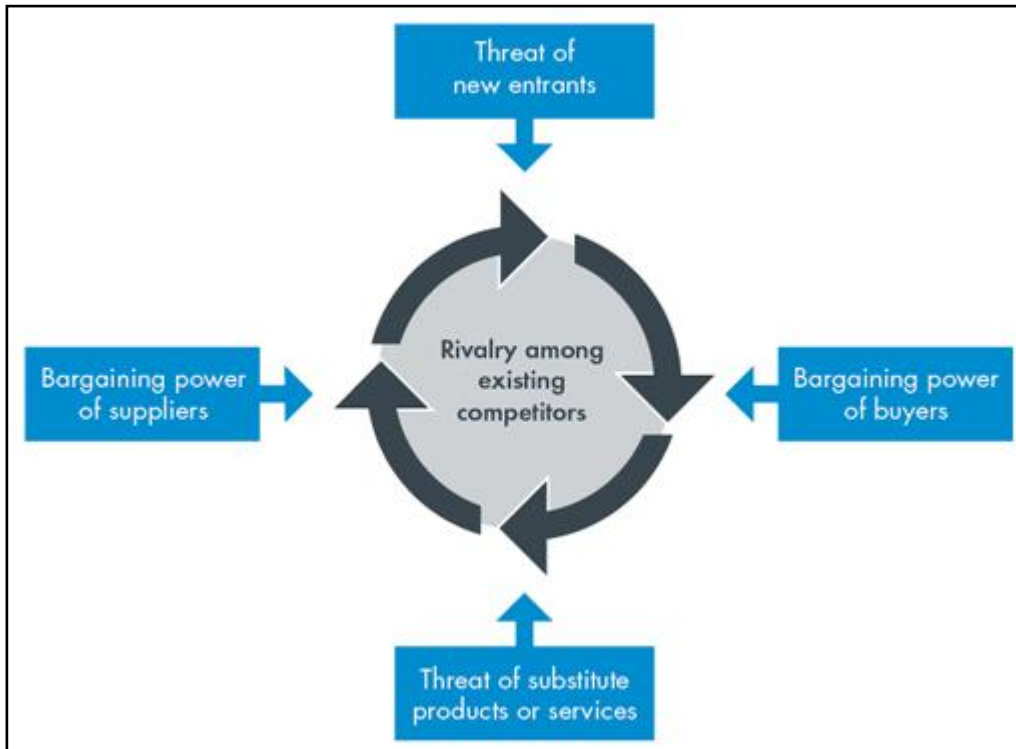
This is the main focus of industry analysis, in which the classic model of Porter's five competitive forces has become the standard model (Hill *et al.*, 2015:47). As described below, these competitive forces can affect a company's profitability both positively and negatively, depending on the circumstances associated with each of Porter's five forces (Hill *et al.*, 2015:47; Lynch, 2015:88).

Before discussing the five forces in more detail, several factors must be taken into account (Louw & Venter, 2010:215):

- It is essential to be aware of the relationship between the macro-environment and the five forces because some dimensions of the macro-environment are to be found in the model.
- In a multi-business company, the five forces framework may well be appropriate at a strategic business unit level of one company, but of no relevance to the other businesses.
- The five forces are inter-connected and pressure from one force can, therefore, trigger changes in another source of competition within an industry.
- Some of the competitive actions involve disrupting the competitive forces. When this occurs, it is difficult to accommodate these factors in the industry environment.

Each force influences the added value in the industry. The relationships among these five forces are depicted in Figure 3.4 below.

Figure 3.4: Porter's five forces model of industry analysis



Source: Porter (2008:80).

The five forces shown in Figure 3.4 are discussed in detail in the five sub-sections below.

3.6.1 THE DEGREE OF RIVALRY BETWEEN EXISTING COMPETITORS

Competitive rivals are those companies offering similar products and services and targeting similar customer segments, which generates rivalry among existing competitors in the marketplace. Competition among rivals develops when one company gains market share at the cost of others. With this in mind, companies within an industry are interdependent. However, in extreme cases, a single company may be determined to become the leader in the industry, thus resulting in intense competition in the marketplace (David & David, 2015:238; Porter, 2008:85).

The effort to generate market share is made by using pricing and loyalty programmes, advertising, promotions and provision of customer services. These efforts can become expensive and as competition tends to reduce prices, profitability is doubly threatened.

Conversely, in the absence of strong competition, profitability is invariably improved (Barney & Hesterly, 2015:62; Hill & Jones, 2013:53).

3.6.2 THE THREAT OF NEW ENTRANTS

New entrants, that is, companies that are not yet involved in the industry, will try to enter it when they believe that profits can be made and that they have the ability to operate in the industry. New entrants are motivated to invest in an industry because they wish to participate in potential market share. Thus, unless the market is growing, companies that are already in the industry will have to share the market with these new entrants (Barney & Hesterly, 2015:56; Porter, 2008:80).

Companies already in an industry will fight the entry of new companies to prevent competition and possible reduction of market share or profit. In some industries there are already barriers to entry created by things such as high establishment costs, regulatory frameworks and even simply lack of knowledge of the industry (Hitt *et al.*, 2011:52; Lynch, 2015:90). It is, therefore, important to monitor the threat posed by new entrants to the industry. Constant monitoring of the business environment to see the advent of new entrants is therefore required not only regarding the core business of a company, but also related operations that may overlap into the core business.

3.6.3 THE THREAT OF SUBSTITUTE PRODUCTS

Substitute products or services are those to which consumers can change, because these products satisfy the same fundamental needs. Many examples are seen of this, consumers can choose to use postal mails to electronic mails, or purchase any of the range of smartphones available, such as iPhone and Samsung Galaxy. Substitutes, therefore, replace the product that a company is selling, denying it that business (David & David, 2015:241; Porter, 2008:84). In addition, substitutes are usually cheaper and thus place a ceiling on the prices that competitors in the industry can charge, limiting the potential of the industry's profitability. Alternatively, or in addition, substitutes can cause competitors to spend money supporting their own products, including providing better

quality and litigating against pirate copies. Being compelled to react always affects profitability (Hill & Jones, 2013:59; Hill *et al.*, 2015:58).

The threat of substitutes or alternative products is likely to be high in most industries. Substitutable products could be different, yet these products satisfy the same kind of consumers, such as the use of electronic mail instead of postal mail. Although the medium through which the services are delivered differs, it satisfies the same need (Babatunde & Adebisi, 2012:28; Porter, 2008:84). Information about consumers' preferences for alternative products will need to be considered when conducting environmental scanning.

3.6.4 THE BARGAINING POWER OF BUYERS

Buyers may be either people or companies, such as retailers and wholesalers. It is the companies who have real bargaining power, since they are the ones that buy the largest quantities of products from suppliers: detergents and foodstuffs or components for motor cars (Hitt *et al.*, 2011:56; Porter, 2008:83).

Buyers want to be in control. Suppliers are affected when buyers are able to bargain. The bargaining power of buyers is influenced by the size of the market and the way in which buyers are able to consolidate (Hill & Jones, 2013:57; Hill & Jones, 2012:64). Buyers' or customers' relative power to bargain has an influence on the prices that competitors can charge in an industry. Powerful buyers have a negative impact on competitors' ability to increase their prices. Less powerful buyers imply that competitors have the advantage to demand high prices (Barney & Hesterly, 2015:65; Hill *et al.*, 2015:55). Information relating to buyers' purchasing power is an aspect to consider when scanning the industry environment. Such information is obtained from sources including trade publications and interaction with customers (Aldehayyat, 2015:471; Haase & Franco, 2011:1650; Jiang & Gallupe, 2015:18).

3.6.5 THE BARGAINING POWER OF SUPPLIERS

Suppliers are defined as companies or individuals that provide in an industry's needs for materials, labour and services. As with buyers, the ability of suppliers to bargain is dependent on the size of the market. Strong suppliers, particularly those providing a key product, can have a negative impact on profitability, by raising their prices (Hill *et al.*, 2015:56; Porter, 2008:82).

Therefore, suppliers can also bargain in a similar way to buyers. Suppliers' power to bargain will increase when their knowledge of their buyer's needs is higher than the awareness of buyers to whom products and services are sold. The relative power of suppliers to bargain is defined by the degree of control they have in the industry; for example, where there is no substitute product or the supplier and the buyer's business are closely connected, such as coal mines and power stations. This influences input prices as well as competitors' profitability (David & David, 2015:242; Hill *et al.*, 2015:56).

The factors in the company's external environment were discussed. The focus of the discussion shifts to management use of information, which is discussed below.

3.7 MANAGEMENT'S USE OF INFORMATION OBTAINED THROUGH ENVIRONMENTAL SCANNING

The term management usually refers to senior managers or executives in the context of an organisation. Senior managers use information that could greatly alter the company. Environmental scanning provides meaningful information to help management. This includes information to support strategic planning, decision-making and forecasting (Albright, 2004:43).

Strategic planning: Information obtained through environmental scanning is a vital input in the strategic planning process. Strategic planning involves environmental scanning, strategy formulation, implementation, strategic evaluation and control (Cheng *et al.*, 2014:439; David & David, 2015:39). Strategic planning was discussed in Chapter 2.

Decision-making: Information is used for general decision-making and to make strategic decisions (Cheng *et al.*, 2014:439). Senior managers are the decision-makers of a company, and environmental scanning provides information to help them make decisions and even to help anticipate problems the company might face. Furthermore, environmental scanning produces a set of major conclusions derived from information that was studied, allowing the manager to focus on relevant data (Albright, 2004:43). Environmental scanning produces clear and detailed information that senior managers can review quickly. Examples from other companies in the industry and specific studies allow these managers to compare other possible solutions before making decisions. The personal presentation of information gathered in the environmental scanning process, in addition to providing specific data, allows managers to query the information and rely on specific people who carry out the scanning and whom the managers trust (Albright, 2004:43).

Forecasting: There is a need for senior management to use information to make forecasts (Bezold, 2010:1514). Forecasting is usually linked with predictive analytics. Predictive analytics does not state exactly what will occur in the future. However, companies can, to some extent, anticipate future events by making logical assumptions. Furthermore, predictive analytics may include scenarios and estimate potential risks that could affect the company. In essence, forecasts are estimates about future developments and events (Lawless, 2015:46). In line with this thinking, environmental forecasting enables companies to be proactive and assists senior managers to anticipate potential changes.

3.8 CONSIDERATIONS FOR ESTABLISHING A FORMAL ENVIRONMENTAL SCANNING UNIT

Having a formal environmental scanning unit enable companies to identify emerging trends in a timely manner and also identify threats that could affect business operations (Du Toit, 2016:17). Environmental scanning produces a great deal of information, which requires certain skills to interpret it properly. A company considering the establishment of a formal environmental scanning unit consequently needs to ask itself certain questions, including (Albright, 2004:43):

- How does the company examine its industry at the moment, and is such information deemed essential for decisions and planning?
- How important is environmental scanning to the company's strategic planning (Albright, 2004:43)? For instance, companies that pursue a prospector strategy by searching for new markets and opportunities would prioritise establishing a formal environmental scanning unit (Cancellier *et al.*, 2014:616; Parnell, 2010:306; Troilo, De Luca & Atuahene-Gima, 2014:264).
- At senior management level, is the concept of environmental scanning endorsed, and indeed, are the company and its staff willing to embrace new concepts (Agbim *et al.*, 2014:254; Albright, 2004:43; Cancellier *et al.*, 2014:616)?
- Will the senior managers' high demand for environmental information lead to more frequent environmental scanning (Agbim *et al.*, 2014:252; Albright, 2004:43; Yoo & Sawyerr, 2014:38)?
- Added to this, are there links between levels of management, such that information can be readily exchanged, and at which level in the company should the environmental scanning process be based (Albright, 2004:44)?
- Can sufficient resources be allocated to the process to derive maximum benefit from it (Albright, 2004:44)?

If senior management supports environmental scanning, then it would be included in the overall strategic planning process.

3.9 THE BENEFITS OF ENVIRONMENTAL SCANNING

Environmental scanning provides a company with several benefits. Through environmental scanning, a company is able to obtain required information, which aids senior managers in developing strategic plans (Albright, 2004:44; Cheng *et al.*, 2014:439). The information acquired through environmental scanning enables managers to align strategic plans and functional strategies, thus enabling a company to respond to challenges arising in a volatile environment (Agbim *et al.*, 2014:252; Lau *et al.*, 2012:1230). Moreover, environmental scanning can assist a company to discover its own strengths and the

weaknesses of its rivals, thus identifying potential clients and new technologies (Albright, 2004:44; Cancellier *et al.*, 2014:615).

In addition, environmental scanning improves a shared vision and augments communication with senior team members as well as staff. It enables companies to reward employees based on performance, thus achieving the goals of the company (Li, 2014:307). With this in mind, environmental scanning enhances strategic implementation. It has been maintained that effective environmental scanning aligns with strategy and that management's effective use of information enhances a company's financial performance (Choo, 2001:7).

Based on the contingency approach to strategic planning, a company can choose a strategy that can reduce the risks that could affect the company (Ford *et al.*, 2013:32). Through environmental scanning, companies are able to revise their strategies to fit their external environment (Albright, 2004:44; Cancellier *et al.*, 2014:612). In line with this thinking, scanning the environment also improves strategic evaluation and control because one purpose of strategic control is to check and modify strategies. Eventually, the most significant advantage of environmental scanning is that companies learn about their macro- and industry environments, so as to become proactive and make informed decisions, while responding strategically to challenges encountered (Cancellier *et al.*, 2014:612).

3.10 THE LIMITATIONS OF ENVIRONMENTAL SCANNING

Environmental scanning has some limitations. One of these is information overload. In such a case, vital information could be ignored, swamped by all the other data. Furthermore, senior managers may not access all the relevant information if they are unaware of some sources. While environmental scanners strive to obtain relevant and timely information, there could be situations when information is not available in time. This occurs especially in fast-paced industries, which are characterised by rapid technological change (Albright, 2004:44; Xu *et al.*, 2011:186).

When senior managements place too much emphasis on environmental scanning, there can be a negative impact on the company, because people are focused on external factors and there is less time to improve the company's internal business processes (Albright, 2004:44). Furthermore, without senior managers' commitment to invest their time in the environmental scanning process, environmental scanning will not be successful (Xu *et al.*, 2011:186).

Obtaining environmental information requires resources. As a result, environmental scanning can be limited, because it is expensive. Some companies may not be able to afford the costs associated with environmental scanning (Xu *et al.*, 2011:187; Yoo & Sawyerr, 2014:29).

3.11 SUMMARY

Environmental scanning is a process that enables senior managers to obtain relevant information about the external environment. This information enables companies to cope with environmental uncertainties and respond to challenges in the environment in a timely and effective manner.

Companies that scan the external environment are able to identify emerging opportunities and threats in the political-legal, economic, socio-cultural, technological, demographic and global environments, as well as the industry environment. In summary, conducting environmental scanning has its limitations, but it also has immense benefits. Environmental scanning assists companies to improve their performance and to succeed in the long term.

In the next chapter, the research methodology of the study is described.

CHAPTER 4: RESEARCH METHODOLOGY

Chapter outline:

The purpose of this chapter is to:

- Provide an overview of the research methodology used in this study;
- Describe the study's research design;
- Discuss the characteristics of mixed methods research;
- Motivate the use of a convergent parallel mixed methods research design;
- Describe the qualitative research phase of the study;
- Describe the quantitative research phase of the study; and
- Explain the research ethics considerations that guided this study.

4.1 INTRODUCTION

The choice of an appropriate research design is determined by the purpose of the study and the research questions to be addressed (Venkatesh, Brown & Bala, 2013:41; Wahyuni, 2012:72). The purpose of this study was to investigate how environmental scanning is being practised in top performing South African companies. This chapter describes the research methodology adopted in the current study. The study followed a mixed methods research methodology. Mixed methods research employs both qualitative and quantitative research methods in a single study to obtain in-depth understanding of a specific phenomenon (Caruth, 2013:113; Creswell & Plano Clark, 2011:1-2). The reasons for selecting a mixed methods research methodology and its characteristics are discussed in the section where the six kinds of mixed methods design are described. The specific mixed methods research design used in this study, a convergent parallel design, and its main characteristics are described in detail, along with the reasons motivating this choice. This is followed by a discussion of qualitative and quantitative methods for collecting and analysing data. The chapter concludes with a discussion of ethical considerations that guided the study.

4.2 OVERVIEW OF THE RESEARCH METHODOLOGY

Research methodologies are broadly classified into two categories, namely qualitative and quantitative methodologies (Cameron, 2009:141; Venkatesh *et al.*, 2013:21). In essence, methodology deals with the question of how a researcher goes about finding answers to research questions. Methods are the specific techniques and procedures used in the collection and analysis of data (Scotland, 2012:9). Qualitative research methodologies allow the researcher to make sense of social phenomena through interaction with participants in order to understand their experiences. It provides an in-depth understanding about a phenomenon, but it does not allow generalisation of a study's findings to a larger population (Caruth, 2013:112; Creswell & Plano Clark, 2011:8). Quantitative research methodologies provide numeric data and allow generalisation of a study's findings to a larger population on statistical grounds, but it does not capture the context in which a phenomenon is being studied (Cameron, 2009:141; Caruth, 2013:112). Mixed methods research falls under the pragmatism paradigm. Researchers electing pragmatism believe that adopting both qualitative and quantitative methods in a study provides multiple perspectives in answering the research questions (Wahyuni, 2012:70).

There has been controversy about qualitative and quantitative research methodologies. Qualitative researchers contend that quantitative research uses shallow description. On the other hand, quantitative researchers argue that qualitative research is too subjective (Caruth, 2013:112; Cooper & Schindler, 2014:144). This has led to the use of a new research methodology, termed mixed methods methodology, which this study used. Mixed methods research is an emerging methodological movement that combines qualitative and quantitative research methods in a single study, drawing on the strengths of both. The ultimate goal of mixed methods research is to develop better understanding and explanation of a central phenomenon (Hussein, 2015:2; Venkatesh *et al.*, 2013:22). The purpose of this research was to investigate the way environmental scanning is being practised in top performing South African companies. Mixed methods research was deemed appropriate for this study because it allowed the researcher to draw on the strengths that both research approaches offer in developing a better understanding of the research topic.

This section provided an overview of the research methodology followed in this study. The study's research design is described below.

4.3 GENERAL DESCRIPTION OF THE RESEARCH DESIGN

The research design of this study is described through the eight macro-level descriptors suggested by Cooper and Schindler (2014:126). These eight macro-level descriptors are reviewed below.

Empirical research: A research study can be non-empirical or empirical. Unlike non-empirical research, an empirical research study is one in which primary or secondary data is collected and analysed by a researcher for the purpose of answering specific research questions (University of Pretoria, 2015c:1). For this study, empirical research was undertaken.

Primary data: Primary data is referred to as novel data, which the researcher collects for particular research; thus the data has not been used previously for any other study (Cooper & Schindler, 2014:128; University of Pretoria, 2015c:8). Predominantly primary data was used in this study. Primary data was collected and analysed to address the research questions. Semi-structured interviews and a survey were the main sources of primary data. The term *participant* was associated with the qualitative phase of this study and the term *respondent* with the quantitative phase. The annual reports of top performing South African companies and their websites were the major sources of secondary data used in this study.

Basic research: Basic research is conducted for the sole purpose of generating new insights or building a conceptual understanding of a unique event (Cooper & Schindler, 2014:15; University of Pretoria, 2015c:1). In line with this, basic research was appropriate because the aim of this study was not to solve any company's specific problem. This research was undertaken purely to understand how top performing South African companies practise environmental scanning.

Non-experimental research: A non-experimental study (also known as an *ex post facto* study) is one in which the researcher observes and measures variables as they are without manipulating the variables being investigated (University of Pretoria, 2015c:6). Conversely, in experimental research, the researcher uses experiments to examine the cause-and-effect relationship and intentionally manipulates an independent variable. This is to determine how this manipulation affects a particular dependent variable, while controlling other variables that may also have an effect on the dependent variable (Cooper & Schindler, 2014:192; University of Pretoria, 2015c:4).

Non-experimental research was considered more suitable in the quantitative phase of this study, because the aim of the researcher was to explore the variables of environmental scanning and report on them as they are. Since this is a mixed methods study, the qualitative phase explored the central phenomenon (i.e., environmental scanning practices) and the context in which it took place. The quantitative phase described the variables of the external environment with regard to the way environmental scanning is being practised by top performing companies.

Cross-sectional research: When participants or respondents are interviewed and surveyed once, this is referred to as cross-sectional research. In cross-sectional research, the timing of the study is a critical aspect that needs to be considered (Cooper & Schindler, 2014:128; University of Pretoria, 2015c:7). This study was cross-sectional, because each participant and respondent was interviewed or surveyed only once.

Communication: Conducting an interview is an active task and requires communication with interviewees. Communication is a process where the researcher interacts with participants directly or indirectly. Communication can take place in person or via the telephone, email and through the Internet (Cooper & Schindler, 2014:127; University of Pretoria, 2015c:7). All the above-mentioned forms of communication occurred in this study.

Field settings: A field setting refers to the authentic or actual environment where the researcher performs the research about the phenomenon being studied (Cooper & Schindler, 2014:128; University of Pretoria, 2015c:8). In this case, the authentic

environment of the current study was the participating companies in South Africa. Specifically the participants' offices, meeting rooms and designated venues were the field settings when conducting the semi-structured interviews.

Mixed methods research: Mixed methods research entails the integration of qualitative and quantitative research approaches in a single study (Creswell, 2014:14). As indicated earlier, this study used a convergent parallel mixed methods research design.

The next section describes the characteristics of mixed methods research and provides an overview of the six different mixed methods research designs. The section also describes the nature of the specific mixed methods research design (i.e., convergent parallel design) used in this study and motivates the choice of this design.

4.4 THE CHARACTERISTICS OF MIXED METHODS RESEARCH

It has been asserted that a mixed methods approach provides deeper understanding of a central phenomenon, because qualitative and quantitative data are collected and analysed rigorously when addressing a research problem (Caruth, 2013:113; Venkatesh *et al.*, 2013:22). Given its mixing nature, this methodology provides two unique perspectives on the research problem. Mixed methods research involves collecting and analysing both qualitative and quantitative data, while keeping the research questions in mind. Furthermore, it is an approach where textual and non-textual (i.e., numeric) data are integrated either concurrently or consecutively. At times, mixed methods research could have characteristics where a qualitative method is built on a quantitative method, or embedded within one. Alternatively, a qualitative method is prioritised to a quantitative method. Finally, both methods can be given equal priority. Drawing on the two distinctive types of data collected, the researcher frames the processes within a theoretical view (Creswell & Plano Clark, 2011:5). In this study, qualitative and quantitative research methods were concurrently implemented and given equal priority.

There are several reasons why researchers choose a mixed methods research approach. Mainly this is to ensure that triangulation or confirmation, complementarity, diversity,

offset or compensation, completeness and credibility are addressed (Creswell & Plano Clark, 2011:62-63; Leedy & Ormrod, 2013:259).

These reasons are briefly discussed below (Creswell & Plano Clark, 2011:62-63; Venkatesh *et al.*, 2013:26):

- **Complementariness:** Mixed methods research is used to determine mutual, complementary perspectives regarding a specific phenomenon, for example, using a qualitative study to acquire additional insights about quantitative results.
- **Diversity:** The use of mixed methods is to acquire divergent views of the same phenomenon. For example, both qualitative and quantitative data are collected and analysed to compare perceptions of the phenomenon being studied.
- **Confirmation/triangulation:** This means collecting multiple sources of data to support the confirmation of the study's findings (Creswell, 2012:259; Creswell & Plano Clark, 2011:62; Leedy & Ormrod, 2013:259). As an illustration, a qualitative study is performed to confirm the results obtained from the quantitative phase of a study.
- **Compensation/offset:** This occurs when one method's strengths compensate for the other method's weaknesses (Creswell & Plano Clark, 2011:62; Leedy & Ormrod, 2013:259). For instance, the lack of quantification in a qualitative study is supported by the numbers in a quantitative study.
- **Completeness:** This can be regarded as developing a complete understanding of the research topic (Leedy & Ormrod, 2013:259). For example, using qualitative findings produces a rich explanation of the findings in the quantitative phase of the study.
- **Credibility:** This implies that by implementing the two methods, the integrity of the findings can be enhanced (Leedy & Ormrod, 2013:259; Polit & Beck, 2012:585). For instance, qualitative findings and quantitative results yield a credible research report.

Thus, for all these reasons, a mixed methods approach was deemed appropriate and implemented for this study. The next section discusses the six major mixed methods research designs.

4.5 AN OVERVIEW OF THE SIX MAJOR MIXED METHODS RESEARCH DESIGNS

Mixed methods research designs can take on a variety of forms. Six mixed methods research designs have been identified by Creswell and Plano Clark (2011:69-72) and Caruth (2013:114):

- **Convergent parallel design:** This design entails collecting and analysing qualitative and quantitative data simultaneously, where each method has equal priority. As is shown in Figure 4.1, the researcher analyses the data collected with each method independently, but mixes the findings during interpretation.
- **Explanatory sequential design:** An explanatory sequential design is used when the quantitative data is first collected and analysed. The quantitative research phase is prioritised and the results are the starting point for collecting qualitative data in a second phase in order to explain the quantitative findings.
- **Exploratory sequential design:** An exploratory sequential design begins with the collection and analysis of qualitative data, which is prioritised. The second quantitative phase is developed from the qualitative findings. The results from the second quantitative phase are used to enhance the qualitative findings.
- **Embedded design:** An embedded design involves the collection and analysis of both qualitative and quantitative data and the use of a qualitative theme within the quantitative data (or vice versa) to enhance the overall design and its usefulness. The qualitative findings aim to support the quantitative results or vice versa.
- **Transformative design:** Transformative design is one in which the researcher chooses to implement a convergent, exploratory, explanatory or embedded design due to changing circumstances that may arise during the course of a study. For example, a researcher may plan to conduct an explanatory study but could eventually incorporate an explanatory design. As an illustration, the researcher can conduct a qualitative study to expose factors that are then quantitatively analysed and can shed light on the nature of the phenomenon being studied.

- **Multiphase design:** This design is adopted when the researcher uses a combination of sequential and concurrent research styles through a number of studies to examine a phenomenon.

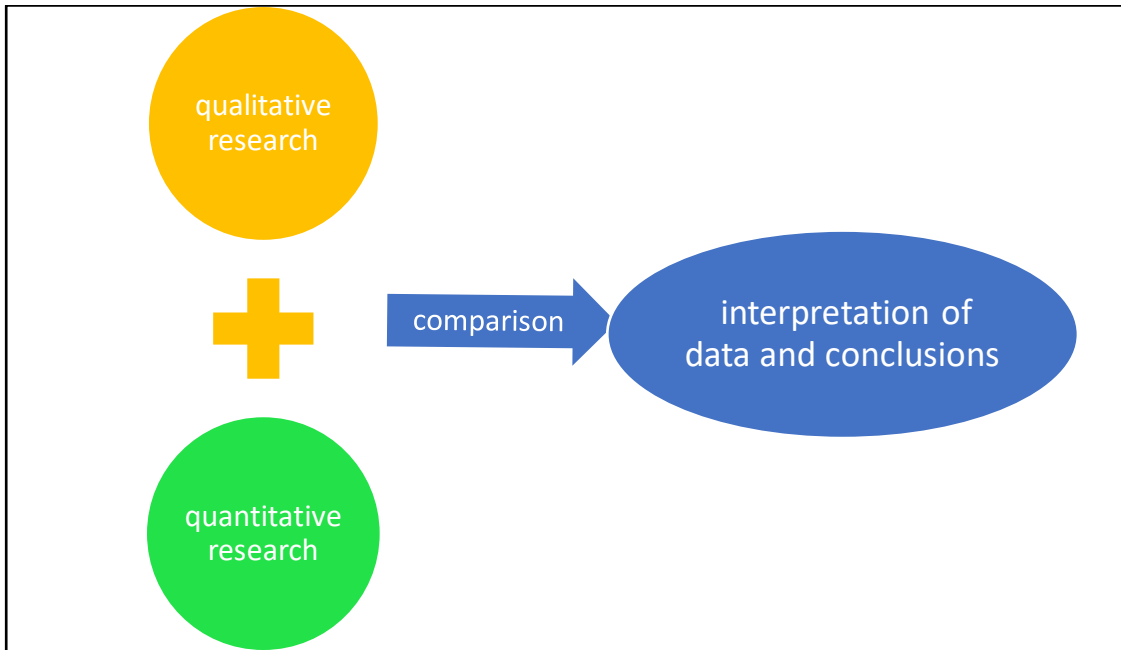
In this study, a convergent parallel mixed methods design was considered suitable. The next section describes this design and motivates why it was chosen.

4.6 DESCRIPTION OF AND MOTIVATION FOR USING A CONVERGENT PARALLEL MIXED METHODS RESEARCH DESIGN

As noted earlier, when a convergent parallel mixed methods design is employed, the researcher collects and analyses qualitative and quantitative data simultaneously (see Figure 4.1) and later integrates the interpretation of findings (Creswell & Plano Clark, 2011:69; Venkatesh *et al.*, 2013:23).

The aim of this design is to draw on the strengths of both the qualitative and quantitative research methods, where the qualitative method's strengths compensate for the quantitative research method's weaknesses and vice versa. This design further enables the researcher to compare and distinguish qualitative and quantitative results and combine these to develop a more comprehensive understanding of a central phenomenon (Creswell & Plano Clark, 2011:77; Venkatesh *et al.*, 2013:24). The reason this design was selected for this study was to acquire diverse but balanced data regarding environmental scanning practices in top performing South African companies, in order to develop a complete understanding of the research topic. Figure 4.1 depict the convergent parallel design used in this study.

Figure 4.1: Characteristics of a convergent parallel mixed methods design



Source: Adapted from Creswell and Plano Clark (2011:69).

While the convergent parallel design is an important mixed methods design, it has unique strengths and weaknesses, which are identified below.

The convergent parallel design has the following unique strengths (Creswell & Plano Clark, 2011:78):

- It is regarded as an efficient design because qualitative and quantitative data are collected simultaneously.
- This design provides more insight into a central phenomenon because both qualitative and quantitative research are performed.
- Using qualitative and quantitative data has an advantage because it brings together teams of researchers with unique expertise.

While the convergent parallel design is the most common form of mixed methods research, there are some challenges to consider. Creswell and Plano Clark (2011:80) highlighted the following:

- The design requires specialised skills, because the two methods are implemented simultaneously and are equally prioritised.

- A key issue associated with this design is to take cognisance of the results derived from the qualitative and quantitative data sets when integrating both types of data.
- It further poses a challenge to present the findings of the two methods in an integrated manner.

Table 4.1 provides an overview of this study's convergent parallel mixed methods research design.

Table 4.1: Overview of the convergent parallel mixed methods design used in this study

Basic structure	Qualitative phase	Quantitative phase
Research design	Generic qualitative research	Survey research
Target population size	20	137
Sampling method	Maximum variation sampling Snowball sampling	Convenience sampling
Realised sample size	16	33
Data collection method	Semi-structured interviews Document analysis (annual reports and company websites)	Online survey hosted in Qualtrics
Data analysis methods	Thematic analysis	Univariate descriptive statistics
Data interpretation	Integrate qualitative and quantitative findings	

In conclusion, the discussion above highlighted how the mixed methods research design could enable the researcher to acquire diverse perspectives regarding the study. The qualitative research phase of this study is discussed in the next section.

4.7 QUALITATIVE RESEARCH PHASE OF THE STUDY

Qualitative research is an umbrella concept, which comprises several different kinds of enquiry that allow a researcher to understand and explain the meaning of a phenomenon (Payne & Payne, 2004:175). This type of research is concerned with providing in-depth understanding about a central phenomenon and the context in which it occurs. In qualitative research, the researcher seeks to understand how things happen and to determine what happens and why things happen (Cooper & Schindler, 2014:144; Neergaard, Olesen, Andersen & Sondergaard, 2009:2). In line with this thinking, it was

appropriate for the researcher to use qualitative research in this study. This is because one of the research questions that guided this study was to determine what dimensions of the external environment are of importance to top performing South African companies.

In qualitative research, the researcher is the main instrument for collecting and analysing qualitative data as well as producing a meaningful report (Patton, 2015:700). Qualitative research is a preferred method for exploring individuals' perspectives regarding a specific phenomenon. It is important to highlight that qualitative research designs have been derived from different academic disciplines, including disciplines in the social sciences. These different disciplines aim to address different phenomena and thus produce different results. Therefore, there are various forms of qualitative research (Kahlke, 2014:39). For instance, grounded theory aims to build theory, whereas a case study aims to provide a detailed description of what is happening in a particular bounded system. Generic qualitative research is also a qualitative research design that aims to provide a rich description of participants' experiences of a unique phenomenon (Neergaard *et al.*, 2009:2). A generic qualitative research inquiry was the specific design used in the qualitative phase of this study.

4.7.1 GENERIC QUALITATIVE RESEARCH

Generic qualitative research is regarded as basic research (Kahlke, 2014:39; University of Pretoria, 2015a:1). The goal of generic qualitative research is to provide a rich description of multiple participants regarding a phenomenon or an event. The conceptual framework of a generic qualitative research study is associated with existing academic information (Neergaard *et al.*, 2009:2). Unlike other qualitative approaches, generic qualitative research is the least theory-driven (Kahlke, 2014:40; Mocke, Niemann & Kotzé, 2016:5). Key processes of collecting data are carried out by conducting semi-structured interviews or focus groups and are usually associated with a small sample size (Neergaard *et al.*, 2009:2; University of Pretoria, 2015a:14). In generic qualitative research, data is analysed by using either content analysis or thematic analysis (Kahlke, 2014:40; Neergaard *et al.*, 2009:3). In this study, data was mainly collected through semi-structured interviews and analysed using thematic analysis.

A generic qualitative research design was, therefore, considered appropriate for this study. This design allowed the researcher to explore the perspectives of senior executives in top performing South African companies regarding the environmental scanning practices in their respective companies. Moreover, it is the most appropriate qualitative research method when using mixed methods because it blends well with other forms of quantitative research methods (Kahlke, 2014:40; Neergaard *et al.*, 2009:4).

Since it was impossible to study the environmental scanning practices of all companies in South Africa, a sample was more practical. The next section describes the sampling method used in the qualitative phase of this study.

4.7.2 SAMPLING IN QUALITATIVE RESEARCH

Sampling is a process of selecting a subset of people to be studied from a larger population (Bristowe, Selman & Murtagh, 2015:1428; Gentles, Charles, Ploeg & McKibbon, 2015:1772). More specifically, it is a process that entails the selection of specific data sources from which the researcher then collects data to address a study's research questions (Gentles *et al.*, 2015:1774).

4.7.2.1 Target population and unit of analysis

The target population of the qualitative phase of this study consisted of large South African companies. A company is considered large when it has more than 200 employees (Nieuwenhuizen, quoted by Du Toit, 2016:18). Initially, the Financial Mail's 2014 list of top performing companies (Financial Mail, 2014:88-92) was used as the sampling frame from which to select companies for the qualitative phase, but the researcher was unable to recruit a sufficient number of companies on this list to participate (see Section 4.8.3.3). Therefore, representatives of additional large South African companies were recruited based on referrals from participants.

A unit of analysis, the actual 'thing' being studied, can range from individuals to groups, organisations, cities and even countries (Patton, 2015:260). The unit of analysis in this study was large, top performing South African companies. This allowed the researcher to

examine the way in which these companies practice environmental scanning and to assess the way participating companies use environmental information for corporate strategic planning.

4.7.2.2 Sampling methods in the qualitative phase

Sampling in qualitative research is usually associated with non-probability sampling, which is a strategy where participants are not randomly selected (Cooper & Schindler, 2014:343; Creswell, 2012:206; Polit & Beck, 2012:517). In this study, a non-probability sampling strategy was implemented. The specific non-probability sampling that was chosen was purposeful sampling, a method that assisted the researcher to select specific individuals or sites in order to gain more insight into a central phenomenon (Creswell, 2012:206; Polit & Beck, 2012:517).

The power and logic of purposeful sampling lie in selecting information-rich cases that need to be studied in depth. Information-rich cases are those from which one can learn a lot about issues central to the purpose of the inquiry, hence the term purposeful sampling (Gentles *et al.*, 2015:1778; Patton, 2015:264). In this study, the size of the company and the number of employees were the main selection criteria for deciding which companies to include. The participants selected were senior executives in their respective companies involved in the companies' strategic planning initiatives. These participants were knowledgeable about environmental scanning practices and, therefore, able to provide rich information relevant to the study's research questions.

Several purposeful sampling strategies can be implemented in qualitative research. In this study, maximum variation and snowball sampling strategies were implemented. Maximum variation sampling involves selecting sites or participants with diverse or wide-ranging characteristics (Patton, 2015:267). This sampling strategy aims to capture and describe themes that emerge from diverse participants (Creswell, 2012:207; Plano Clarke & Creswell, 2015:334; Polit & Beck, 2012:517). A maximum variation purposeful sampling strategy was deemed appropriate for this study because it allowed the researcher to capture the central themes that emerged from diverse participants regarding environmental scanning. The participants in this study, for example, included individuals

with backgrounds in business management, supply chain, marketing, finance and human resource management. The views of these diverse participants enabled the researcher to describe the central themes that were identified. These themes provided a rich description of the way environmental scanning is being practised in top performing South African companies. Furthermore, snowball sampling is a form of purposive sampling through which samples of individuals or sites are based on referrals from participants who have already participated in a study (Plano Clarke & Creswell, 2015:334; Polit & Beck, 2012:516-517; Sewdass & Du Toit, 2014:187). At the end of each semi-structured interview, the researcher asked the participants to recommend another executive from another large company in South Africa in order to increase the size and diversity of the sample.

4.7.2.3 Sample size in the qualitative phase

The sample size in qualitative studies is usually small and guided by the information required for a specific research problem (Polit & Beck, 2012:521). Furthermore, the sample size needs to be based on the principle of saturation; that is, the point where no new information is uncovered (Guest, Bunce & Johnson, 2006:60; Polit & Beck, 2012:521). There is no rule regarding an adequate sample size to achieve data saturation (Merriam, 2009:80). However, decisions on sample size have to do with matching the sampling strategy to the purpose of the selected method of a study (Braun & Clarke, 2013:115). With this in mind, the researcher reviewed the sample sizes in related studies to obtain an estimate for the sample size used in this study. After reviewing several studies conducted on environmental scanning, the researcher found that a quantitative research was undertaken. Quantitative research is usually associated with large sample sizes, while qualitative research is associated with small sample sizes (Polit & Beck, 2012:521). Two previous qualitative studies on environmental scanning by Jiang and Gallupe (2015:4) and Karami (2008:9) achieved sample sizes of 15 and 12 respectively. In this study, the researcher invited 20 potential participants, of whom 16 were available and willing to participate; hence a total sample of 16 was achieved in the current study's qualitative phase.

Saturation is an important element in qualitative research design, because it serves as an indication that sufficient data has been obtained (Bristowe *et al.*, 2015:1428; Gentles *et al.*, 2015:1781). In qualitative inquiry, the researcher manages the sampling units required to achieve theoretical saturation by choosing which type of variation to maximise. In this context, theoretical saturation occurs when no additional data is being obtained from which the researcher can develop new categories or themes (Gentles *et al.*, 2015:1782; Guest *et al.*, 2006:59). Furthermore, the concept of data saturation is essential in qualitative research because it is regarded as the point where no new information or themes emerge from the collected data (Gentles *et al.*, 2015:1782).

In this study saturation started to occur by the 12th interview. This is in line with the findings of Guest *et al.* (2006:76), who asserted that a sample of 12 participants is sufficient if the goal of the study is to describe a particular phenomenon in a relatively homogenous population. The data became saturated even more during the 13th, 14th and 15th interviews. When qualitative data is thoroughly analysed, there comes a point of diminishing returns, where increasing the sample size no longer contributes to new information (Gentles *et al.*, 2015:1781). In line with this thinking, it was not necessary to conduct further interviews after the 16th interview, because at this point no new themes emerged.

4.7.3 METHODS OF DATA COLLECTION IN THE QUALITATIVE PHASE

Data for qualitative research can be collected through interviews, focus groups, field notes or documentation (Bristowe *et al.*, 2015:1428; Kahlke, 2014:40). The main method of collecting primary data for this study was semi-structured interviews with participants. Secondary data was also collected in the form of annual reports and information obtained from the participating companies' websites.

An interview is a process of obtaining information from a participant to determine his or her views on a specific research topic. The interviewee is regarded as an expert, while the interviewer is viewed as the learner seeking answers to the research questions (Mack, Woodsong, MacQueen, Guest & Namey, 2005:29). Since conducting semi-structured interviews was the most important means of collecting primary data, it was important to pre-test the discussion guide used.

4.7.3.1 Pre-testing the discussion guide

The discussion guide to be used in a semi-structured interview has to be clear, unambiguous and to the point (Braun & Clarke, 2013:87; University of Pretoria, 2015b:2). A discussion guide can be pre-tested by conducting at least one informal interview with a possible representative of the target participants or with a study leader (Rowley, 2012:265). For the purpose of this study, the discussion guide was pre-tested with an academic expert. Moreover, the discussion guide was pre-tested to ensure that the language used in it was meaningful to participants and that the questions were in logical order. Since the research targeted senior executives, the researcher also conducted an informal interview with a senior executive, but not one of the participants, from one large company in South Africa. The reason for pre-testing the discussion guide and conducting an informal interview was to test the validity of the questions.

After the pre-tests, the researcher adjusted the discussion guide by changing the wording and sequence of some of the questions. For example, the following question was removed from the discussion guide:

How does your company view the business environment in terms of change?

The above-mentioned question was intended to elicit answers that shed light on the changes occurring in the participating companies' external environment. However, the pre-test indicated that the question was vague and that participants did not interpret the question in the same way as the researcher. Hence, a new question was added to the discussion guide:

Can you please describe the major changes currently occurring in your company's external business environment?

The audio-recorder that was used during the semi-structured interviews was checked to ensure the successful recording of all the interviews.

4.7.3.2 Semi-structured interviews

The use of semi-structured interviews is often associated with qualitative inquiry. A semi-structured interview is a technique for exploring a diverse number of questions. It is

required that the interviewer be a good listener, adaptive and responsive to the participant during the interview (Rowley, 2012:262). This technique was deemed appropriate, because it allowed the researcher to explore the views of participants regarding environmental scanning.

Semi-structured interviews are advantageous because (Mack *et al.*, 2005:30; McIntosh & Morse, 2015:7):

- The tone and expression of the participant regarding the central phenomenon can be heard.
- The researcher can obtain the perspectives and experiences of the participants relating to the research topic.

However, there are also some drawbacks associated with conducting semi-structured interviews, namely (McIntosh & Morse, 2015:7):

- Interviewing is costly and time-consuming.
- The researcher's presence may bias responses.
- The quality of the data is affected by the interviewer's experience and skills.

Primary data collection for the qualitative phase of this study occurred from March to April 2016. In this study, the researcher conducted face-to-face semi-structured interviews with 16 participants from 11 large companies in South Africa. It is important to highlight that in three cases more than one executive from a company was interviewed in order to increase the diversity of the sample. In the first company, three participants were interviewed, another three in the second company, and two in the third company. One participant was interviewed from each of the remaining eight companies, bringing the total number of participants to 16. In this study, each participant in the semi-structured interviews was interviewed separately.

Prior to conducting the interviews, the researcher requested permission (see Appendix A). Next, the researcher sent an initial e-mail to participants, introducing the researcher, the University of Pretoria and the purpose of the research. This e-mail was also intended to arrange a date and time for conducting the semi-structured interviews (see Appendix B).

The discussion guide was attached to this initial e-mail to allow participants time to prepare for the interviews (see Appendix C).

Most of the participants indicated that they were interested in participating in the study within one or two days after receipt of the initial e-mail. The researcher was aware of the fact that most of the participants were senior executives, and therefore liaised with their personal assistants (PAs) to remind them in cases where a participant did not reply to the initial e-mail within a week. Depending on the availability and willingness of these participants, the researcher arranged and conducted 16 face-to-face semi-structured interviews.

At the start of each interview, the researcher formally introduced herself and restated the purpose of the study. Participants were reminded that their participation was voluntary and that they could leave the study at any time. The researcher asked the participants for permission to audio-record the semi-structured interviews before the discussion started.

The discussion guide for the semi-structured interviews consisted of open-ended questions, which allowed participants the opportunity to express their own opinions. This allowed the researcher to ask participants questions about their particular experiences in relation to environmental scanning practices of their respective companies. Importantly, the research questions were linked to the discussion guide.

English is the main language for business in South Africa. Since the participants were all employed in companies conducting their business in South Africa, the semi-structured interviews were conducted in English. Some of the interviews occurred in the participants' offices, whilst others took place at a designated place and some occurred in meeting rooms. The interviews lasted 30 minutes on average. The researcher explained the ethical procedures that this study followed and each participant was asked to sign the informed consent form in Appendix D before starting the discussion. All participants read through the informed consent forms and signed the forms. This demonstrated that all participants participated in the study voluntarily.

At the end of each interview, the participant was given a chance to make any further comments on the research topic. Moreover, the researcher asked all participants if they would like to have a copy of the formal research report of this study. All participants indicated that they would be happy to get a copy of the research report. As a matter of courtesy, the researcher sent a follow-up email within 24 hours, thanking each participant for the time taken to participate in this study.

Table 4.2 below indicates the dates when the semi-structured interviews were conducted. Pseudonyms were used to protect the identities of the companies' and participants.

Table 4.2: Dates of semi-structured interviews conducted in the participating companies

Companies	List of interviews	Position of participants	Gender	Dates
Company A	1	Mobility and Immigration Services Manager	Male	3 March 2016
Company A	2	Human Resource Manager	Male	3 March 2016
Company A	3	Director for Compensation and Benefits Consulting	Male	18 March 2016
Company B	4	Vice-President for Strategy Enablement and Strategy Execution	Male	15 March 2016
Company B	5	Vice-President for Supply Chain and Marketing	Female	31 March 2016
Company B	6	Vice-President for Corporate Finance and Business Development	Male	7 April 2016
Company C	7	Senior Environmental Officer	Female	7 April 2016
Company C	8	Environmental Manager	Female	7 April 2016
Company D	9	Executive Vice-President for Human Resources and Strategy	Female	30 March 2016
Company E	10	Executive for Corporate Affairs and Public Policy	Female	20 April 2016
Company F	11	Performance and Wealth Management Manager	Female	8 April 2016
Company G	12	Chairperson	Male	8 April 2016
Company H	13	Group Strategy and Risk Manager	Male	12 April 2016
Company I	14	Chief Human Resource Officer	Male	13 April 2016
Company J	15	Health and Wellness Manager	Female	22 April 2016
Company K	16	Sales and Business Development Manager	Male	20 April 2016

Note: The dates are linked with the companies' pseudonyms and are not listed in order.

All the interviews were audio-recorded with each participant's consent. During the interviews, the researcher also took note of non-verbal signs exhibited by the participants.

This section discussed the methods of data collection used in the qualitative phase. The next section describes the methods of data analysis used in the qualitative phase.

4.7.4 METHODS OF DATA ANALYSIS IN THE QUALITATIVE PHASE

Before discussing the data analysis procedures used in the qualitative phase, it is important to highlight the data preparation procedures. Data preparation has to be done in an organised manner. Hence, the data preparation procedures followed in the qualitative phase of this study are discussed below.

4.7.4.1 Data preparation procedures

The data preparation procedures involved making back-up copies of the interview recordings, then transcribing each recording and creating back-up copies of the transcripts (Bloomberg & Volpe, 2012:136). Data collected from the semi-structured interviews needed to be arranged and labelled in folders. This process required attaching a name or label to specific sets of data collected (Creswell, 2012:238-239). Each interview sheet was labelled with a unique number, placed in a folder and kept safe. This procedure allowed easier retrieval of the information provided by the participants. After the completion of each interview, the interview was transcribed within 48 hours and saved separately in an MS Word file used during data analysis (see Section 5.3).

In addition, all the companies' annual reports that were used to collect additional information were kept in a specific folder. The researcher made copies of all original documents and these copies were placed in a secure place.

Transcription is a process of converting spoken words into text (Bloomberg & Volpe, 2012:136). In this study, the researcher transcribed the audio-recordings of the semi-structured interviews, word for word, and transformed the recordings into textual data. The researcher also listened to the interviews again while reading each transcript to check its

accuracy. After the transcription of the recordings into text, the next stage was data analysis.

4.7.4.2 Data analysis procedures

Data analysis in qualitative research is a complex process, which involves constant interaction from seeing an aspect to be investigated, collecting the data on it, analysing the data and then returning to repeat the process, until the researcher is satisfied that the evaluation is valid. The information gained ranges from absolute data to abstract concepts, deductive inductive reasoning and then descriptions (Nieuwenhuis, 2007:99-100).

This study followed a procedure for analysing qualitative data called *thematic analysis*. Thematic analysis is a methodology that a researcher adopts to identify, organise and establish meaningful themes across a data set (Braun & Clarke, 2012:57; Vermeulen, Niemann & Kotzé, 2016:5). The key terms associated with the data analysis procedures used in this study are explained in Table 4.3 below.

Table 4.3: Key terms associated with the qualitative data analysis process

Key terms	Description
Memoing	An important process that is practised throughout a study is one through which researchers familiarise themselves with the collected data and make notes of ideas and insights they have during the qualitative data analysis process.
Transcribing	A process of converting electronic data, such as audio-recordings to textual data.
Coding	A process in the data analysis where the researcher reads the data thoroughly and identifies significant codes.
Themes	This process requires integrating similar codes into a main idea that is related to the research topic.

Source: Nieuwenhuis (2007:104-108).

The data analysis procedures used in the qualitative phase of this study are discussed in more detail in Section 5.3 of the next chapter.

4.7.5 DEMONSTRATING QUALITY AND RIGOUR IN THE QUALITATIVE RESEARCH PHASE

Certain criteria must be satisfied to ensure quality and rigour in qualitative research. Lincoln and Guba (1985:300) identified four criteria that can be applied to demonstrate the trustworthiness of a qualitative study. These four criteria are credibility, transferability, dependability and confirmability. These criteria are similar to validity and reliability, which are terms more readily associated with quantitative research.

The four criteria identified by Lincoln and Guba (1985:289-327) were adopted to ensure quality and rigour in the qualitative phase of this study. Each criterion is discussed in detail below:

Credibility: Credibility implies that there is confidence in the truth of the data collected and the research findings (Creswell & Plano Clark, 2011:62; Polit & Beck, 2012:585). Credibility addresses the question “How congruent are the research findings with reality?”(Merriam, 2009:214). A number of factors can be used to provide evidence that the researcher has correctly examined the phenomenon being studied (Lincoln & Guba, 1985:324):

- The use of research methods that have already been used and that have been accepted by previous researchers in various fields inspire confidence in the methods used and results obtained.
- Triangulation involves using several types of data about a central phenomenon in order to develop a comprehensive understanding of the phenomenon.
- Participants in the various companies are encouraged to provide a range of opinions and insights that can be combined into a single, more complete interpretation.
- The participants should be encouraged to provide honest answers. This can be attained by encouraging participants to be frank and to provide their personal views on the question being asked.
- Collaboration between the researcher and research project director provides an opportunity to broaden the researcher’s vision and provides a sounding board for the

researcher to assess his or her own biases and shed light on any flaws in the proposed plan of action.

- Scrutiny of the information obtained from frequent reviews of the research progress or by peer reviews carried out by other researchers is important to ensure the data collection and interpretation are accurate.
- A rich description of the subject being studied gives others a good idea of what the researcher is trying to achieve.
- Looking at previous research in similar (or the same) fields can allow comparison and allow the researcher to see how well the findings are supported by the new work.

Dependability: Dependability is closely linked to credibility. This implies that similar findings do not change over time, when the study is conducted again, although new findings may emerge (Polit & Beck, 2012:585). The foremost method to ensure dependability is the provision of a detailed description of the research undertaken. This description should be detailed enough to allow other researchers to replicate the study (Shenton, 2004:71; Wahyuni, 2012:77). The following aspects should be taken into consideration:

- The overall design of the study, its goals and how the research design was implemented on a strategic level.
- An operational description providing detail of data collection, dealing with what was done in the field.

Confirmability: This means that the interpretation of the analysed data should be based on or supported by the information provided by participants and not created by the researcher. In essence, the researcher must show that the interpretation is not manipulated by his/her own views (Polit & Beck, 2012:585). Again, detailed reports of what was done, and what motivated the researcher to make such choices, should allow peers to appraise the objectivity of the study. The researcher should be unbiased and open with regard to the choices and what could be termed an “audit trail” of paper work (including transcripts and field notes) available to reviewers in order to substantiate their work (Shenton, 2004:72).

Transferability: Transferability refers to the extent to which findings of a research can be applied to other settings. This involves providing a rich description of data required so that a reader can evaluate how the findings can be transferred to other groups and situations (Polit & Beck, 2012:585). When qualitative research is applied to individuals and small groups, some critics suggest that the results are too precise to be replicated or used elsewhere (Shenton, 2004:69).

In order to demonstrate the four trustworthiness criteria and rigour employed in this study, the researcher adopted the provisions suggested by (Shenton, 2004:70) as follows:

To ensure credibility, established research methods were used in this study. Multiple sources of data, including semi-structured interviews and annual reports of the participating companies, were used. There were frequent debriefing sessions between the researcher and the study supervisor. Rich descriptions of the participating companies and participants are included (see Section 5.2). Participants were encouraged to be open and provide honest answers. The data collected was critically reviewed before documenting the findings. There was clear linking back from the findings to the literature review (see Sections 7.3.1-7.3.5).

To ensure dependability, there was employment of overlapping methods, namely semi-structured individual interviews and a survey in this study. In-depth methodological description was also provided to allow the study to be replicated.

To ensure confirmability, participants' voices were reflected in the qualitative findings. Direct quotations, which reflected participants' voices, are shown in the findings of the qualitative phase of this study (see Sections 5.5.1-5.7.2). Qualitative data analysis was based on the information the participants supplied.

To ensure transferability, there was a broad grouping of disparate companies linked solely by the size and scale of operations and drawn from a number of widely different industries. The researcher consequently believes that the data obtained and interpretations made can be related to other large South African companies in whatever field of endeavour they operate, thus allowing transferability.

The preceding discussion concentrated on the qualitative research phase of the study. In the next section, the focus is placed on describing the quantitative research phase of the study.

4.8 QUANTITATIVE RESEARCH PHASE OF THE STUDY

Quantitative research is more concerned with breadth and generalisation than with in-depth understanding. Quantitative research is particularly useful for answering 'how important or how intense?' questions in quantitative terms (Cooper & Schindler, 2014:146). Since this study used a mixed methods research design, it includes a quantitative phase.

Unlike qualitative research, which provides textual data, quantitative research provides numeric data (Creswell, 2014:17). Quantitative research involves statistical analysis (Leedy & Ormrod, 2013:282). The main data analysis was done through statistical means, in particular through descriptive statistics. Validity and reliability were used to demonstrate the quality of the findings (Cooper & Schindler, 2014:146; Creswell, 2014:155). The specific quantitative research method used in this study was a survey.

4.8.1 SURVEY RESEARCH

A survey is a quantitative descriptive research approach and is characterised by obtaining information from a large sample of respondents, who are regarded as possible representatives of a larger target population. The respondents are asked questions that the researcher has constructed. Survey data provides a description of trends or of the opinions of the sample of respondents. The researcher makes inferences or generalises the results to the population through the data obtained from respondents (Creswell, 2014:155). In a survey, the particular data collection instrument is a questionnaire, which can be administered via the telephone, personal interviews, paper-based mail, e-mail or the Internet (Bethlehem, 2010:161).

A survey was conducted in the quantitative phase of this study, with respondents being asked to complete an online questionnaire hosted in Qualtrics. Qualtrics is an electronic

platform where questionnaires can be administered online. The rationale for conducting a survey was to obtain information on the environmental scanning practices of top performing South African companies from a larger sample of respondents. This was done in order to generalise the results to the population.

The survey was hosted in Qualtrics, an online survey platform. The advantages of conducting an online survey are as follows (Bethlehem, 2010:161; Leedy & Ormrod, 2013:206; Leedy & Ormrod, 2014:212; Valerie & Lois, 2012:2-4):

- An online survey is cost-effective.
- Online survey is a convenient means to contact target respondents using e-mail.
- E-mail invitations can be branded (e.g., including a subject with a prestigious university name), and personalised to respondents, which creates credibility of the survey and it also increase response rate.
- Online survey facilitates tracking of completed responses and enables the researcher to send automatic reminders to respondents who have not completed the survey.
- Responses can be obtained from a large number of people within a short timeframe.
- Answers provided by respondents are immediately stored in a computer database.

However, an online survey has some disadvantages. Leedy and Ormrod (2014:212), Valerie and Lois (2012:2-4), as well as Vehovar and Manfreda (2008:181-182) highlighted the following:

- The sampling frame is limited to the e-mail address accessible to the researcher, this result to coverage bias.
- Respondents who spend little time on the Internet are unlikely to participate in an online survey.
- Respondents who do not check their e-mail in a reasonable time will not see the invitation and consequently will not be aware of the study.
- It is possible that respondents who have filled in the questionnaire will not return their responses.

4.8.2 SAMPLING IN THE QUANTITATIVE PHASE

Sampling entails the selection of a subset of people from a whole population to be studied. The members of a sample usually share common characteristics (Gentles *et al.*, 2015:1772). The researcher considered one main characteristic shared by respondents in this study: holding senior management positions in their respective companies. Moreover, the sample consisted of employees knowledgeable about this study's central phenomenon, namely environmental scanning.

4.8.2.1 Description and delineation of the target population

The target population for the quantitative phase of the study was the 200 top performing South African companies included in the Financial Mail's 2014 list (Financial Mail, 2014:88-92). However, when the researcher contacted these companies, several declined to participate because of company policies restricting participation in external surveys (see Section 4.8.3.3). The actual target population for the quantitative phase was, therefore, reduced to 137 top performing companies that, in principle, were willing to participate in an external survey. These JSE listed companies each had a market capitalisation of at least R1 billion (Financial Mail, 2014:10). The unit of analysis in the quantitative phase of this study was the individual companies whose representatives were surveyed.

4.8.2.2 Sampling methods in the quantitative phase

Two forms of sampling, namely probability and non-probability sampling, are mainly used in quantitative research. Probability sampling involves the random selection of a sample of respondents from a larger population (Bethlehem, 2010:162; Cooper & Schindler, 2014:343; Leedy & Ormrod, 2013:207). Non-probability sampling also involves the selection of a sample of respondents from a larger population, but the selection process is not random. Instead, it is based on the researcher's discretion (Cooper & Schindler, 2014:343; Leedy & Ormrod, 2013:215). After careful evaluation of the two sampling methods, the researcher selected a non-probability sampling method.

The specific non-probability sampling method used in the quantitative phase of this study is self-selection sampling (i.e., convenience sampling strategy). This sampling method means that the respondents who participated volunteered to take part in the study by accepting the survey invitation (Bethlehem, 2010:162). In this study, the researcher sent e-mail invitations with a link to the survey to 137 respondents identified from the 200 top performing companies listed in the 2014 Financial Mail list. The respondents then volunteered to participate in the study. Therefore, the sample was self-selected based on a convenience sampling strategy. A self-selection sampling strategy was considered appropriate for the quantitative phase of this study for the following reasons:

- When employing such a strategy, the researcher could indirectly contact a large number of CEOs by sending these executive e-mails (Leedy & Ormrod, 2014:212; Valerie & Lois, 2012:2-4).
- A similar sampling strategy has been used in previous studies on corporate environmental scanning practices (Chen, 2013:581; Du Toit, 2016:18).
- The realised samples in most web surveys are inevitably self-selected and thus convenience samples because respondents can freely choose to participate or decline participation (Bethlehem, 2010:162).
- The researcher could not use alternative survey methods (such as a telephonic survey) because of lack of contact details, financial constraints and the fact that it is very difficult to reach senior executives directly through means other than e-mail.

4.8.2.3 Sample size in the quantitative phase

A guiding principle in quantitative sampling is to draw a large, representative sample from a population. If the entire population is small, it is appropriate to sample the total population (Cooper & Schindler, 2014:349; Leedy & Ormrod, 2013:216). Thus, in this case, because the population of 137 companies is small, the researcher attempted to recruit all these companies to participate in the study. However, after four reminders, only 41 respondents from 41 different companies completed the questionnaire online, resulting in a response rate of 30.0%. Eight of these questionnaires were discarded because less than 75% of the main questions were answered. Ultimately, a total of 33 responses constituted the realised sample for the quantitative phase of this study.

There is little indication in the literature as to what should be a plausible response rate for a survey of company executives. Nonetheless, common practice is to cite other, similar studies without creating a summary expectation (Cycyota & Harrison, 2006:134). In terms of related studies on environmental scanning, a 65.8% response rate was achieved by Aldehayyat (2015:467); a 32.5% response rate was realised by Du Toit (2016:18) and a 13.8% response rate was reported by Haase and Franco (2011:1647). Moreover, the average response rate obtained from executive samples is 32% (Anseel, Lievens, Schollaert & Choragwicka, 2010:3; Cycyota & Harrison, 2006:142).

Rather than using monetary incentives to encourage responses, the researcher made every effort to increase the response rate by following the recommendations of Dillman, Smyth and Christian (2014:330) (see Section 4.8.3.3). The University of Pretoria's principles on research ethics prohibit the use of monetary incentives in academic studies and the use of such incentives would also have been too costly to consider. Since the sample of the quantitative phase involved executives (i.e., CEOs), the 30.0% response rate is comparable to the response rates achieved in other survey studies involving executives. Despite this, the small sample size achieved in the quantitative phase is acknowledged as a major limitation of the study (see Section 7.5).

4.8.3 METHODS OF DATA COLLECTION IN THE QUANTITATIVE PHASE

A lot of the information needed to understand how companies operate will come from the people who lead them. Researchers in the field of business management have long recognised that senior managers or executives are important employees in a company because they are responsible for designing corporate strategies. Executives are key informants regarding the processes used to make decisions (Cycyota & Harrison, 2006:133). Since this study focused on environmental scanning practices, it was appropriate for the researcher to target CEOs or other senior managers in top performing South African companies for the purpose of primary data collection.

In quantitative research, data is usually collected through experiments or surveys (Cooper & Schindler, 2014:185). This study collected data through an online survey hosted in Qualtrics. The questionnaire (see Appendix E) consisted of 14 questions grouped into

three categories. The first part of the questionnaire contained questions to determine respondents' job positions as well as the main industry in which their companies operate. The second part of the questionnaire focused on the competitive situation of the participating companies, while the third part was concerned with these companies' environmental scanning practices. The next section describes the questions and scales used in the questionnaire.

4.8.3.1 Measurement in the quantitative research phase

Measurement in quantitative research involves assigning numbers to empirical events or characteristics in compliance with a set of rules. Measurement occurs when an established index confirms a height, weight or other attribute of an object. To measure is to determine the extent, dimensions or quantity of something, mainly by comparison with a criterion (Cooper & Schindler, 2014:246). There are various basic question and scale designs available, including multiple choice-single response questions, multiple choice-multiple response questions and Likert scales (Cooper & Schindler, 2014:250).

In this study Likert scales and multiple choice questions were used. Likert scales are a widely used variation of the summated rating scale. Summated rating scales comprise statements that state either a favourable or an unfavourable option on an object or item being measured. The advantage of Likert scales is that they present a larger volume of data than many other rating scales (Cooper & Schindler, 2014:278). When Likert scales are used, respondents are asked to either agree or disagree with statements. In this study, the Likert scale statements ranged from 1 ("strongly disagree") to 5 ("strongly agree"). Multiple-choice question (i.e., multiple-choice single-response scale) is a measuring technique that consists of multiple options but the respondent is allowed to choose one option (Cooper & Schindler, 2014:277).

Most of the questions in the questionnaire were used in other studies, except for questions 8 and 9, which were specifically designed for this study.

The questionnaire contained 14 questions grouped into three sections (see Appendix E). The first four questions in Section A of the questionnaire related to background information

on the companies and respondents who participated in the quantitative phase of the study. These questions measured the following variables:

Industry type: The type of industry the companies operated in was assessed through a multiple choice-single response question (see Appendix E, question 1). A similar measure was used in previous studies by Aldehayyat (2015:469), as well as Haase and Franco (2011:1647).

Job position: In order to determine respondents' positions in their respective companies, a multiple choice-single response question was applied (see Appendix E, question 2). This measure was used in other studies by Begg (2007:128), as well as Jogaratnam and Law (2006:179).

Company size: The number of employees was used as an indicator of the participating companies' size (see Appendix E, question 3). A similar question was used in past research by Haase and Franco (2011:1647).

Number of years employed: The total number of years a respondent had been employed in his or her company was used as a proxy measure of the respondent's knowledge of and experience with the company. This was measured through an open-ended question (see Appendix E, question 4). A similar measure was used in previous studies by Aldehayyat (2015:468), as well as Jogaratnam and Law (2006:179).

Section B of the questionnaire, which focused on the competitive situation of the participating companies, included two questions. Question 5 measured respondents' perceptions of how well their respective companies adapted to changes in the external environment, while Question 6 measured respondents' perceptions of the intensity of the competition their companies experience.

Perception of how companies adapt to changes in the external environment: To determine how companies adapt to changes in their external environment, respondents were asked to indicate the way their companies coped with changes in their external

environment (see Appendix E, question 5). Such a measure was used in past research by Begg (2009:129).

Intensity of competition: Respondents were also asked to indicate their level of agreement with three Likert scale statements relating to the intensity of competition in the market environment. A five-point Likert scale was used, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”) (see Appendix E, question 6). This scale was adopted from Jaworski and Kohli (1993:59-60), who initially developed the measure. It was subsequently also used by Begg (2007:130).

Section C of the questionnaire contained eight questions relating to the way environmental scanning supports strategic planning.

Existence of a formal environmental scanning office: To determine whether a company had a formal environmental scanning office or unit, a multiple choice-single response question with response options of ‘Yes’, ‘No’ and ‘Do not know’ was used (see Appendix E, question 7). This question was adopted from Du Toit (2016:19).

Time spent scanning the external environment: This question was specifically designed for the current study. It measured respondents’ perceptions of the typical amount of time their respective companies used to scan the external environment. This was measured through a multiple choice-single response question with response options including lengthy, average, sporadic and minimal (see Appendix E, question 8).

Modes of environmental scanning: This question was designed specifically for this study and the researcher discussed the formulation of this question with the study supervisor. To the researcher’s knowledge, no scale exists that measures the four modes of environmental scanning identified by Choo (2001:13-20). This scale represents the first steps in the development of such a scale. The scale items were based on Choo’s (2001:13-20) description of the key characteristics of the four modes of environmental scanning. The wording of the scale items were critically evaluated by the study supervisor and by the managers who participated in the survey pre-test. As a result, it seems that the scale has both face and content validity.

It is important to highlight the fact that respondents were not directly asked to indicate the specific mode of environmental scanning (i.e., searching, enacting, conditioned viewing and undirected viewing), which their companies employ. The reason being, respondents would not have been able to answer such a question fully unless they were familiar with the exact meaning and characteristics of the four modes. Instead, in question 9 of the questionnaire, respondents were presented with statements that reflect the key characteristics of each of the four modes as described by Choo (2001:13-20) and as discussed in Section 3.3.

Table 4.4 illustrates the four modes of environmental scanning and the scale items that were measured in question 9 of the questionnaire.

Table 4.4: The modes of environmental scanning and the scale items measured

Modes	Scale items measuring the modes of environmental scanning
Searching	Environmental scanning enables us to make sense of changes and trends in our company's external environment. We scan the environment in a broad and comprehensive way. Environmental scanning is a routine and continuous activity in our company. Our company believes that there are no perceived benefits of environmental scanning. We do extensive environmental scanning on many aspects of our external environment.
Enacting	We do environmental scanning to influence events and outcomes in the external environment. Our environmental scanning efforts emphasize experimentation and leaning by doing. We often expose external stakeholders to new product concepts or business ideas to get their feedback as part of our environmental scanning efforts.
Conditioned viewing	Our environmental scanning efforts rely heavily on external sources of information (e.g., publications or databases) that are widely used and respected in our industry. We tend to follow an established, standard procedure when scanning the environment. Our environmental scanning efforts are narrowly focused on a small number of well-defined issues.
Undirected viewing	We rely primarily on informal, personal contacts for information about trends in the external environment. In our company, environmental scanning is typically done informally. Our company's external environment is so complex and dynamic that it is

Modes	Scale items measuring the modes of environmental scanning
	difficult, if not impossible to analyse. Our goals for environmental scanning are fuzzy and ill-defined.

Note: On a five-point Likert scale, an answer of strongly agreed best described the specific mode of environmental scanning employed in the participating companies.

This measure included 15 Likert scale statements with the scale points are labelled as 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree (see Appendix E, question 9). The sample size was unfortunately too small to evaluate the dimensionality of the scale statistically through explanatory or confirmatory factor analysis. This represents an important limitation of this study.

Perceived benefits of environmental scanning: The benefits of environmental scanning, including gaining a competitive advantage, were assessed through the use of a five-point Likert scale (see Appendix E, question 10). All the scale points were numbered ranging from 1 (“Strongly disagree”) to 5 (“Strongly agree”). This question was adopted from a previous study by Du Toit (2016:20).

Use of environmental information: The extent to which companies used information obtained through environmental scanning was assessed through the use of a five-point Likert scale (see Appendix E, question 11) adopted from Du Toit (2016:20).

Perceived importance of different sources of environmental information: Two five-point Likert-type scales was used to determine the extent to which primary and secondary sources of environmental information were important to companies (see Appendix E, questions 12 and 13). These two scales included eight primary and eight secondary sources of environmental information respectively. The scale points were labelled as 1 = Not important at all, 2 = Very unimportant, 3 = Relatively important, 4 = Very important and 5 = Extremely important. These measures were based on past studies by Haase and Franco (2011:1647-1648) as well as Jogaratnam and Law (2006:177-178), where the sources of information were categorised as either internal or external information sources.

Frequency with which the participating companies measure different dimensions of the macro- and market environments: Respondents were asked to indicate how

frequently they scanned six dimensions of the macro- and three dimensions of the market environment (see Appendix E, question 14). This measure was also used in previous research by Aldehayyat (2015:469), as well as Yoo and Sawyerr (2014:37).

4.8.3.2 Instrument design and pre-testing

The questionnaire was pre-tested in three phases. First, the questionnaire was reviewed by an academic at the University of Pretoria who specialises in environmental scanning to ensure that the questions in the questionnaire were relevant to the research questions. Second, the questionnaire was pre-tested with three senior managers on a face-to-face basis. The senior managers involved with pre-testing the questionnaire were individuals who did not participate in the main study, but represented potential respondents in this study. After the questionnaire had been pre-tested with these individuals, the researcher revised the questionnaire based on their feedback. Lastly, the questionnaire was tested through the Qualtrics survey system with two other individuals at a distance. The last test was intended to attend to system problems, but the test showed that the Qualtrics system was good and the individuals did not find it difficult to respond when using it. After designing and pre-testing the questionnaire, the next stage was to collect data from the actual respondents.

4.8.3.3 Data collection procedures

Data collection for the quantitative phase of this study occurred from March to April 2016. As mentioned in Section 4.8.1, the online survey was hosted in Qualtrics. The procedures that the researcher followed prior to data collection are described below:

The researcher did an Internet search on the 200 top performing companies listed in the 2014 Financial Mail list (Financial Mail, 2014:88-92). Ten of the 200 companies had overseas contact numbers and were, therefore, excluded from the sampling frame. Next, the researcher phoned the remaining 190 companies to request the e-mail addresses of the CEOs. During the telephonic call, the researcher introduced herself to the receptionist and explained that she was from the University of Pretoria and would like to send an e-mail to the CEO inviting him or her to participate in this research. The researcher also

indicated what the study was about. The researcher was alert to the fact that CEOs are busy and alternatively requested the PAs' e-mail addresses. Of the 190 remaining companies, 137 receptionists supplied the required e-mail addresses.

Fifty-three receptionists indicated that it was against their companies' policy to give out the CEO or PAs' details for the purpose of participating in a study. Another ten of the companies were not accessible because the phone rang several times without being answered although the researcher called these companies multiple times in a seven-day period and at different times during office hours.

Ultimately, 137 e-mail invitations were sent to the CEOs and/or their PAs. An e-mail invitation was sent to each CEO directly. This e-mail, which was sent under the study supervisors' name, explained the purpose of the research, requested the CEO's participation in the study and contained a link to the survey hosted in Qualtrics.

In order to enhance the response rate obtained in the quantitative phase of this study, the researcher followed the guidelines suggested by Dillman *et al.* (2014:328-338) as follows:

- All e-mail contacts that were addressed to respondents were personalised. In the initial e-mail that was sent to respondents, they were addressed as [Dear (title) and "(surname)"]... The use of a personalised e-mail was important, as it implied that the e-mails were tailored to specific CEOs, requesting their participation in this study.
- E-mail invitations to respondents were sent from a credible individual, specifically the researcher's supervisor on the official e-mail template of the University of Pretoria. Respondents tend to pay attention to two things, namely, the sender and subject of an e-mail, when they open e-mails in their inboxes (Dillman *et al.*, 2014:338). The subject line read: "University of Pretoria: 2016 environmental scanning survey". The subject captured the attention of respondents who voluntarily participated in this study by following the link in the e-mail and completing the questionnaire.
- The timing of sending out e-mails to respondents was strategically planned. All e-mails were sent during office hours and on working days. Respondents were given a reasonable time before a reminder e-mail was sent. Since the goal of these e-mails

was to solicit responses, reminder e-mails were sent within 7-8 days, except for the first reminder e-mail, which was sent within two weeks because of the Easter holiday.

- One of the main strategies used to increase the response rate was the use of multiple e-mail contacts with respondents and varying the messages from one e-mail to the next. In total, four e-mails were sent to respondents to increase the response rate. These four e-mails included the initial invitation e-mail, as well as a first, second and final reminder. Appendix B contains examples of the e-mails sent to respondents. The send date and purpose of each e-mail are indicated below:
 - 15 March 2016: The initial e-mail invitation introduced the respondents to the survey. It explained how they had been selected and emphasised the purpose of the study. Furthermore, this e-mail provided vital information to help respondents access the online survey. It also indicated that the survey would take about 10 minutes to complete.
 - 29 March 2016: The first reminder e-mail served to thank those who had completed the survey. For those who had not completed the questionnaire, the reminder emphasised why their responses were important. The purpose of the survey was briefly mentioned, but the focus was on why a response from the sampled respondents was important.
 - 6 April 2016: The second reminder also focused on the importance of hearing from the respondents, but more emphasis was placed on those who had not responded to the previous e-mail. This e-mail was designed as a request for help to urge respondents to complete the survey.
 - 14 April 2016: The final reminder e-mail message had a different tone. Respondents were again invited to complete the questionnaire as the survey was drawing to a close. This e-mail indicated the time when the survey would be closed. Moreover, respondents were reminded that their answers were anonymous and confidential.

After the final e-mail had been sent to respondents, the researcher made follow-up telephone calls to the PAs of respondents who did not complete the questionnaire, to remind the respondents that their answers were important and the survey was drawing to a close. Typical answers received from the PAs of the respondents included:

Sorry, the CEO is currently busy and cannot attend to the survey.

The CEO is out of the country.

The CEO is in a meeting and cannot guarantee that he will do the survey because he is just too busy.

The researcher listened to these answers and was cognisant of the fact that CEOs are usually very busy. According to Aldehayyat (2015:467), the main reasons for non-response are:

- Work pressure and time to answer questionnaires (34%);
- Company policy of not participating in surveys (18%);
- Apology with no reasons given (20%); and
- Survey topic is sensitive (14%).

The aforementioned reasons were evident in this study.

After the completion of data collection, the researcher had to analyse the quantitative data. The methods of data analysis used in the quantitative phase of this study are briefly discussed below.

4.8.4 METHODS OF DATA ANALYSIS IN THE QUANTITATIVE PHASE

Prior to analysing the quantitative data, the researcher ensured that the survey data was secured. This data was imported into an MS Excel file and the file was transferred to a memory stick and secured. Data security is a fundamental consideration, because when it is breached the identities of and information supplied by respondents can be ascertained (Dillman *et al.*, 2014:348).

Because of the small sample of 33 respondents realised in the quantitative phase, the data was described using basic univariate descriptive statistics including frequency counts, percentages, means and standard deviations. The abbreviations and symbols used in the quantitative data analysis process are listed in Table 4.4 below.

Table 4.5: Abbreviations and symbols used in the quantitative data analysis process

Abbreviation or symbol	Definition
α	Cronbach's alpha coefficient
F	Frequency
M	Mean or average
Mdn	Median
N	Population size
n	Sample size or subset of the larger population
SD	Standard deviation
%	Valid percentage

Source: Adapted from Kotzé (2007:54-55).

After preparation of the data, IBM SPSS (Statistical Package for Social Sciences) version 23 was used for quantitative data analysis. The specific quantitative analyses conducted on the data are discussed in more detail in Section 6.2 of Chapter 6.

4.8.5 RELIABILITY AND VALIDITY

Reliability: Reliability basically is about consistency of measurement (Bryman, 2012:169). Most of the questions and rating scales used in this study's questionnaire were adapted from previous studies. There are various forms of reliability. In terms of the multiple-choice questions in the questionnaire (i.e., Q1, 2, 3, 4, 5, 7, 8 and 14), the only form of reliability one can assess is test-retest reliability. The test-retest reliability of a scale is assessed by administering the same scale to the same group of respondents twice under similar conditions, normally two to six weeks apart (Cooper & Schindler, 2014:443). The test-retest is suitable for scale measuring relatively constant attributes. This form of reliability is used to verify whether a scale provides consistent results and it is associated with the stability viewpoint on reliability (Cooper & Schindler, 2014:447-448). However, the test-retest reliability was not feasible in this study because this was a cross-sectional study and doing a test-retest requires each respondent to answer the question twice. Therefore, the researcher had to assume that the questions provided reliable data, primarily based on the fact that the questions were used successfully in previous studies.

The Cronbach's alpha was deemed appropriate to measure internal reliability. The Cronbach's alpha is an appropriate indicator of the internal consistency reliability of scores collected with multiple item rating scales. A separate Cronbach's alpha should be calculated for each construct or sub-dimension measured by a multiple-item rating scale. Cronbach's alpha is a generally known statistic used to evaluate internal consistency reliability (Bryman, 2012:170). In this study, Cronbach's alpha was used to assess an abstract construct, specifically the 'intensity of competition', and the value obtained was 0.65. Achieving the Cronbach's alpha minimum value of 0.60 is considered to be good (Bryman, 2012:170). The fact that the value of the Cronbach's alpha is less than 0.70, which is considered to be an acceptable measure of internal consistency reliability, is a limitation in this study.

However, before calculating Cronbach's alpha, one should first evaluate the dimensionality of a scale using exploratory or confirmatory factor analysis. In this study's case, based on the results reported by Jaworski and Kohli (1993:68), the researcher assumed that the three items in Question 6 measured the underlying construct "competitive intensity" (without checking the dimensionality of this scale through exploratory factor analysis, for reasons mentioned below). The researcher calculated the Cronbach's alpha across the responses to the three items which all measured the underlying construct, competitive intensity and obtained a value of 0.65. This value is lower than the generally accepted cut-off of 0.70. Because the magnitude of the value Cronbach's alpha is affected by both the average correlation between responses on the items in a scale *and* by the number of items, the low Cronbach's alpha obtained in this study may have been the result of the small number of items used. Because there was nothing the researcher could do to improve the Cronbach's alpha of scores obtained from the three-item measured, one had to use the measure as it was.

In the case of question 9, one should have first used exploratory factor analysis (EFA) to investigate the dimensionality of respondents' answers to the items in this question. EFA is a statistical procedure for analysing a set of observed variables in order to determine the variables that are strongly correlated (Urdan, 2010:181). The purpose of EFA is to evaluate the dimensionality of set of multiple items in a question by finding out the smallest number of interpretable factors required to describe the correlation among them (Brown,

2006:20). EFA requires a large sample. Most experts indicate that to use EFA, one should have a minimum sample size of 100 or, if this requirement is met, 5 to 10 times the number of respondents as the number of items in the scale (Urdan, 2010:169-171). Ideally, in this study, an EFA should indicate that there are four underlying dimensions in respondents' answers to the items that correspond with the four modes of environmental scanning. In the case of this study, one would have required a minimum of 100 respondents to do an EFA on the response obtained in question 9. The sample in the quantitative phase of this study was too small; the researcher could not do an EFA. For this reason, the researcher have no information on which items in question 9 group together to measure the underlying modes of environmental scanning, and, consequently, it was not necessary to calculate Cronbach's alpha across any of the items. The only thing the researcher could do was to focus on descriptive statistics reported on the individual items. Future researchers will have to investigate the dimensionality of the items in question 9 using EFA in a large sample and, thereafter, also evaluate the internal consistency reliability of the resulting factors or dimensions in the scale.

In the case of question 10, the researcher did not calculate the Cronbach's alpha because each scale items represents a unique or distinct benefit of environmental scanning. Since the focus was on respondents' responses regarding each of the unique or distinct benefits reflected in the individual items, it was not necessary to calculate Cronbach's alpha or to calculate a composite score across the items in this scale. One can of course calculate Cronbach's alpha across these items if one wish to treat the items as measure of the underlying construct "benefits of environmental scanning". In this study, the researcher chose to focus on the individual items instead.

The same principles outlined above for question 10 also apply to question 11, 12 and 13. In all four of these questions, the interest was again on respondents' answers to the individual scale items. For these questions, Cronbach's alpha was, therefore, not appropriate. The only way to assess the reliability of responses to individual scale items was through test-retest reliability, which was not practically feasible for reasons discussed above. So again, the researcher had to assume that respondents' scores (i.e., answers) were reliable.

Validity: This is essentially about whether the question or scale in a questionnaire truly measures the concept or construct that it intends to measure (Bryman, 2012:171).. There are various forms of validity. In this study content validity was especially important. Content validity specifically answers the following question: Do the items in the scale fairly represent all the important sub-dimensions or scope of the construct that it purports to measure? There are two characteristics of content validity, namely face validity and logical validity (Cooper & Schindler, 2014:257; Rubio, Berg-Weger, Tebb, Lee & Rauch, 2003:94). Face validity addresses the following question: Does the items in a question or scale, on face value, appear to measure the construct or concept of interest? The face validity of a scale is normally assessed by a panel of experts, such as professors who are knowledgeable about the particular construct being measured. The experts are usually asked to assess the clarity of the scale and to recommend changes. In some instances a panel of lay people can also be asked to assessed the face validity of the scale (Bryman, 2012:171; Rubio *et al.*, 2003:94). Logical validity also entails a more rigorous process, for instance, using a panel of experts to assess the content of the measuring instrument (Rubio *et al.*, 2003:94). Most of the questions or scales in this study were adapted from previous, other studies and had face validity because (a) the questions or scales were successfully used in previous studies and (b) the questions or scales were pre-tested with 3 individuals who indicated that they understood and were able to answer the questions. For the two questions or scales that were specifically designed for this study, they had content validity because they were critically reviewed by an academic expert on environmental scanning and (b) was also pre-tested with 3 individuals who indicated that they understood and were able to answer the questions.

To ensure validity in this study, each question in the questionnaire was a reliable and valid measure of the specific concept or construct it purported to measure. The questionnaire covered the relevant dimensions of the research topic on environmental scanning practices. Moreover, the pre-testing of the questionnaire enhanced the validity of the content in the questionnaire.

Given the small size in the quantitative phase of this study, it was not possible to evaluate other forms of validity (e.g., predictive validity and nomological validity). Hence, the

researcher had to assume that the questions or scales used in this study were valid measures of their respective constructs.

The next section discusses the ethical considerations relevant to the study as a whole.

4.9 ETHICAL CONSIDERATIONS

The different ethical considerations relevant to this study are briefly discussed in this section based on the recommendations by Cooper and Schindler (2014:28-33).

Ethics considered: The researcher obtained formal ethical clearance from the Research Ethics Committee of the Faculty of Economic and Management Sciences at the University of Pretoria in November 2015.

Protection of participants' privacy: Participants have a right to privacy, which must be protected. In order to achieve this, the researcher ensured that anonymity and confidentiality in respect of the participants and the participating companies in this study were maintained.

Informed consent: Each participant was asked to read and sign an informed consent form before participating in the study (see Appendix D).

Voluntary participation: Participants were reminded that they had the right to withdraw from the study at any time. No incentives were offered to encourage participation. The participants, therefore, participated in the study on a voluntary basis.

Protection from harm: The researcher explained to participants what the study was about and guaranteed their protection from physical or psychological harm. No participants were harmed physically or psychologically because of their participation in the study.

Confidentiality and anonymity: In this study, confidentiality and anonymity were ensured by using pseudonyms to refer to companies and participants in the qualitative phase. The companies' and participants' names were also removed from the transcripts and quotations presented in Chapter 5. In the quantitative phase, confidentiality and anonymity were ensured by storing the data in a password-protected environment, by analysing the data at an aggregated level, and not reporting the names of individual respondents or companies.

4.10 SUMMARY

Mixed methods researchers employ qualitative and quantitative research methods in a study to acquire deeper and broader understanding of a phenomenon. The qualitative research phase of this study occurred in a natural setting, which enabled the researcher to understand the experiences of participants regarding their companies' environmental scanning practices. Similarly, respondents in the quantitative phase provided information relating to the way their companies practised environmental scanning. The data collected in these two research phases provided diverse viewpoints regarding environmental scanning practices in top performing South African companies. Moreover, in this chapter, the researcher described the specific methods used to investigate environmental scanning in sufficient detail to allow other researchers to replicate this study in another setting.

A convergent parallel mixed methods design was used in this study. This implies that the researcher collected qualitative data and quantitative data simultaneously. In total, 44 companies participated in this study. There were 11 participating companies in the qualitative phase and 33 participating companies in the quantitative phase of this study. Sixteen participants from 11 major South African companies were interviewed in the qualitative phase, while 33 respondents from top performing South African companies were surveyed in the quantitative phase.

The most important concept of mixed methods research is to appreciate what each method has to offer and draw on them. As a reminder, in a convergent parallel mixed methods design each method is equally important and, therefore, given equal priority. In this study, qualitative and quantitative data were collected simultaneously and analysed

separately, but merged during interpretation in order to compare or contrast the two findings. The analysis and findings of the qualitative phase are reported in the next chapter, while Chapter 6 describes the analysis and findings of the quantitative phase.

CHAPTER 5: DATA ANALYSIS AND FINDINGS OF THE QUALITATIVE RESEARCH PHASE

Chapter outline:

The purpose of this chapter is to:

- Provide an overview of the data analysis approach and findings of the qualitative phase;
- Provide brief profiles of the companies that participated in the qualitative phase of this study;
- Describe the qualitative data analysis process used in this study;
- Present the emerging themes identified during data analysis;
- Discuss the dimensions of the external environment that are of relevance to the participating companies.
- Examine the manner in which environmental scanning is being practised by the participating companies; and
- Discuss how the participating companies use the acquired environmental information.

5.1 INTRODUCTION

The previous chapter provided an overview of the research design of this study. The purpose of this chapter is to describe the qualitative data analysis process followed in the qualitative phase of this study and to introduce the themes that represent the study's qualitative findings. The chapter starts with brief profiles of the companies that participated in the qualitative phase of this study. This is followed by a description of the qualitative data analysis process. This process involved transcribing the interviews, coding the data, clustering codes and finally developing themes. Next, the themes identified from the qualitative data are introduced and discussed. The three main themes, which represent the main qualitative findings, are as follows: dimensions of the external environment that are being monitored, the way in which environmental scanning is being carried out and the use of information within the respective companies.

In order to fully comprehend the findings reported in this chapter, it is important to be familiar with the companies that participated in the qualitative phase of this study. The next section provides brief profiles of the participating companies.

5.2 BRIEF PROFILES OF THE PARTICIPATING COMPANIES IN THE QUALITATIVE PHASE

Eleven companies were investigated in the qualitative phase of this study through semi-structured interviews conducted with senior managers representing the 11 participating companies. Basic information about these 11 companies with respect to their size and the job positions of the individual participants are presented in Table 5.1. All 11 participating companies have a market capitalisation of at least R1 billion. All the participating companies operate globally and in South Africa. Pseudonyms were used to protect the identity of the participants and their companies.

Table 5.1: Summary of the individual participants and their respective companies

Participants	Gender	Job title	Number of employees globally	Pseudonyms of companies	Industry
P1	Male	Mobility and Immigration Services Manager	160 000+	Company A	Accounting/Financial Services
P2	Male	Human Resource Manager	160 000+	Company A	Accounting/Financial Services
P3	Male	Director for Compensation and Benefits Consulting	160 000+	Company A	Accounting/Financial Services
P4	Male	Vice-President for Strategy Enablement and Strategy Execution	30 000+	Company B	Chemicals, Gas and Energy
P5	Female	Vice-President for Supply Chain and Marketing	30 000+	Company B	Chemicals, Gas and Energy
P6	Male	Vice-President for Corporate Finance and Business Development	30 000+	Company B	Chemicals, Gas and Energy
P7	Female	Senior Environmental Officer	14 000+	Company C	Construction
P8	Female	Environmental Manager	14 000+	Company C	Construction

Participants	Gender	Job title	Number of employees globally	Pseudonyms of companies	Industry
P9	Female	Executive Vice-President for Human Resources and Strategy	66 000+	Company D	Mining
P10	Female	Executive for Corporate Affairs and Public Policy	15 000+	Company E	Mining
P11	Female	Performance and Wealth Management Manager	33 800+	Company F	Banking and Financial Services
P12	Male	Chairperson	Unknown	Company G	Consulting and Business Services
P13	Male	Group Strategy and Risk Manager	1 000+	Company H	Nuclear Energy
P14	Male	Chief Human Resource Officer	70 000+	Company I	Insurance and Risk Management
P15	Female	Health and Wellness Manager	3 800+	Company J	Financial Services
P16	Male	Sales and Business Development Manager	76 000+	Company K	Transportation

The participants in the qualitative phase of this study were very knowledgeable about the study's central phenomenon. These participants were key employees and were directly involved with strategic matters in their respective companies. They provided rich information on the dimensions of the external environment that were influencing their businesses. The participants also revealed the way environmental scanning was being practised in their respective companies, including the sources from which their companies obtained information. Profiles of the participating companies and their specific business operations are provided below. The company profiles are based mainly on information obtained from the semi-structured interviews and the respective companies' websites, as well as annual reports. The specific secondary sources of information on which these profiles are based are not cited to protect the identity of the participating companies.

5.2.1 COMPANY A

Company A is a global financial services company and one of the "Big four" accounting and auditing companies in South Africa. This company has offices in 158 countries and

employs over 160 000 employees globally. It is regarded as one of the largest South African companies in the financial services industry. There is growing awareness in the company of the need to keep track of the changes in its external environment. This includes assessing company law, labour laws and the Employment Equity Act, as well as the economic changes occurring in its external environment.

The attitudes of institutional shareholders regarding companies' remuneration policy, stakeholders, and the recent King Code of Governance are strategic issues faced by the company. This company regards people and technology as major resources worth investing in as one of its strategies. This is to give the company a sustainable competitive advantage. The company engages with its stakeholders and listens to what they have to say and this enhances its innovation. Moreover, the company designs innovative products to meet its clients' needs.

The top management of Company A supports the environmental scanning process, which assists corporate strategic planning. Environmental scanning is done continuously and the main areas of concern include clients and the economic and legal environments. In addition, the company is aware of current shifts in human resource related trends. The information collected through environmental scanning is critically checked and ultimately used for the thought leadership of the business.

5.2.2 COMPANY B

Company B is a leading company in the chemical, oil and gas industry in South Africa and also operates globally. Part of the company's business activities includes gas exploration. This company operates in more than 35 countries and employs over 30 000 people globally. The company has crude oil refineries in South Africa and supplies crude oil and gas to many petrol service stations in South Africa.

The instability and changes in the price of crude oil are major challenges faced by the company. However, the company is proactive and has developed a strategy to cope with changes even before they occur. A unique challenge faced by this company is satisfying

its customers who are also its competitors, but the company copes very well with this trend and has implemented strategies to enhance its market share.

Company B engages in formal environmental scanning to support its strategic planning process. The senior management team, as well as the executive vice-presidents, are involved with the environmental scanning task. When conducting environmental scanning, the exchange rate, the price of crude oil and regulations, such as those relating to the petroleum pipelines industry, are aspects that are monitored. Managing relationships with stakeholders is one way Company B responds to the trends and changes in its external environment.

5.2.3 COMPANY C

Company C operates in the construction industry in South Africa. This company also has businesses in other African and European countries, with over 14 000 employees globally. Its products include the design and manufacturing of eco-friendly building materials. The company constructs buildings that are environmentally sustainable and eco-friendly. These two types of eco-friendly buildings include 'green star' and 'LEED jobs'. LEED is an acronym for Leadership in Energy and Environmental Design. The eco-'green star' buildings were adopted from Australia and 'LEED jobs' from the USA. Company C is also involved with upgrading water facilities in South Africa. Green star is an objective assessment of how green or eco-friendly a construction process is. LEED jobs indicate the assessment of how a building or a number of buildings are designed in a way that is energy saving, water efficient and that reduces carbon dioxide emission.

One of the major challenges faced by Company C is the shortage of land for waste disposal sites. The company consequently has to look for alternative ways to deal with how waste is being managed. While in the past a beautiful design would have met clients' needs, now they are demanding buildings that are environmentally sustainable. Company C constructs buildings and houses that are environmentally sustainable to attract and retain its clients.

Although there is no formal environmental scanning office in this company, the establishment of such an office is being considered. Currently, as a form of scanning the environment, the company looks at climate change, the mines and the demand for infrastructure. Quarterly, the group executive committee and members of the board meet during strategic planning sessions to design strategies to cope with the changing business environment.

5.2.4 COMPANY D

Company D operates in the mining industry in South Africa and is one of the top ten gold mining companies globally. It is an internationally listed company and is also listed on the JSE. The company has 17 mines in nine countries, including South Africa, with over 66 000 employees globally. It keeps track of many external changes along a number of parameters, including the supply and demand for gold.

While the company is aware of a number of factors in its external environment, illegal mining activities seem to be a major challenge. Even though artisanal mining (i.e., outsiders mining on a small scale) is an inherent risk of the business, organised crime syndicates pose a bigger risk to the company. The senior risk managers are responsible for conducting environmental scanning.

The company scans its external environment, including the political, economic, ecological and technological environments, in detail as well as its competitors, customers and suppliers. Environmental information is obtained from both primary and secondary sources and it is fed into the company's strategic planning process. Normally, an off-site executive strategy planning session is conducted for two or three days, where the strategic plan is reviewed and adjustments are made. The environmental information is also used for various purposes when making strategic choices.

5.2.5 COMPANY E

Company E is a mining company operating globally, including in other African countries. This company also operates in the mining industry in South Africa and employs over 15 000 employees worldwide. The company's mining activities include aluminium, copper and manganese. It has undertaken some restructuring, but would need a five-year transition period to accommodate all the new Broad-Based Black Economic Empowerment (BBBEE) requirements stipulated in the revised mining charter.

The newly revised Mining Charter of the Department of Mineral Resources will affect the way Company E conducts its business. In response to this development, the company will analyse the new legislation to see how it affects its strategic plan. Then the impact of the legislation on the company will be examined, as well as the opportunities and threats arising from the new Mining Charter.

This company conducts formal environmental scanning and engages with relevant stakeholders to influence decisions in its external environment. The information obtained through environmental scanning is incorporated into the company's knowledge management systems and is also used to develop a *position paper*. The company's position paper should demonstrate how its strategy is linked to its external environment.

5.2.6 COMPANY F

Company F is one of the "Big four" banks in South Africa, providing banking and financial services. The company operates in 12 African countries and employs over 33 800 employees globally. From a business perspective, a lot of what the company does has to do with understanding its internal and external environments. There has been an increase in regulations affecting the company as well as economic issues. From an African perspective, issues of slow growth in the economy influence this company's business operations. For these reasons, a lot of the company's corporate and individual clients in South Africa are struggling with growth issues.

In this company, technology is viewed as an important trend because it affects the ease of doing business. The company's clients are transacting more on mobile technological platforms and the experience of mobile platforms drives their customers' behaviour. Technology has increased the business's opportunity as well as become a risk in terms of security factors. Given the intensity of competition faced by this company from the other three major banks and from non-traditional banking institutions, the company builds a more solid relationship with its clients to ensure its success.

This company has a formal environmental scanning office, which is linked to the CEO's office. It also engages in a formal strategic planning process. The top management team regularly explores current strategic issues and develops strategies to respond and adapt to changes in its external environment.

5.2.7 COMPANY G

Company G is one of the largest remuneration consulting companies in Africa. This company operates in the consulting and business services industry in South Africa, focusing on remuneration and rewards. The company also provides consulting services to government parastatals as well as other companies listed on the JSE.

A major trend in this company's external environment is that its corporate clients are struggling to generate the revenue that they used to make and this leads to cost control measures being implemented. Because Company G serves as consultants for most of the leading companies in South Africa, the economic situation could pose a challenge in terms of the affordability of its services. Therefore, the company has to look for ways of adapting to these changes, such as charging less and giving more value-added services. The other trend is that companies in general, including Company G, are flooded with big data and they need to synthesise the information and make sense of it.

Although the company does not have a formal environmental scanning office, the executives themselves, including the chairperson, are involved with environmental scanning. In order to be more effective, the company engages in a formal strategic planning process, which occurs annually. Information obtained through environmental

scanning is used as input to the strategic planning process, where strategies are developed to enhance the company's sustainability.

5.2.8 COMPANY H

Company H is a leading company in the nuclear energy industry in South Africa and produces nuclear medicine that helps in the cure of cancer. This company employs over 1 000 employees globally. The company's products are exported to Europe and to other African countries. However, in African markets, the products are subsidised in order to make them affordable. Company H's products are expensive and since its clients in Europe have higher purchasing power, the company generates more revenue from these clients.

Among the many external factors in Company H's business environment, political changes and technological advancement, as well as managing the perception of what nuclear energy is all about, are the main challenges facing the company. Furthermore, there are several safety standards and regulations, such as the ISO 14001, to which the company has to adhere.

For this company, environmental scanning is perceived as a very important process because it enables the company to add value to its business operations. Maintaining close associations with its stakeholders is one way in which the company copes with changes in its external environment. The information obtained through environmental scanning is used in the company's strategic planning process, including strategy formulation and managing the company's risk.

5.2.9 COMPANY I

Company I is a large company operating in the insurance and risk management industry globally. This company operates in 120 countries globally, including 15 African countries. The company has over 70 000 employees worldwide. Its core business is to provide

insurance, risk management and employee benefits. In South Africa, the company also operates in the insurance and risk management industry.

A challenge encountered by this company stems from direct competitors who provide similar services to those of Company I. Moreover, the demands of its clients in South Africa are materially different from the demands of its clients in other African countries, because the clients in South Africa are more informed about services they expect. One way this company responds to changes in its external environment is to engage continuously with its stakeholders to find out what they want and then to provide value-added services to them.

Environmental scanning is viewed as an essential management tool, which enables the company to make informed decisions. The company monitors regulatory changes, economic conditions as well as what the rating agencies are saying about South Africa. With regard to the company's core insurance business, environmental scanning enables Company I to mitigate potential risks that could have a negative impact on its clients, as well as on the company itself.

5.2.10 COMPANY J

Company J is one of South Africa's top performing companies providing financial services solutions and employee benefits for corporate clients. This is a global company with over 3 800 employees worldwide, which also operates in other African countries. In South Africa, the company operates in the financial services industry.

The company's corporate clients usually tend to the cut cost of health and wellness benefits of their employees, but then unhealthy employees tend to reduce productivity. When corporate clients reduce costs, this poses a challenge to Company J to generate more revenue and compels the company to look for ways to increase its market share. Offering value-proposition services at low cost to its clients is one of Company J's strategies to increase its market share.

Company J tries to leverage returns from its existing investments. The company has a formal environmental scanning office, which gathers information on its competitors. Environmental scanning is conducted with the aim of enhancing the company's financial performance. The CEO and top management team attend strategic intent meetings quarterly and make some strategic decisions on behalf of the company.

5.2.11 COMPANY K

Company K provides intelligent transportation systems to clients globally and in South Africa and has over 76 000 employees globally. The company's business activity involves traffic and toll road management. Hence, Company K operates in the road transportation industry in South Africa. This company integrates various transportation systems to create products and services for major cities in South Africa, including Cape Town and Durban, and for the Gauteng Province. Even though this is a technology-based company, understanding its clients' behaviour and making sales at the right time are crucial to its success.

The key challenges that Company K deals with are effecting transparency in the tender processes in South Africa, in particular, and in other African countries. In order to ensure transparency, this company has to have a third party, such as Price Waterhouse Coopers (PWC), audit and where possible report when there is non-compliance and non-transparency in the tender process. For this company, BBBEE increases the costs of doing business by 30%-40% and also makes it difficult to deliver real value to corporate clients. Another challenge faced by the company derives from vehicle owners who tend to refuse trackers being placed in their vehicles.

Although Company K conducts detailed environmental scanning on all factors of the external environment, this is done annually and the company has consequently missed out on some important events. However, this company conducts environmental scanning on its clients more often than other aspects in its external environment. The information obtained through environmental scanning is fed into corporate strategic planning, thus enabling the company to enhance its financial performance.

The next section describes the data analysis process used in the qualitative phase of this study.

5.3 A DESCRIPTION OF THE QUALITATIVE DATA ANALYSIS PROCESS FOLLOWED IN THE STUDY

Qualitative data analysis is an on-going process involving constant reflection about the data and making sense of the findings of a study (Nieuwenhuis, 2007:99). Data analysis is basically a process used to answer research questions. Such analysis entails asking broad questions and developing an evaluation of information supplied by participants (Creswell, 2012:237). For the qualitative phase of this study, data analysis was performed through the use of thematic analysis. It is described as a process for identifying, analysing and reporting patterns (themes) within a data set (Braun & Clarke, 2012:57). This process involves preparing the data, followed by conducting the actual analysis by delving deeper into understanding the data and interpreting the broader meaning of the data (Creswell, 2012:238).

The following generic process suggested by Braun and Clarke (2012:57-69), Creswell (2012:238-258) and Nieuwenhuis (2007:104-113) was used to guide the analysis of data in this study. This process involved six steps, which are discussed below:

Step 1: Prepare data for analysis: The raw data, that is, the interview recordings, were first transcribed into a written format (Braun & Clarke, 2012:60; Nieuwenhuis, 2007:104). Prior to starting the qualitative data analysis process, the researcher listened to the recorded interviews and concurrently transcribed them into a verbatim written format. The researcher typed the transcriptions of interviews into an MS Word document and then printed the transcripts in preparation for data analysis. Next, the researcher read through the transcripts while listening to the records to verify the accuracy of the transcripts. This stage also involved memoing. The researcher recorded memos that included reflective notes about ideas, insights and lessons learnt during this study. Thereafter, the transcripts and field notes taken during the interviews were repeatedly read through in order to become familiar with the data. Each participating company and participant was assigned a pseudonym, as shown in Table 5.1.

Step 2: Establishing initial codes: In this step of the data analysis process, the data had to be read and reread to establish codes (Braun & Clarke, 2012:61). The researcher read the data critically to create codes. Codes are used to identify and attach a tag to a characteristic of the textual data that is meaningful to the research questions (Braun & Clarke, 2012:61; Creswell, 2012:238). This phase served as an enabler to gain deeper understanding of the information participants provided on this study’s central phenomenon, namely environmental scanning. The researcher read through each transcript, jotting down notes in the margins. These notes were the basis of formulating codes and were written next to the data that appeared to be potentially important and relevant to this study. Table 5.2 illustrates the way codes and main themes were identified in this study.

Table 5.2: Examples of extracts from the coded transcripts showing the link between the codes and main themes identified in this study

Raw data extracts	Codes	Definition	Main themes
'We follow the trends. Africa is currently the leading continent in terms of the needs. However, because of the expensiveness of the product, Africans can hardly afford the product. Hence, in that instance, we export a lot to other countries as opposed to Africa. If you look at our customer base, Europeans they are leading because they have the money.' (P13)	Global environment	Companies worldwide are increasingly becoming involved in international business, especially through exporting.	Dimensions of the external environment
'It depends on what information we are looking for: if it is health, we use WHO, police for crime information, bank, financial analysts for economic information and local informers on the ground.' (P9)	Sources of information	A company can choose to acquire information from both personal and impersonal sources of information.	Environmental scanning practices
'We will then take the best pieces of information from the environmental scanning and feed it into our annual strategy session. Information we get feed into our decision-making body.' (P12)	Strategic planning	Strategic planning, a process including environmental scanning, through which management uses information to make informed strategic decisions.	Use of information

Step 3: Searching for themes: Searching for themes is a critical part of the data analysis process because a theme captures something significant about the data with regard to a study’s research questions (Braun & Clarke, 2012:63). Themes represent a number of

patterned responses within the data. These themes must show multiple perspectives from participants and be supported by several quotations from the data. This step requires analysing the codes to determine how diverse codes could be joined to form a theme (Braun & Clarke, 2012:63; Creswell, 2012:249). In this study, the researcher searched for themes by identifying patterns of key issues that relate to environmental scanning from the participants' interviews sessions. Furthermore, the field notes compiled during the semi-structured interviews were used to verify similarities or conflicting views regarding each theme for in-depth analysis of environmental scanning of top performing companies in South Africa. After identifying the main themes indicated in Table 5.2 above, the next stage of the data analysis process was to review potential themes.

Step 4: Reviewing potential themes: The themes identified in Step 3 were now critically reviewed. This aspect is extremely important because it relates to the quality of the data. This requires a review of the developed themes relating to the overall data collected (Braun & Clarke, 2012:64; Nieuwenhuis, 2007:108). During this stage, the researcher reviewed the available data and went back to the literature to further make sense of the data.

Step 5: Defining and tagging the themes: Themes have to be clearly defined, indicating the uniqueness of each specific theme. It is important to consider how each theme tells a coherent story about the data (Braun & Clarke, 2012:66). When the researcher was implementing this step of the analysis, each theme was assigned a specific focus to answer the study's research questions.

Step 6: Interpret the data and construct the report: In this final step, the researcher stated and affirmed the study's main findings (Braun & Clarke, 2012:69). This was also in the form of the meaning drawn from the literature. During the analysis process, care was taken to pay attention to exceptions; findings were verified to enhance the trustworthiness of the report. The researcher looked at various perspectives of participants in the participating companies regarding their companies' environmental scanning practices. The various themes in the data were utilised to acquire an in-depth understanding and develop a rich description of how environmental scanning is being practised in top performing South African companies.

In the final analysis of the data, the researcher could also suggest that findings confirm previous studies or recommend new questions that needed to be asked; hence interpretation could take many forms (Creswell, 2012:254-258; Nieuwenhuis, 2007:113). Constructing the report requires careful data analysis and a clear detailed summation of the findings. This information and conclusions are then drafted into a comprehensive final research report. By clearly describing the research methods used, reporting fully on the data collected and analysis thereof and presenting the results and interpretations clearly, the researcher will produce a final report that convinces readers of the trustworthiness of the findings (Braun & Clarke, 2012:69).

The themes identified during the qualitative data analysis process are discussed in the next section.

5.4 THEMES IDENTIFIED DURING THE QUALITATIVE DATA ANALYSIS PROCESS

The qualitative phase of this research identified three main themes related to environmental scanning, namely:

- dimensions of the external environment that the participating companies scan;
- environmental scanning practices; and
- use of the information obtained from environmental scanning to enhance strategic planning.

These three main themes and their related sub-themes are summarised in Table 5.3 below.



Table 5.3: Themes and sub-themes identified in the qualitative phase of the study

Company	A	B	C	D	E	F	G	H	I	J	K
Dimensions of the external environment											
MACRO-ENVIRONMENT											
<i>Political</i>	X	X	X	X	X	X	X	X	X	-	X
<i>Economic</i>	X	X	X	X	X	X	X	X	X	X	-
<i>Socio-cultural</i>	X	-	-	X	X	-	X	X	-	-	X
<i>Technology</i>	X	X	-	X	-	X	X	X	-	-	X
<i>Regulatory</i>	X	X	X	X	X	X	-	X	X	-	X
<i>Ecological/Natural</i>	-	X	X	X	X	X	X	X	-	-	X
<i>Global</i>	X	X	X	X	X	X	X	X	X	X	X
MARKET ENVIRONMENT											
<i>Customers/ clients</i>	X	X	X	X	X	X	X	X	X	X	X
<i>Competitors</i>	X	X	X	X	X	X	X	X	X	X	X
<i>Suppliers</i>	-	X	X	X	-	-	-	X	-	-	-
Environmental scanning practices											
MODES											
<i>Searching</i>	-	X	-	X	X	X	-	X	-	X	-
<i>Enacting</i>	X	-	X	-	-	-	X	-	X	-	-
<i>Conditioned viewing</i>	-	-	-	-	-	-	-	-	-	-	X
FREQUENCY	X	X	X	X	X	X	X	X	X	X	X
SOURCES	X	X	X	X	X	X	X	X	X	X	X
Use of information											
STRATEGIC PLANNING	X	X	X	X	X	X	X	X	X	X	X
STRATEGY IMPLEMENTATION	X	X	X	X	X	X	X	X	X	X	X

Note: The letter “X” indicates that a specific sub-theme was identified in a participating company. The symbol “-” implies that the sub-theme was not identified in the participating company.

The main themes and sub-themes summarised in Table 5.3 are discussed in detail in the remainder of this chapter. This discussion starts with the findings related to the participants’ views regarding the dimensions of the external environment relevant to their respective companies and the influence of these dimensions on their companies.

5.5 DIMENSIONS OF THE EXTERNAL ENVIRONMENT THAT THE PARTICIPATING COMPANIES SCAN

The external environment is composed of the macro- and market environments and the company has no control over this environment (Agbim *et al.*, 2014:252; Yoo & Sawyerr, 2014:30). This view was confirmed by a participant:

I look at a whole number of external factors which impact on our business. It is very difficult one, because those external factors are beyond our control in most cases.
(P1, Male, Mobility and Immigration Services Manager)

This quotation confirms that there are various factors in the external environment that companies need to consider when conducting environmental scanning. These external factors have been narrowed to ten sub-themes. In Table 5.2, the ten factors are presented as sub-themes under the overall theme “Dimensions of the external environment”. These ten sub-themes are discussed below. Section 5.5.1 focuses on the dimensions of the macro-environment and Section 5.5.2 deals with the market environment.

5.5.1 MACRO-ENVIRONMENT

The macro-environment is sometimes referred to as the general or remote environment. It encompasses the political, economic, socio-cultural, technology, regulatory, ecological and global environmental dimensions (Blackwell & Eppler, 2014:81; Pallapothu & Krause, 2013:28). The section below discusses the macro-environmental dimensions relevant to the participating companies.

5.5.1.1 Political environment

The political environment is one of the environmental dimensions constituting the macro-environment. Fifteen of the 16 participants mentioned that factors in the political environment were relevant to their environmental scanning efforts. These factors include political changes and political instability. Other factors include government policies, such as BBBEE, as reflected in the following participant quotations:

There are quite a lot [of factors]. One of them is political changes. You know that we are in the nuclear space. Not everybody supports nuclear. So when so and so don't support nuclear [Laughs] ... it becomes challenging to operate in the nuclear environment. So we have to keep in the loop from time to time. (P13, Male, Group Strategy and Risk Manager)

Basically, what is happening in the construction industry, due to the political changes in our country, there has been a decrease in the amount of our infrastructural developments. (P8, Female, Environmental Manager)

What freight charges are governments putting on the price of gold that might be less attractive? (P9, Female, Executive Vice-President for Human Resources and Strategy)

They [government] ... have added another "B" [to the BBEE policy]. In South Africa specifically with the [BBBEE] empowerment initiatives and objectives, makes the environment very difficult. There are privileges of BBBEE, empowerment goals that makes the environment very difficult to actually deliver real value. (P16, Male, Sales and Business Development Manager)

In countries where there is political stability, political trends would have an influence on business, as confirmed in the existing literature on environmental scanning (Asdullah & Ahmad, 2015:31; Samnani, 2014:39). These companies have to scan the political environment in all the countries and regions where they conduct business and also globally, not just in South Africa, to determine how it might influence their business practices.

Political changes seem to be the most relevant aspect scanned when the companies that participated in this study conduct environmental scanning in the political environment. The political situation in South Africa and in other countries has an impact on their businesses. Ten of the 11 companies mentioned that their companies monitored the political trends in South Africa. Six of these companies were concerned with changes in government politics, as these affected their business. Funds that flow into a company through investment help to increase the assets of a company. In situations where there is political instability, investors could pull their investments out of South African companies and transfer their

investments to other countries where they feel there is more political stability. It seems that the participating companies are concerned about investors' decisions to either keep or withdraw their investments from their companies. These decisions are influenced by the political environment in South Africa and other countries where they operate. Such political stability in South Africa could also attract more investors:

Political instability also impacts on investors' confidence. (P1, Male, Mobility and Immigration Services Manager)

Two participants, from the chemical, gas and energy and the mining industries respectively, indicated that the prices of crude oil and gold were not determined by their respective companies. This implies that companies whose products are determined by the government have to consider the costs of production and supply of such products before selling them to customers. Their production and marketing strategies must ensure that the prices of such products sold in the market do not exceed the price ceiling that has been determined by the government:

In terms of strategy, what [do] we look at? A number of things, the business unit, highly regulated. Whatever fuel that "I" see on the road, the price is determined by the government. (P5, Female, Vice-President for Supply Chain and Marketing)

With regard to BBBEE, two companies from the mining and transportation industries affirmed that BBBEE influenced their business operations. The participant from the mining company mentioned that the BBBEE requirement had moved from 40%-60%, which would require her company to review its BBBEE strategy and make adjustments. On the other hand, the transportation company found BBBEE to be a challenge in offering value to its clients. It is evident that environmental scanning is important, as it helps the senior management team to cope with changes that arise in the external environment. In both cases these companies should consider adopting a strategy to cope with the BBBEE changes in their business environment:

[BBBEE] previously they [government] would say for your top leadership that is the board as well as senior executives 40% should be black people. Now they have come up to say 60% should be black people. They have added another piece, 25% of them

should be black women. Previously, there were recognition for white women, but not anymore, because they feel that they have achieved the quota they were looking for, for white women. (P10, Female, Executive for Corporate Affairs and Public Policy)

5.5.1.2 Economic environment

Fifteen participants highlighted that their respective companies conducted environmental scanning on the factors of the economic environment because the economic condition in the country could have an impact on their businesses. The economic factors monitored by participants included trading in central banks, oil prices, exchange rates, gas prices, the rating agencies, inflation and the general economy in Africa, including South Africa. These seven related economic factors are reflected in the following quotations:

We do an intensive amount of economic financial scanning. We look at the Central Banks, for example, the Central Bank of America, the Central Bank of China, the Central Bank of India. Is the Central Bank of China selling or purchasing gold? Is the Central Bank of India buying gold for jewellery? (P9, Female, Executive Vice-President for Human Resources and Strategy)

The things that we watch: Oil price, exchange rate, gas price, fuel products changes (P.4, Male, Vice-President for Strategy Enablement and Strategy Execution)

The company scan the economic environment, taking into consideration the costs of inflation. (P3. Male, Director for Compensation and Benefits Consulting)

Economic issues, from the African perspective regarding the slow growth in the economy influence this industry. Therefore, a lot of the company's corporate and individual clients are struggling with growth issues. (P11, Female, Performance and Wealth Management Manager)

The general economy in South Africa appears to be the most important aspect of the economic dimension to the participating companies when they scan the economic environment. Only one company from the transport industry was silent about the economy in South Africa, perhaps because this particular company's products and services are not exposed to fluctuation of currency exchange rates. Ten of the 11 participating companies

expressed their views on how economic conditions in South Africa affect their companies' financial performance:

We look at what the rating agencies are saying about South Africa, we take that into consideration. ... "I" would say when it comes to South Africa, it would be the slow economic growth. (P14, Male, Chief Human Resource Officer)

Two participating companies from the financial services and insurance industries mentioned that their respective companies monitored inflation and the currency exchange rates, for instance the value of the rand to the US dollar. In addition, reports from the rating agencies are important economic trends that these companies consider when scanning the environment, because such reports give relevant information about the economic status of South Africa. One reason why companies scan for inflation is that it leads to high uncertainty in terms of making long-term investment decisions (Hill & Jones, 2013:72). Companies in the chemical, gas and energy industry are also affected by fluctuating exchange rates, as confirmed by two participating companies. For these companies whose revenues are linked to the price of crude oil, the decline in the price of crude oil could have a negative impact on their revenue. It would seem that a weaker rand would be favourable for companies importing products from the USA to South Africa, whereas when the value of the rand is low to the US dollar, a company exporting its products to America will find such an exchange rate unfavourable:

Changes [in the external environment] relate to the general decline in the price of oil. Another change is the value of the rand for instance. (P1, Male, Mobility and Immigration Services Manager)

There is a need to gather information on the economic situation in a country because this enables companies to prepare better for the future. Factors in the external environment could either enhance or hamper the participating companies' financial performance:

The economic situation in Africa and internationally is tight, and companies are struggling to generate the turnover and profit that they used to make. (P12, Male, Chairperson)

When there is economic prosperity, there is usually an increase in customers' expenditure and business growth. Conversely, economic decline tends to have a negative impact on business growth (Pallapothu & Krause, 2013:30; Samnani, 2014:38).

5.5.1.3 Socio-cultural environment

Socio-cultural factors is another important macro-environmental dimension. Eight of the participants mentioned the impact that factors in the socio-cultural environment have on their business operations. The factors identified in the socio-cultural environment included lack of skills, inequality, HIV/AIDS, unemployment, crime and corruption. These factors are reflected in the following participant quotations:

I think companies internationally and especially in Africa are struggling to get the right skills at the right place at the right time and once they find them to keep them. So the attraction and the retention of the right skills is very difficult. Inequality [pause] it affects most companies especially in terms of pay and remuneration ... so you get CEOs earning millions and the bulk of the masses earning less. And hence, this trend needs to be equalised. ... (P12, Male, Chairperson)

And previously, it [tender process] was very corrupt, but in the last two years we have laboured hard to get transparency in the business operations. (P16, Male, Sales and Business Development Manager)

South Africa's history of apartheid is an issue that is still being addressed in companies as part of their social transformation. Hence, discrimination in terms of gender, race and disability is carefully analysed in companies. Inequality is also viewed as a socio-cultural trend, which is reflected in the salary gaps of CEOs at the top level of management and other employees, including those at the lower level in companies. Companies need to change such systems, because that may be one reason for employees to go on strike. Every company must carefully consider its reward system in line with its strategy (Sisk, 2005:3). Therefore, companies need to reward both executives and other employees in a way that motivates them without jeopardising the implementation of strategy:

Employees must be paid equally... You cannot dismiss someone on the basis of race, gender or disability ... (P3, Male, Director for Compensation and Benefits and Consulting)

One of the participating companies in the mining industry monitors how HIV/AIDS influences its company's productivity. The participant also indicated that her company took proactive action, such as providing ARV drugs and offering counselling programmes to keep the workers healthy and enhance productivity:

Why do we track disease profile? Because it has significant impact on the country in which we operate. South Africa has a very high percentage of people affected with HIV. So if we have 25% of the workforce with AIDS we have to make provision for antiretroviral [ARV] drugs to the workforce, because without that, we will have a workforce that cannot continue to be productive. We also scan for labour-related stoppages, crime. (P9, Female, Executive Vice-President for Human Resources and Strategy)

On issues of skills, for example, not having a matric certificate has been addressed by one of the companies. This included providing scholarships to the local community for those who want to obtain their matric:

In South Africa [there is a] high level of youth unemployment. Most of these youths are engaged in crime. The company observed that the youths in particular, around the mines do not have matric certificates. So the company has to think of how to assist these youths obtained a matric certificate. The company offers scholarships for those who want to pursue their matric certificates. One of the company's building projects was able to create jobs for 180 youths in one of the communities. (P10, Female, Executive for corporate Affairs and Public Policy)

Such actions demonstrate CSR. A CSR company is one that takes action to support charitable causes, enhances the employees' well-being and makes the company a suitable place to work (Carroll, 2015:88; Kirat, 2015:4).

In the mining industry, crime is also a socio-cultural factor that the participating companies consider when conducting environmental scanning. Mining companies should generally

consider the impact that organised crime syndicates have on their business operations and consider what they can do, at a strategic level, to counter this impact. A counter measure is essential because organised crime syndicates pose a huge risk that could even lead to a whole mine being invaded. One participant in the transportation industry highlighted that his company had to deal with the issue of corruption regarding tender processes. It would seem that corruption increases the cost of doing business and hence cannot be ignored.

5.5.1.4 Technology environment

One of the environmental dimensions that the participating companies monitor is technology. It is important for these companies to monitor rapid technological changes, especially with the emergence of the Internet, mobile phones with more advanced options such as cameras, Wi-Fi, Internet and e-mail, to mention only a few. Participants from these companies had the following to say about technology:

A big change is technology, because it makes it easy for companies to conduct business. A lot of companies now are using technology to compete as opposed to people. (P12, Male, Chairperson)

I mentioned technology [pause] I think that is a big thing. I think the ease of doing business, simplicity, has become a key value proposition for a lot of companies. Technology in particular have depersonalised the relationship that we have with people but we are also aware of the fact that technology makes things easier. (P11, Female, Performance and Wealth Management Manager)

So if everybody is worried about technology, then why don't we turn technology into opportunity? Technology is not disruptive yet. We want to create the disruption. (P2, Male, Human Resource Manager)

Technology [pause] it becomes really challenging when it comes to technology. The trial and [testing of machines] challenges that cost a lot of money for production. The changes that happen with technology require that we keep up to the standards that are in the market. If you ought to be the best producers of [nuclear medicine] that we are, we have to keep up with technology. When our peers are using advanced

technology, we have to keep up with that. (P13, Male, Group Strategy and Risk Manager)

Technology is concerned with technological change and its influence on companies' products and processes (Gupta, 2013:14). The views of the different participants indicate that the participating companies monitor technology when conducting environmental scanning. The most important aspect of technology was its usefulness in making business operations easy. Seven of the 11 companies that participated in the qualitative phase of this study highlighted the role technology played in their respective companies. However, the use of technology was not mentioned in four of these companies, apparently because people seemed to be more relevant in the running of their businesses, as opposed to technology.

Two participants from the consulting and business services and the nuclear energy industries confirmed that technology enabled their respective companies to compete in the market. However, another participant from the financial services industry was aware of the current state of technology in his company's external environment and wanted to create a disruption in his company. This can be regarded as a disruptive innovation strategy.

Two participants from the consulting and business services and the banking industry concurred that the use of technology was an advantage that enhanced their business operations. However, the participant from the banking industry emphasised the disadvantage of technology. She indicated that technology did not provide the personal service one can receive from a friendly employee. Two of the participants from the chemical, gas and energy and the nuclear energy industries indicated that another disadvantage associated with technology was its high cost. Through environmental scanning, a company can identify opportunities and threats even for technology. Although technology is a factor in the external environment, it is also a resource that is used within a company to enable it achieve its goals (David & David, 2015:339; Pallapothu & Krause, 2013:31).

5.5.1.5 Regulatory environment

The regulatory or legal environment has to do with the laws and associated legal requirements in a country. The participants in the qualitative phase of this study indicated that there are many regulations in South Africa that influence the participating companies. The aspects of the regulatory environment identified in this study include safety regulations, the revised Mining Charter, company law, taxation law, the Employment Equity Act, the King Report on Corporate Governance, health and litigation claims and labour-related issues. The following quotations reflect the participants' views on the regulatory environment:

There are a lot of regulations that influence the company. For example, there are several safety standards and regulations that this company has to [adhere] to. (P13, Male, Group Strategy and Risk Manager)

There are a number of safety regulations that are imposed into the petroleum refinery industry. (P5, Female, Vice-President for Supply Chain and Marketing)

We keep track of labour law and taxation law. We keep track of company law, regulatory body, King Code ... We also look at the Employment Equity Act. (P3, Male, Director for Compensation and Benefits Consulting)

Because I think environmentally has to do with legislation changing. We are now more responsible for what actually happens to our waste and how we actually deal with it. (P7, Female, Senior Environmental Officer)

Responses from nine of the 11 participating companies indicated that they were scanning the regulatory environment in South Africa so as to keep up to date with new regulations that influenced their businesses. However, two participating companies did not mention any aspect in the regulatory environment. It would seem that these two companies were not surprised about changes in the regulatory environment or perhaps the regulations in South Africa did not really have an impact on their businesses. Safety regulations seem to be the most important dimension to monitor when the participating companies conduct environmental scanning of the regulatory environment. One can suggest that because the

safety of workers in companies is important to regulators in South Africa, compliance is imperative. There is also the King IV Report on Corporate Governance, which is neither an act such as the Employment Equity Act in South Africa nor a company law, which one participant discussed. This participant indicated that his company in the financial services industry monitored such trends. The rationale is that the King IV Report on Corporate Governance serves as a guide for ethical business practices and ensures transparency in the leadership of companies (Maritz *et al.*, 2011:5-6).

Two participating companies from the mining industry highlighted their concerns about the regulatory changes in this industry, in particular the revised Mining Charter. Both companies were concerned about labour-related issues, such as strikes and new unions entering the industry. Even though the issue of strikes was reflected in the quotations, one cannot ignore the impact that striking workers and labour unions can have on a business. It would seem that when workers go on strike, productivity is reduced; two participating companies therefore indicated that their companies did a bow-tie analysis. A participant explained that a bow-tie analysis is usually used by companies to evaluate risks and to depict the identified risks and possible solutions in a diagram:

On Friday, the 15th of April [2016] the Department of Mineral Resources announced a revised Mining Charter for the industry. [Issues of strikes] and the taxi association [affecting our workers] is problematic. So when we look at the strikes, we do what we called in this organisation the bow-tie analysis (P10, Female, Executive for Corporate Affairs and Public Policy)

One other regulatory dimension that had an impact on the mining industry was linked to a class action law suit on silicosis. This was a new trend that South African mining companies experienced. In a class action suit, a group of lawyers approaches a number of employees, offers to act as their representatives and takes legal action against a company. In such a class action, the lawyer will negotiate a fee or percentage of the reward provided by the courts to be paid as a lump sum, or by each participant in the action. A class action normally involves a large number of claimants and as such the lawyers are assured of a substantial pay out on winning the case. Silicosis is a lung disease caused by breathing in dust in underground mines. Such litigation can pose a risk to a company, which will require developing a strategy to address such issues. Therefore, the

participating companies are scanning the regulatory environment in South Africa to keep abreast with developments and prepare for some of the challenges that could arise:

For the first time in South Africa, we have had a class action suit on silicosis. For every risk – health claim and litigation, labour-related stoppages, strikes, new unions entering the labour, mining industry restructuring, then we do a bow-tie analysis (P9, Female, Executive Vice-President for Human Resources and Strategy)

It is important that companies monitor the legal requirements of a country because these have an impact on business operations (Albright, 2004:41). It is evident that through environmental scanning companies are able to identify opportunities and potential risks to their companies.

5.5.1.6 Ecological environment

Ecological environment is concerned with all the natural resources of a geographic region. Since these resources are scarce, the impact companies have on the ecological environment is important (Du Toit, 2016:18). The ecological factors that were identified in this study include climate change, waste, shortage of land for waste disposal sites, water, and energy shortage. These factors are reflected in the following participant quotations:

[Other aspects scanned] we scanned weather patterns and environmental hazard. (P9, Female, Executive Vice-President for Human Resources and Strategy)

In KwaZulu-Natal it is all about weather, road conditions, [so we monitor these] and advise our clients about road conditions and visibility of water on the highway. (P16, Male, Sales and Business and Development Manager)

Waste is a big problem in South Africa, because the thing is we are running out of land for sites, and we need to find alternative ways of how to deal with it. Some of the land for sites is unregistered. So that's another thing. The current drought [is an issue]. As a construction company water is essential. We also recycle water. (P7, Female, Senior Environmental Officer)

There is a waste management department in this company whose responsibility is to ensure that the waste the company produce does not contaminate the air, water or land. (P13, Male, Group Strategy and Risk Manager)

According to the responses from the participants, eight of the 11 participating companies monitored the ecological or natural environment because it has an impact on the operations of their businesses. However, three participants were silent on this and did not mention whether it was necessary for their companies to monitor this environment.

Climate change and water scarcity seem to be the two most important environmental dimensions of the ecological environment relevant to these companies, perhaps because these two dimensions affect their business operations directly. Two of the participating companies are addressing the issue of water scarcity by doing recycling.

Perhaps the three participating companies that were silent on business operations are not directly influenced by the impact of the ecological environment. It seems that the ecological environment does not have a significant impact on companies operating in the consulting and business services industry, as it would be for companies who operate in the mining and/or chemical and gas industries. One could argue that a company operating in the mining industry would regard the ecological environment as specifically relevant and would actually scan and verify the authenticity of any information gathered during environmental scanning.

However, one participant whose company operates in the banking and financial services industry, highlighted that aspects in the ecological environment, such as energy shortage and drought, were critical to the business success. For instance, bank clients whose core business was farming or agriculture would find alternative means of securing water, such as creating dams. This would create a need for more capital for irrigation purposes. Hence, they would need to go to the banks to negotiate loans:

Climate, the natural environmental issues, these have very big impact, because that will indirectly influence the behaviour of our clients, for instance, the drought in South Africa. So that means our clients in the farming environment are under pressure from

a financial perspective. (P11, Female, Performance and Wealth Management Manager)

Two participating companies in the construction and the nuclear energy industries respectively indicated that dealing with waste disposal was essential in their business practices. For the company in the nuclear energy industry, this waste was dangerous to the health of humans, as indicated below:

We make sure that the waste is so contained, because we generate waste that is very dangerous. There is a waste management department in this company focusing mainly on removing waste. (P13, Male, Group Strategy and Risk Manager)

On the other hand, one participating company in the mining industry indicated how the shortage of energy affected their business operations. As a result, the company designed a strategy of generating about 20% of its own electricity to support its business operations and minimise the risk of energy shortages:

The other area that we are looking at is water. ... You know if you look at it, is like that in South Africa, mining have been using the bulk of water in an environment where water is scarce; is an issue of actually finding alternatives. So there are a number of ways of doing it. Like some of the mines are underground, they have a way of actually securing water. So you know, we are looking at how we are recycling that water ... The other one thing is around the energy. You know energy shortage, but at the same time expensive. We generate 20% of own electricity. So we have actually invested in that. (P10, Female, Executive for Corporate Affairs and Public Policy)

From the various responses regarding the shortage of land for waste disposal, climate change, energy shortage and water scarcity, it is evident that these natural resources are scarce. Because of the scarcity of these natural resources, especially water and land, the impact a company has on its environment is crucial.

5.5.1.7 Global environment

In today's world the trend in businesses is to operate globally to increase their market share and strategically explore opportunities to keep their businesses economically

sustainable (Hill & Jones, 2013:72; Hill *et al.*, 2015:275). Moreover, most businesses are also entering into new geographic markets, as illustrated by the following participant quotations:

We are looking at expanding our business outside of the borders of South Africa into developing countries, where there are currently more opportunities. (P8, Female, Environmental Manager)

Religion is a huge mega trend ... fundamentalist religion ... Boko Haram ... ISIS ... which means that countries have to focus a lot of attention in terms of protecting themselves so against the fundamentalist ... and when you spend more money on military and police, then you have less money for education and healthcare. So those couple of mega international trends really do impact companies. Politics in the Europe is not stable; politics in America is not stable. Politics has a big bearing on the world economy. (P12, Male, Chairperson)

We follow the trends. ... [Internationally] ... Africa is currently the leading continent in terms of the needs [for nuclear medicine]. However, because of the expensiveness of the product, Africans can hardly afford the product. Hence, in that instance, we export a lot to other countries as opposed to Africa ... If you look at our customer base, Europeans they are leading because they have more money ...they can afford it. (P13, Male, Group Strategy and Risk Manager)

In other African countries, even though there is slow economic growth, they are still growing faster than the average growth of South Africa. (P14, Male, Chief Human Officer)

Each of the 11 companies that participated in the qualitative phase of this study monitored specific environmental dimensions in the global environment, which seemed to be of particular relevance to the particular company. For instance, a participating company in the transportation industry looked at socio-cultural factors such as language and the level of corruption in a country when intending to expand to other Sub-Saharan African countries:

In Sub-Sahara Africa, we need to immediately separate the language issue. So the French-speaking countries are almost inaccessible, opposite to South Africa. It is not

just the language, the culture, bureaucracy, the government set-up; it is very difficult to enter into the market with that European or South African mindset. Nigeria is our most successful because it is the most entrepreneurial. In Angola, [there has been] no success even though we have tried. We directly attribute that to the political situation. In fact, when you look at the World Bank report ranking on countries to do business with, Angola is the third from the bottom. (P16, Male, Sales and Business Development Manager)

A participant whose company operates in the mining industry scanned for freedom fighters' movement and political structures in other African countries, as well as what drives crime in Columbia:

Top ten issues that mining companies faced in 2014 ... [include] corruption in certain countries. In Columbia, there are military militant movement as part of ransom for funding their illegal activities, they resort to illegal kidnapping. In Mali, Tanzania, we need to understand the government, freedom fighters groups, all of these different parties that could affect the [business] operation. (P9, Female, Executive Vice-President for Human Resources and Strategy)

On the one hand, two participating companies in the financial services and mining industries faced similar challenges when they had to deal with the Ebola outbreak in the West African region, including Liberia and Guinea:

In Liberia, the Ebola epidemic was a major change which took place in the company's business environment [outside South Africa]. The Ebola outbreak affected the West African businesses. The Ebola issue lead to travel restrictions, especially for people who had Economic Communities of West African States (ECOWAS) visas. We had to appeal to the European [markets] Paranoia. (P1, Male, Mobility and Immigration Services Manager)

We also have to do disease profile in other countries, for example in our West African region, Ghana, Senegal we do malaria profiles. In Guinea the Ebola outbreak, the local people were not properly equipped, we safeguard workers, took out all the families from the mine, remove significant portion of the experts. Our company's doctors were working with the local authorities. (P9, Female, Executive Vice-President for Human Resources and Strategy)

On the other hand, a participating company in the nuclear energy industry monitors its European and African clients' purchasing behaviours. Another participant, whose company operates in the insurance industry, was of the opinion that the economic growth rate in South Africa is slower than in other African countries where his company operates. Another company operating in the consulting and business services was monitoring security factors and education, as well as the impact of political instability on the global economy.

It is evident that all these diverse global trends have an impact on the 11 participating companies, which would require them to adopt different strategies in order to enhance their business sustainability. All the participating companies operate in South Africa as well as outside South Africa' borders. This is an indication that they monitor global trends in the external environment. This could be due to globalisation where companies are involved in an integrated world economic activity (Min & Smyth, 2014:373). Environmental scanning enables companies to identify opportunities as well as threats in the external environment.

The next section presents the qualitative findings on the market environment.

5.5.2 MARKET ENVIRONMENT

The market environment is sometimes referred to as the industry or task environment and is considered as the general conditions for competition, which influence all companies providing similar products or services (Barney & Hesterly, 2015:55; Porter, 2008:80). It comprises customers, competitors and suppliers (Agbim *et al.*, 2014:252; Albright, 2004:41; Yoo & Sawyerr, 2014:30). In this study, three sub-themes related to the market environment were identified. The three sections below discuss the market environmental dimensions relevant to the companies participating in this study.

5.5.2.1 Customers or clients environment

The participating companies constantly monitor their customers, especially in terms of their purchasing behaviour. Participants shared some of their opinions on how their respective

companies monitored the purchasing patterns of their customers or clients and how to meet their needs:

We have to watch how the customers consume our products. (P4, Male, Vice-President for Strategy Enablement and Strategy Execution)

Clients [pause] that have changed as well ... I look at the companies that we build for, the developers that we build for, they use green buildings as a bit of leverage to tenants ... now, you are not renting a normal building. You are now renting a green star building. I think from marketing aspect for them, it is feasible and I think it is best practice that clients are looking at sustainability of their buildings. (P7, Female, Senior Environmental Officer)

Because we are customers-driven, and not technology-driven, so we need to look at the future demand, where is our customer based moving to? On the other side, the customers are very structured. What the customers actually enjoy about us is our ability to manage the contract. (P16, Male, Sales and Business Development Manager)

For example, in South Africa, you have a more informed consumer, and therefore, their demand is materially different. So the key we drive it [environmental scanning] as a philosophy to understanding what our customers are saying. (P14, Male, Chief Human Resource Officer)

[Our company noticed that its] corporate clients are trying to cut costs. And very often, we find that health and wellness [costs] tend to be on the [minds] of most employers when they choose to cut costs. (P15, Female, Health and Wellness Manager)

All 11 participating companies monitored their customers. The most crucial element for all the participants was an understanding of what their customers wanted and how they could meet their customers' needs. It seems that the participating companies were concerned about generating more revenue to enhance their financial performance which compelled them to satisfy their customers. In an environment where many companies are offering similar products and services, it is easy for companies to lose clients if they do not meet their needs. This would have a negative impact on the companies' profits.

From the semi-structured interviews, it is evident that the participating companies have a clear understanding of what their customers or clients' needs are. These companies also understand what drives their clients' purchasing behaviour. Environmental scanning helps companies to understand their customers and to provide relevant products and services that meet customer needs (Cancellier *et al.*, 2014:612).

5.5.2.2 Competitors environment

All 11 participating companies perceived their business environment as competitive. The three elements relating to competition are, firstly and most importantly, competition from other companies in the same industry. Secondly, there can be other companies competing from different industries, because of diversification from their core business operations. Thirdly, the participating companies monitored one another's competitive actions in the market. The following quotations reflect the way participants in the participating companies monitor competitors:

I think for us, competition is coming from traditional banking organisations, but much [competition from] other sectors out of the market. So we are in a competitive environment from a banking perspective, from other sectors, like retail, mobiles and so on. (P11, Female, Performance and Wealth Management Manager)

In the oil industry, the barrier to entry is very high. Why do I say so? Before I get into the market, I must have R1 billion or more. So it is not something that I and my friend can decide we are going into except we have those billions. (P5, Female, Vice-President for Supply Chain and Marketing)

We look at ... what it cost to produce gold as to what our competitors are doing. (P9, Female, Executive Vice-President for Human Resources and Strategy)

Formal [environmental scanning is conducted] in terms of looking at our competitors. (P15, Female, Health and Wellness Manager)

The most competitive market is South Africa. (P16, Male, Sales and Business Development Manager)

These observations are in line with the literature on environmental scanning which indicates that companies' market environment is highly competitive (Babatunde & Adebisi, 2012:24). The finding that the business environment in South Africa is competitive is confirmed by Du Toit (2016:19) and Hyde (2000:108).

All 11 participating companies monitored the competition in the environment where they operated. The conduct of competitors and competition arising from direct competitors in the market seemed to be the two most relevant environmental dimensions that the companies monitored. It could be that when these companies monitor one another's actions they are able to determine the next step a competitor will take in the market. Three participating companies from the financial services, mining, and insurance industries indicated that their companies were watching their respective competitors' actions:

We are a market leader, but obviously we want to keep an eye on what our competitors are doing as well. (P3, Male, Director for Compensation and Benefits Consulting)

On the other hand, a company in the financial and banking services industry seemed to be dealing with a lot of competition emanating not only from direct competitors within the banking industry but also from retail and other industries. As for the company in the chemical, gas and energy industry, concern about market share was its priority:

Competitors ... we all compete in the same market; we are all generally in the energy and chemicals market. Competition for market share is very difficult. (P6, Male, Vice-President for Corporate Finance and Business Development)

Perhaps the participating companies in the qualitative phase of the study operate in the red ocean. As explained in Section 2.2.3, a red ocean is a market that is already in existence and where the rules of the game are known by all. In such a market, companies employ different strategies to acquire market share and to outwit their competitors (Kim & Mauborgne, 2005:106).

5.5.2.3 Suppliers environment

In business operations, suppliers refer to companies or individuals that provide an industry with its needs, such as materials, labour and services (Hill *et al.*, 2015:56; Porter, 2008:82). Another environmental dimension that the participating companies monitor is suppliers. Four of the 11 participating companies shed light on the main aspects they considered when monitoring their suppliers. These aspects include procurement, logistics, types of suppliers and supply and demand:

I think actually, for all of us ... a lot of the construction companies ... there has really been a learning curve, because we have had to look at our own procurement, where we [are] actually purchasing. We have had to look at our own suppliers ... we also have to look at the type of suppliers that we used in the past. (P7, Female, Senior Environmental Officer)

Even when the mode of transport has an accident, the waste are intact. And those waste containers they must be approved by the regulators. (P13, Male, Group Strategy and Risk Manager)

Supply chain consists of inbound – procurement received on time and outbound – customers get deliveries on time. [We look at] element of transportation and logistics. Whatever truck that you see [company's name] [includes] logistics – movement of products. If you are delivering fuel to a customer, the component that you can recover should not exceed the ceiling price. (P5, Female, Vice-President for Supply Chain and Marketing)

We look at the supply and demand trends for gold. (P9, Female, Executive Vice-President for Human Resources and Strategy)

It is essential to understand the market environment in which a company operates, because strategic decisions are based on the company's interaction with its competitors and suppliers (Lynch, 2015:84).

The supply of and demand for their products seemed to be the most relevant aspect to the participating companies, because a company would need to identify the demand for its

products before considering the quantity of products to be supplied. Even if the company is not the supplier of the product, but on the demand side, identifying how much supply of the products is required is also essential. Three of the participating companies in the construction, mining and chemical, gas and energy industries were concerned about the supply of products. However, the two companies in the construction and the chemical and gas industries were more concerned about the procurement aspect of their supply chain in their respective companies. The participant in the chemical, gas and energy industry was not only bothered about procurement, but also emphasised the delivery of her company's product to customers in a timely manner. The companies operating in the nuclear energy and the chemical and gas industries seemed to focus on the logistics aspect of their products that was moving their products from one destination to the other. One of the participants in the chemical, gas and energy industry stressed that her company had to factor in the costs of supplying the products in such a way that the selling price did not exceed the price ceiling.

The participant whose company operates in the nuclear energy industry also considered the costs of transporting his company's products to clients, but emphasised the need to ensure safety of waste disposal when transporting this to disposal sites. As for the participant whose company operates in the mining industry, her company chose to assess the trend of supply and demand of gold. Perhaps because the price of gold varies in international markets, this company monitors its buyers' demand to determine the costs of exporting and supplying its products to customers.

It is interesting to note that seven of the companies that participated in this study did not provide any information on their suppliers. It would seem that these companies are operating in industries where suppliers are not directly influencing the success and profits of their businesses. Alternatively, these companies might have created relationships with their customers, which do not require frequent monitoring of suppliers.

As observed from the responses from the various participants, the dimensions of the external environment are interrelated. For instance, while a company is exporting its products, consideration of the global environment would be necessary. Moreover, the dimensions of the economic environment would be of importance, especially when such

products are exposed to currency exchange rates or interest rates. Coping in such a complex and dynamic business environment would require adopting a variety of strategies on corporate and business level, as well as deliberate and emergent strategies.

The next section describes how the participating companies conduct environmental scanning and also discusses the modes of environmental scanning and sources of information used in this regard.

5.6 QUALITATIVE FINDINGS ON ENVIRONMENTAL SCANNING PRACTICES

In this section, the qualitative findings regarding the participants' perceptions of their companies' environmental scanning practices are described. As explained in Section 3.3, there are four modes of environmental scanning: searching, enacting, conditioned viewing and undirected viewing (Choo, 2001:12; Du Toit, 2016:17). However, in the qualitative phase of this study, only three of these modes were identified: searching, enacting and conditioned viewing. The findings related to these three environmental scanning modes are presented below. Thereafter, the findings regarding the frequency with which the external environment is scanned and the sources from which participating companies acquire information about the external environment are discussed.

5.6.1 MODES OF ENVIRONMENTAL SCANNING IDENTIFIED IN THE QUALITATIVE PHASE

The participating companies in the qualitative phase of this study seem to use one of three modes of environmental scanning, namely searching, enacting or conditioned viewing. Six of the 11 participating companies adopt a searching mode of environmental scanning while four of the companies adopt an enacting mode. Only one company seems to adopt a conditioned viewing mode of environmental scanning.

5.6.1.1 **Searching**

A searching mode of environmental scanning is one in which the company has a formal process of gathering environmental information. Companies that employ a searching mode gather information on various dimensions of the external environment in a comprehensive way (Choo, 2001:19; Du Toit, 2016:17). In this study, the participating companies exhibited two characteristics associated with a searching mode of environmental scanning, namely having a separate environmental scanning unit within their companies and scanning many environmental dimensions, as illustrated by the following participant quotations:

Yes, there is a formal environmental scanning [unit]. In fact, this place, you cannot do anything until you have demonstrated that you have passed the test. ... We have Australia, which is our corporate office sending a team here who are going to actually check to make sure that our scanning is aligned and it is supporting the business. (P10, Female, Executive for Corporate Affairs and Public Policy)

Environmental scanning, we look at political, economical, socio-cultural and all [the dimensions of the] environment. (P5, Female, Vice-President for Supply Chain and Marketing)

There is a formal environmental scanning as part of the strategic planning process. We follow the PESTEL [Political, Economic, Socio-cultural, Technological, Ecological, Legal analysis] analysis. (P13, Male, Group Strategy and Risk Manager)

There is a formal environmental scanning [unit]. In fact, in that unit, one of the main things they look at is what is happening in the environment. (P11, Female, Performance and Wealth Management Manager)

Six of the participating companies operating in the banking and financial services, mining, nuclear energy, and the chemical, gas and energy industries have a separate environmental scanning unit or office. It seems that the types of industry in which these companies operate require them to do extensive scanning of all the dimensions of the external environment. Moreover, one can argue that these companies also have the financial capabilities to invest in their corporate environmental scanning processes. Such

extensive searching for information could enable these companies to identify and possibly exploit new markets.

5.6.1.2 Enacting

An enacting mode of environmental scanning is a process whereby the company actively gathers information to influence events in its external environment. When companies adopt this mode, they bring new business concepts to their stakeholders to elicit their feedback. This type of environmental scanning mode also entails learning by doing (Choo, 2001:17). Two characteristics of an enacting mode of environmental scanning – seeing the results of implementing a new strategy and learning by doing – are reflected in the quotations below:

As an example, there was a fantastic article put out on how companies are augmenting their sales, and then segmenting it into hunters and farmers. Hunters go and find the business. Farmers look after the current business. So I said let's discuss, look into it during our strategy session and see if it is applicable to us. (P12, Male, Chairperson)

[In a] lot of the construction companies there has really been a learning curve, because we have had to look at our own procurement. (P7, Female, Senior Environmental Officer)

As indicated above, a key characteristic of a company using an enacting mode of environmental scanning is that it tends to test its external environment to see what the outcomes are (Choo, 2001:17). Four of the participating companies operating in the consulting and business services, construction, financial services and the insurance industries adopt an enacting mode of environmental scanning. It would seem that for these companies, implementing new business strategies without being afraid of the outcomes is part of their business practices. From the classical example provided by the participant (P12) mentioned above, one could argue that companies that adopt an enacting mode are willing to learn from failures, since they are testing new business concepts that they have not applied before. There could be a possibility of achieving positive outcomes when a company tests a strategy in its external environment (Cancellier *et al.*, 2014:615-616).

Conversely, there could be negative outcomes, but perhaps the essential thing is that companies learn when they experiment with new concepts in their business operations (Choo, 2001:18).

5.6.1.3 Conditioned viewing

Another mode of environmental scanning that a company can adopt is referred to as conditioned viewing. When a company uses a conditioned viewing mode, environmental scanning efforts are used to understand the perspectives of its stakeholders. This manner of gathering information follows a standard procedure when scanning the external environment (Choo, 2001:16). A participant remarked that:

Environmental scanning [pause] well yes and no. We do not employ a third party to do the external scanning for us. We rely on our internal sources to bring us that information. And it is very much structured on the SWOT analysis. And from there we deduce some strategic direction. (P16, Male, Sales and Business Development Manager)

The above-mentioned company, which operates in the transportation industry, seems to employ a conditioned viewing mode of scanning to some extent. This type of mode follows a structural environmental scanning process. Since the participant highlighted that they used internal sources to obtain information instead of secondary sources that are mainly respected in the industry, its mode of scanning is not fully conditioned viewing. Moreover, the participant mentioned that information gathered from internal sources was used in their SWOT analysis sessions. It is important that companies know their strengths and weaknesses and are able to identify opportunities and threats in the external environment, as indicated by the participant. However, relying too much on a SWOT analysis has its own limitations. One such limitation is that this does not provide solutions to a company's problems and should only be a basis for further discussions on strategic analysis (Dess *et al.*, 2014:73).

5.6.2 FREQUENCY OF ENVIRONMENTAL SCANNING

One aspect of environmental scanning practices focuses on the frequency of environmental scanning. The frequency of environmental scanning refers to the number of times in a specific period a company scans its external environment (Agbim *et al.*, 2014:252). The overall impression received from the participants suggests that most of the participating companies engage in environmental scanning on a continuous basis. Participants indicated how often their companies conducted environmental scanning. Nine of the 11 companies conducted environmental scanning on a daily or weekly basis, whereas the representative of one participating company mentioned that the company monitored the environment on a quarterly basis. Another participating company conducted its environmental scanning annually. How often these types of environmental scanning practices are conducted in the companies is reflected in the following quotations:

We review what happens in the environment on a weekly basis because the environment is fast moving. (P3, Male, Director for Compensation and Benefits Consulting)

Environmental scanning is an in-depth exercise continuously done. (P6, Male, Vice-President for Corporate Finance and Business Development)

Daily ... [hum] every day we open our ears to the ground. We conduct environmental scanning. The Google alert comes into my e-mail every day. (P12, Male, Chairperson)

Because the environment in which we operate changes. There is an ongoing monitoring, but quarterly we monitor. (P11, Female, Performance and Wealth Management Manager)

[The company] conducts environmental scanning once a year. But it also means we miss a lot of things. (P16, Sales and Business Development Manager)

From the responses from the five participants it is evident that environmental scanning can be done as a routine and continuous activity, as well as a quarterly or annual task in companies. Nine of the participating companies, especially those in the financial services,

mining, construction, chemical, gas and energy industries, conduct environmental scanning either on a daily or weekly basis. One participating company in the banking and financial services industry conducts environmental scanning on a quarterly basis. Another participating company in the transportation industry conducts environmental scanning annually. The participant from this company was of the opinion that his company did not derive much benefit from environmental scanning conducted on a daily or monthly basis. However, a company that conducts minimal environmental scanning might miss important trends that could enhance its business operations (Babatunde & Adebisi, 2012:26; Jansen van Vuuren, 2002:140). Perhaps there are not many changes in the external environment that affect this company's operations, as opposed to the other participating companies. For the other nine participating companies, it is evident that conducting environmental scanning on a daily or weekly basis benefits their business operations.

The findings also suggest that the executives themselves pay critical attention to the environmental scanning tasks in their companies. One can argue that environmental scanning is not the task of only competitive intelligence officers, as suggested by Du Toit (2016:18) in her study, but is an aspect of importance even to the executives in the participating companies.

5.6.3 SOURCES OF INFORMATION FOR ENVIRONMENTAL SCANNING

The participants in the qualitative phase of this study obtain information on the external environment from various sources. These information sources can be categorised as either primary or secondary sources of information. Primary sources, for example, refer to customers, clients and suppliers, while secondary sources include research reports, government publications and newspapers (Du Toit, 2016:16). The various primary and secondary sources from which the participating companies acquired information were revealed in participants' quotations:

[Sources of information include] consultants, independent assessors [and] internal staff. (P15, Female, Health and Wellness Manager)

We get a lot of feedback from our clients. (P8, Female, Environmental Manager)

The two quotations above focused on personal sources, specifically primary sources of information. The next participant quotation reflects external impersonal sources of information:

We have used the University of Pretoria quite a number of times ... we have used CSIR... [Council for Scientific and Industrial Research] we have used GIBS [Gordon Institute of Business Science], so that we can compare [information]. (P10, Female, Executive for Corporate Affairs and Public Policy)

The following sources are a combination of primary and secondary sources of information as reflected in the participants' quotations:

When we do environmental scanning, we use credible sources: major consultants, major universities ... Harvard Business School, MIT [Massachusetts Institute of Technology] and Oxford [University]. Students that study Masters and PHD, we look at their literature review, let's say the research is in the areas of our business, we get the latest literature. [Also] by talking to our customers, listening to our customers hearing what they say and what they think the trends are. (P12, Male, Chairperson)

It depends on what information we are looking for: If it is health, we use WHO [World Health Organisation], police for crime information, bank, financial advisors, analysts for economic information, and local informers on the ground ... major consulting firms like PWC ... different sources of information. (P9, Female, Executive Vice-President for Human Resources and Strategy)

World Bank, we look at McKinsey what they publish in terms of specific countries. We ask our clients in terms of how we are servicing them. We also obviously look at research that has been published. (P14, Male, Chief Human Resource officer)

Newspapers, CNN [Cable News Network] [and] we are members of various trading chambers. (P1, Male, Mobility and Immigration Services Manager)

[Sho] Let me think about it [pause] we subscribe to a number of associations; some of them will give you information on the oil prices. Some of them will give you information on the refineries that want to shut down. We have got people who look at

Google, Twitter, newspapers. (P5, Female, Vice-President for Supply Chain and Marketing)

Government publications ... Press releases [other] reports. We ask our customers, suppliers. We also get information from research companies. (P13, Male, Group Strategy and Risk Manager)

These observations are in line with the existing literature on environmental scanning, which indicates that companies obtain information from primary and secondary sources (Aldehayyat, 2015:463; Haase & Franco, 2011:1646). From the participants' responses, it is evident that sources of information are a critical aspect when conducting environmental scanning. All 11 participating companies obtained their information from both primary and secondary sources of information.

Of the various sources of information, the feedback of customer and/or clients seem to be the most primary information source from which the participating companies obtained information. This was followed by major consultants who perhaps gave the participating companies' expert advice relating to their businesses. Research reports and government publications appeared to be the two most important sources of secondary information. It seems that the practice of using both primary and secondary sources provided a balanced perspective on the information required for use by these various companies.

5.7 QUALITATIVE FINDINGS ON THE USE OF ENVIRONMENTAL INFORMATION

The aim of this study was to examine how environmental scanning is conducted in top performing South African companies. The earlier discussion described the external environment in which these companies operate and how they scan the environment for information-gathering purposes. This section focuses on how senior managers use environmental information in their respective companies for strategic planning.

5.7.1 THE USE OF ENVIRONMENTAL INFORMATION FOR STRATEGIC PLANNING

Strategic planning entails environmental scanning and developing strategies in a company to achieve the company's goals. It is also a process whereby senior managers take a holistic view of the company, engage with their stakeholders and take strategic decisions on behalf of the company in order to enhance the company's sustainability (Klag & Langley, 2014:274; Li, 2014:305-306).

The companies that participated in the qualitative phase of this study used environmental information for the following purposes: strategic planning, decision-making, development of strategies, implementing and evaluating plans to improve their businesses. As part of their strategic planning processes, the participating companies conducted environmental scanning and engaged with their respective stakeholders. The participants had the following to say about their companies' strategic planning processes:

Environmental scanning is used in our strategic planning process. The information is reviewed, challenged [and we] verify the sources of information. Strategic planning is a continuous process. (P4, Male, Vice-President for Strategy Enablement and Strategy Execution)

Information obtained [pause] we always used that for strategic decision-making for our business. (P1, Male, Mobility and Immigration Services Manager)

First of all, we do a lot of work on our strategy ... take all the information that we have gathered ... all that information obtained through environmental scanning is fed into the strategic planning process. Strategic plan ... [we] do plans for one, three to five years. The other piece we tend to look at is what we do with this information to reposition the company. (P9, Female, Executive Vice-President for Human Resources and Strategy)

The second biggest trend is big data and a lot of data are flooding companies. They need to synthesis and make sense of it ... [pause] that is a very good question. There is no formal way of checking the quality of the information, but we make some

assumptions. If the Harvard Business Review puts out something, it is more or like going to be of good quality ... We will then take the best pieces of information from the environmental scanning and feed it into our annual strategy session. Information we get feed into our decision making body. (P12, Male, Chairperson)

From the quotations, it is evident that the participating companies used the information obtained through environmental scanning to enhance their strategic planning processes and to make informed strategic decisions. Furthermore, the findings indicate that environmental information is used for strategy formulation. Moreover, the findings also suggest that environmental scanning is linked to strategy because when obtaining information from the external environment, senior managers use the information to develop strategic plans, as in the case of a deliberate strategy approach (Maritz *et al.*, 2011:11). These findings are in line with the literature on strategic planning, indicating that environmental scanning assists managers to acquire relevant information, which can be used as input into the strategic planning process (Aldehayyat, 2015:461; Cheng *et al.*, 2014:440).

However, one participating company from the consulting and business services industry highlighted that information overload is a challenge that many companies face. This finding is in line with the literature on environmental scanning regarding limitations that can arise because of information overload. For example, key information can be hidden, swamped or overlooked because of the high volume of available information (Xu *et al.*, 2011:186-187). In order to make sense of this information, companies need people with the right analytical skills to validate the available information for relevance and accuracy. This means senior managers would prefer information that is being filtered to meet their needs when making decisions (Albright, 2004:42-43; Xu *et al.*, 2011:189).

There is a formal strategic planning process. The [environmental scanning] unit is part of the Group CEO's office and they facilitate the strategy development. This unit engage with leaders in the organisations. They also engage with external stakeholders. (P11, Female, Performance and Wealth Management Manager)

Yes, there is a formal strategic planning process ... normally at the C-level ... [Executive Committee] ... our company is a part of a multinational, so we go once a

year to Europe and all the chief operating officers from all our subsidiaries join in.
(P16, Male, Sales and Business Development Manager)

We use it [information] for thought leadership. (P2, Male, Human Resource Manager)

The quotations above indicate that the process of strategic planning is taken seriously by senior managers of the 11 participating companies. This is because the strategic planning process enables them to drive their companies' strategic directions in line with their key goals. Eight participants from the participating companies, including those in the financial services and transportation industries, used business terms such as CEOs, managing directors and senior managers to describe specific officials responsible for strategic planning. These terms relate to the employees who usually consider information from environmental scanning to design strategies and take decisions on behalf of their companies. The findings are in line with those of Nag *et al.* (2007:943), who asserted that strategic planning involves CEOs or senior managers who develop strategies, use companies' resources and implement plans that improve their companies' financial performance.

One participating company in the financial services industry emphasised the use of information for the thought leadership of the business. Leadership in a company is important because leaders influence stakeholders, including internal employees, to adapt to changes in the external environment that have an impact on their businesses (Dess *et al.*, 2014:350; Maritz *et al.*, 2011:7). A key aspect of leadership is that while leaders are involved with strategy formulation, they are also key drivers of strategy implementation (Dess *et al.*, 2014:346; Hill *et al.*, 2015:411). The participating companies also engage with their stakeholders as part of their strategic planning process:

Yes, there is a formal strategic planning process. That is normally our board members and our stakeholders engaging in the strategic planning process. Strategic planning is held quarterly. We look at the market, meaning the business news ... what is the focus ... the mining ...what is the focus ... as well as international markets. (P8, Female, Environmental Manager)

Yes [our company] does ... [strategic planning] ... as a mega international company it has very specific purposes and strategy. We also meet and engage with leading companies [stakeholders] in the country. We listen very carefully to what they have to say as well. (P3, Male, Director for Compensation and Benefits Consulting)

To create scenarios [for strategic planning] ... all the executive vice-presidents have regular exposure to the areas that they are responsible for ... they meet with businesses, international research companies and investors. (P6, Male, Vice-President for Corporate Finance and Business Development)

Literature on strategic planning indicates that it is relevant for companies to engage with their stakeholders to know what the stakeholders want from them and how the companies can meet their stakeholders' needs (Klag & Langley, 2014:274; Smith, 2015:89). From the interviews it is evident that the participating companies are in touch with their stakeholders. The actions of stakeholders, such as investors, can either enhance companies' success or lead to failure. When a company engages with potential or current investors and has a strategy that the investors can buy into, it is able to attract investments. Moreover, the company should have a strategy to offer returns on investment. This is one reason why it is important for the participating companies to engage with their stakeholders.

Two of the participating companies in the construction and consulting and business services industries highlighted that their companies' boards of directors met during strategic planning to evaluate the information obtained through environmental scanning. Boards of directors play a significant role in companies, which could include steering the path their companies will follow and taking decisions that will enable their companies to remain sustainable. The role of the board of directors is to ensure transparency within the business and transparent reporting on a company's triple bottom line environmental, socio-cultural and financial performances. Specifically in South Africa, the board of directors is responsible for ensuring good corporate governance in the company (Carroll, 2015:89; Maritz *et al.*, 2011:5-6).

5.7.2 THE USE OF ENVIRONMENTAL INFORMATION FOR STRATEGY IMPLEMENTATION

The responses from the participating companies on how they use environmental information entail strategy implementation as part of the strategic planning process. Strategy implementation entails putting the strategy that has been developed during strategy formulation into action (David & David, 2015:332). Two main drivers of strategy implementation identified in this study were leadership and resources. As illustrated by the following participant quotations, the information that companies obtain about their external environment enables these companies to implement their strategies:

Fix the roof while the sun is still shining ... which we did. Fortunately for us, we did that before the oil price dropped. A lot of response strategy to change was in place. (P6, Male, Vice-President for Corporate Finance and Business Development)

Good question [pause] I don't think it is inconsistent ... continuous [relating to strategic planning]. In my view, if you are doing the same [things] as last year, then you are not growing. So we are in a continuous mode of change ... because if you are using poor data; you are going to get poor results. [Good] data equals validation ... equals predictive analysis. (P2, Male, Human Resource Manager)

And now we are going to invest in technology for ourselves to make sure that we can secure the energy that we require to operate. (P11, Female, Performance and Wealth Management Manager)

The information obtained through environmental scanning assists management to take proactive action. Having the right strategy will be of no use to a company unless that strategy is implemented. All 11 the participating companies use the information obtained from environmental scanning for strategy implementation. With regard to strategy implementation, leaders motivate staff to implement their companies' selected strategies (Dess *et al.*, 2014:346; Hill *et al.*, 2015:411). Two of the participating companies in the financial services industry highlighted how important their companies' leadership is when it comes to responding to strategic issues in their respective companies. It is evident that leadership is important in a company's strategic planning:

Annually, the leadership team get together around November and December each year to respond to strategic drivers. [We are] quite an innovative company and we use our resources and connections in other good businesses to craft the products which respond to major changes in the environment. (P3, Male, Director for Compensation and Benefits Consulting)

The use of resources is an important driver in strategy implementation, because resources are assets that provide added value to companies. A company can use a combination of tangible resources, such as financial, human and technology resources, as well as intangible resources such as skills, capabilities and information, for strategy implementation (David & David, 2015:339; Lynch, 2015:113-114). In terms of tangible resources, one participant in the financial services industry indicated how the company used its resources to implement strategic goals. The company also had connections and relationships, which it used to get information to design innovative products. This indicates how information from the external environment benefits the company to respond to changes. Eleven of the participating companies use their human resources to achieve their company's goals, whereas seven of the participating companies, including those in the banking and financial services industries, use technological resources to enhance their business operations. All the participants used terms such as reduced costs, added value for money, shares and investments, illustrating that their companies used financial resources to implement different strategies. It is evident that without the financial resources, the participating companies would not be able to reach their companies' key goals. Hence, information obtained through environmental scanning is crucial for companies to reduce costs but improve profits while implementing strategies:

We have to respond to look at how we can become more effective, charging less and giving more value added advices. (P12, Male, Chairperson)

With regard to intangible resources, core competencies seem to be relevant for strategy implementation. Three of the participating companies, including those in the mining industry, highlighted that their companies train employees so that their employees possess the right skills to implement their companies' strategies effectively. Importantly, the use of information was a key resource used in all 11 companies because they all used information to accomplish their companies' goals. This suggests that the information the

participating companies obtained through scanning the environment was helpful in implementing their strategies:

The company looks at how we empower our leadership [in order to enable] them to carry forward the advice that comes from the experts. [The company] invest also in training in a manner that enable at least one level [of employees] before the [committee sits] to consider what needs to be done. (P15, Female, Health and Wellness Manager)

One of the participants, whose company operates in the financial services industry, mentioned that implementing the same strategy and obtaining the same results as in the previous year suggested that the company was not growing. This indicates that companies are also using an emergent strategy approach. Being in a continuous mode of change would require designing and implementing strategies simultaneously to cope with changes in the external environment, as in the case of emergent strategy (Dess *et al.*, 2014:10; Pretorius & Maritz, 2011:3-4). This implies that the information obtained through environmental scanning is critical to companies' growth. Through constant environmental scanning; companies are able to amend their strategies and implement changes in response to developments in their external environment. Furthermore, senior managers are able to determine if their strategies are being implemented as planned and their financial performance is improving (Dess *et al.*, 2014:278; Hill *et al.*, 2015:405).

In terms of strategic planning there is one final phase called strategic evaluation and control. In this phase of strategic evaluation and control, the company reviews its strategy and makes adjustments that are aligned with its internal and external environment (Dess *et al.*, 2014:278; Hill *et al.*, 2015:405). Although strategic evaluation and control did not form a sub-theme in this study, the remarks of two participants reflect the use of environmental information for strategic evaluation and control:

Twice a year we review the strategy to see if it is relevant (P4, Male, Vice-President for Strategy Enablement and Strategy Execution)

Our company has adopted an agile methodology, what that means we break big things down and into smaller things and then look for [ways of] delivering the

minimum required to meet this application. [For example,] if a customer has a requirement to deliver say write on a piece of paper, he wants a very expensive ball pen from Pick and Pay we would rather say right now we can deliver to you the cheap product and incrementally improve our product delivery. (P16, Male, Sales and Business Development Manager)

Three participating companies in the insurance, mining and transportation industry adopt a form of implementation control called the agile methodology. This aspect of implementation control entails breaking down large projects into smaller sub-projects. It also entails taking incremental action in order to guarantee the successful implementation of strategy (Pearce & Robinson, 2007:395). The participating company in the chemical gas and energy industry quoted above also reflects the use of information control, an aspect of strategic evaluation and control. The essence of information control is to determine if the assumption on which the premise of a selected strategy was based is still relevant (Dess *et al.*, 2014:279).

5.8 SUMMARY

In this chapter, the findings of the qualitative phase of the study were presented. Brief profiles of the 11 participating companies were presented, indicating that all these companies operated globally and in South Africa. The participating companies operated in the financial services, chemical and gas, nuclear energy, construction, mining, risk and insurance, consulting and business services and transportation industries. The researcher managed to conduct face-to-face semi-structured interviews with senior executives in these companies. These executives were key employees in their respective companies who were involved with strategic initiatives. Furthermore, these participants shared information regarding the areas of the external environment that had an impact on their companies and how they scanned their environment and used the information to enhance their strategic planning.

The qualitative data analysis process began with transcribing all the interviews. The researcher read through each interview, coding any data that was relevant to the study's

central phenomenon, environmental scanning. The codes were subsequently clustered and finally themes were developed, which formed the basis of the qualitative findings.

The findings reported in this chapter indicate that all the participating companies conduct environmental scanning, but their environmental scanning practices differ from company to company. Moreover, the information obtained through environmental scanning is used to enhance the particular companies' strategic planning processes.

Since this is mixed methods study, the quantitative research phase is discussed in the next chapter.

CHAPTER 6: DATA ANALYSIS AND FINDINGS OF THE QUANTITATIVE RESEARCH PHASE

Chapter outline:

The purpose of this chapter is to:

- Present the quantitative data analysis and findings of this phase;
- Provide a description of the quantitative data analysis process;
- Present the quantitative findings;
- Provide information on the top performing companies that participated in the quantitative phase;
- Describe the competitive situation of the participating companies; and
- Describe the way environmental scanning supports corporate strategic planning.

6.1 INTRODUCTION

As indicated previously, the aim of this study was to investigate the environmental scanning practices of top performing South African companies. The research design of the quantitative phase was described in Section 4.8 of Chapter 4. The previous chapter presented the empirical findings of the qualitative phase of this study. This chapter starts by describing the quantitative data analysis process. Next, the findings related to the three sub-sections of the questionnaire are presented and discussed. First, background information on the participating companies and the individual respondents are presented. Second, the competitive situation of these companies is described. Third, emphasis is placed on the participating companies' environmental scanning practices and how these practices support corporate strategic planning. The third sub-section also focused on the modes of environmental scanning and is concerned with the way companies monitor the external environment. Lastly, the main findings of the quantitative phase are summarised.

Once the survey was completed and responses from respondents were received, the next stage was to analyse the quantitative data.

6.2 DESCRIPTION OF THE QUANTITATIVE DATA ANALYSIS PROCESS

The data collected through a survey may, where relevant, be described with percentages, means, standard deviations and other forms of descriptive statistics (Leedy & Ormrod, 2013:189). This section describes the quantitative data analysis processes followed in this study. A total of 41 respondents participated in the survey and their responses were captured. The study achieved a response rate of 30.0%, which is regarded as acceptable for reasons provided in Section 4.8.2.2. These responses were captured and analysed using SPSS version 23.

The quantitative data analysis process used in this study is summarised below (Kotzé, 2012:86):

- **Data preparation:** In this phase, the researcher:
 - Cleaned the raw data and checked the data for coding errors.
 - Checked the data for compliance with question instructions.
 - Checked the questionnaires for completeness. (A questionnaire was excluded from the data set if less than 75% of the core questions were answered.)
 - Imported the data into SPSS version 23.
 - Defined variable specifications in the SPSS version 23 “variable view” window.
- **Descriptive statistics:** In this phase, the researcher:
 - Prepared appropriate univariate descriptive statistics and/or descriptive graphs for each question, question field and total score in the data set.
 - Reported and interpreted the descriptive statistics.

The researcher applied the above-mentioned steps to 33 of the 41 collected questionnaires. Eight questionnaires were discarded because less than 75% of the core questions had been answered (also see Section 4.8.2.3).

6.3 PRESENTATION OF THE QUANTITATIVE FINDINGS

In Sections 6.3.1 to 6.3.3, descriptive statistics are reported for each of the questions in the questionnaire (see Appendix E). These three sub-sections correspond with the three sections in the questionnaire. The findings are presented in the same order in which the questions appear in the questionnaire.

6.3.1 BACKGROUND INFORMATION ON THE TOP PERFORMING COMPANIES THAT PARTICIPATED IN THE QUANTITATIVE PHASE

According to the Financial Mail (2014:10), top performing companies all have a market capitalisation of more than R1 billion. The 33 companies whose survey responses were analysed all complied with this description. In the first section of the questionnaire, respondents were asked four questions, including the industry in which their companies operated. The questions also enquired about the respondents' position in the company, the number of employees in the company and the length of time respondents had been employed in their respective companies (see Appendix E).

In question 1 of the questionnaire, respondents were asked to indicate the main industry in which their company operated. Table 6.1 contains a frequency count of responses to this question.

Table 6.1: Industry in which the participating companies operate (n=32)

	Frequency	Valid Percentage
Financial, insurance, real estate and business services	12	37.5
Mining and quarrying industry	5	15.6
Wholesale and retail trade industry	5	15.6
Tourism industry	2	6.3
Construction industry	1	3.1
Manufacturing industry	1	3.1
Transport, storage and communication industry	1	3.1
Other (Please specify)	5	15.6
Total	32	100.0

Note: The column labelled "frequency" indicates the raw frequency counts for the different response options.

The results in Table 6.1 indicate that 37.5% of the participating companies operate in the financial, insurance, real estate and business services industry. This is followed by 15.6% of the companies that operate in the mining and quarrying industry. Similarly, 15.6% of these companies operate in the wholesale and retail trade industry, while 15.6% of the companies operate in other industries, including the energy and chemicals and ICT industries.

In question 2, respondents were asked to indicate their position in the company. Table 6.2 provides a profile of the respondents in terms of their positions in their respective companies.

Table 6.2: Job positions of the respondents (n=31)

	Frequency	Valid Percentage
Executive management (e.g., CEO, MD, CFO, COO)	18	58.1
Senior management	6	19.4
Middle management	6	19.4
Other (Please specify)	1	3.2
Total	31	100.0

Note: The column labelled “frequency” indicates the raw frequency counts for the different response options.

The results in Table 6.2 indicate that 58.1% of the respondents are in executive management positions (e.g., CEO, CFO, COO, MD), while 19.4% of the respondents are in senior management positions. One respondent was an environmental sustainability and reporting analyst. The respondents were knowledgeable about the central phenomenon, environmental scanning, which was investigated. CEOs and members of the top management team are usually responsible for taking strategic decisions on behalf of their respective companies. They are also responsible for ensuring that their companies' long-term goals are accomplished.

In question 3, respondents were asked to indicate the number of employees that work in the participating companies. Table 6.3 shows the number of employees in the respondents' respective companies.

Table 6.3: The number of employees per participating company (n=32)

	Frequency	Valid Percentage
Less than 1 000	10	31.3
1 000 to 3 000	5	15.6
3 001 to 5 000	3	9.4
5 001 to 10 000	3	9.4
More than 10 000	11	34.4
Total	32	100.0

Note: The column labelled "frequency" indicates the raw frequency counts for each response options.

The results in Table 6.3 show that 34.4% of respondents have more than 10 000 employees in their companies. The results also show that most of these participating companies are "extra-large", because 34.4% of the participating companies have over 10 000 employees.

In question 4, respondents were asked: "How long have you been employed in your company?" Table 6.4 provides information on the number of years respondents have been employed in their respective companies.

Table 6.4: Descriptive statistics on the number of years the respondents have been employed in the participating companies (n=31)

Minimum	Maximum	Mean	Median	Std. Deviation
1	29	9.97	8.00	6.77

Note: The column labelled “Mean” indicates that on average respondents have been employed for 9.97 years in their respective companies.

The results from the answers of 31 respondents show that the shortest time a respondent was employed in the company was one year and the longest 29 years. On average, respondents had been employed in the company for 9.97 years, with a median of 8.00 years and a standard deviation of 6.77 years.

This section reported descriptive statistics of the survey questions dealing with the respondents’ background information in terms of the industry in which their companies operate, the number of employees working for their companies, the respondents’ positions and the number of years they have been employed. The next section focuses on the competitive situation of the participating companies.

6.3.2 THE COMPETITIVE SITUATION OF THE PARTICIPATING COMPANIES

Two questions related to the competitive situation of companies in their external business environment. The first (Question 5) focussed on how well the participating companies coped with changes in the external environment. In the second question (Question 6), respondents were asked to indicate their level of agreement with statements on the market environment in which their company operated. The findings of these two questions are presented below.

In question 5, respondents were asked: “In your opinion, how well does your company cope with changes in the external business environment?” Table 6.5 deals with the respondents’ perceptions of how well their respective companies cope with changes in the external environment.

Table 6.5: Respondents' perceptions of how well the participating companies cope with changes in the external environment (n=31)

	Frequency	Valid Percentage
Very well	16	51.6
Extremely well	7	22.6
Fairly well	7	22.6
Slightly well	1	3.2
Not well at all	0	0
Total	31	100.0

Note: The column labelled "frequency" indicates the raw frequency counts for the different response options.

The results in Table 6.5 indicate that, according to the respondents, 51.6% of the companies cope very well and 22.6% of them cope extremely well with changes in the external environment. These results suggest that the participating companies have strategies to cope with changes in their external environment. This finding correlates with the findings of Begg (2007:129), Du Toit (2016:19), as well as Sewdass and Du Toit (2014:187) who respectively found that 48.6%, 55.5% and 55% of companies cope very well with changes in their external environment.

In question 6, respondents were asked to indicate their agreement with three Likert-scale statements about the competitive intensity of the market environment in which the company operates. As explained in Section 4.8.3.1, this three-item scale was adopted from Jaworski and Kohli (1993:59-60). Table 6.6 provides descriptive statistics regarding the competitive intensity of the market environment in which the participating companies operate.

Table 6.6: Descriptive statistics regarding the competitive intensity of the market environment

	Mean	Std. Dev.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
One hears of a new competitive move almost every day in our market environment.	3.32	1.08	3.2%	25.8%	16.1%	45.2%	9.7%
There are many "promotion wars" in our company's market environment.	3.31	1.18	6.3%	21.9%	21.9%	34.4%	15.6%
In our market environment, anything that one competitor can offer; others can match	3.26	1.12	0.0%	38.7%	9.7%	38.7%	12.9%

	Mean	Std. Dev.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
readily.							

Note: All scale items were measured on a 5-point Likert scale labelled from 1 (“strongly disagree”) to 5 “strongly agree”. A mean score of 3.3.1 on a 5-point Likert scale on “promotion wars” in terms of a company’s market environment lies between neither agree nor disagree.

The three items shown in Table 6.6 above were used to measure the construct competitive intensity. To evaluate the internal consistency reliability of these three items, Cronbach’s alpha was first calculated. Secondly, a composite score was created and finally the mean and standard deviation for the three items were calculated.

The Cronbach’s alpha value on these items was 0.65, which is less than the acceptable internal reliability consistency value of 0.7 and represents a limitation in this study. Despite the low Cronbach’s alpha, the researcher calculated a composite score across the three items to represent the construct competitive intensity (M=3.29, SD=0.85). On average, the respondents gave answers to all three statements that are slightly above the scale mid-point, which suggests that, on average, they tend neither to agree nor to disagree with these statements.

The percentages reported in Table 6.6 suggest that there were differences in opinion among the respondents’ ratings on all three statements. For example, in the case of item 1, 25.8% disagreed and 3.2% strongly disagreed with the statement, while 45.2% agreed and 9.7% strongly agreed. So, while majority of the respondents agreed or strongly agreed, a sizable portion provided answers on the opposite side of the scale. This would have pushed the average towards the scale mid-point. This also suggests that perceptions of competitive intensity vary quite widely across respondents and thus across the participating companies and possibly also across industries.

Perhaps these companies have reached a size or presence in their markets that makes them impervious to competition. Alternatively, the intensity of competition stems from other factors, which were not listed in the options above. Perhaps the participating companies in the quantitative phase of this study employed a blue ocean strategy. Companies that use a blue ocean strategy construct their own market space. This involves reducing costs while

increasing value for customers and making competition immaterial in the market (Kim & Mauborgne, 2005:105-106).

The quantitative findings on the competitive situation of top performing South African companies were presented in this sub-section. The next sub-section reports the findings regarding respondents' perceptions of the way environmental scanning is being employed in their respective companies and its use to support corporate strategic planning. The next sub-section also describes respondents' perceptions of the modes of environmental scanning, the different sources of primary and secondary information used for environmental scanning and the environments that are being monitored by top performing South African companies.

6.3.3 ENVIRONMENTAL SCANNING IN SUPPORT OF CORPORATE STRATEGIC PLANNING

This section starts by establishing if the participating companies engage in formal environmental scanning. This is followed by an indication of the typical amount of time the participating companies spend scanning the external environment. The discussion then focuses on how environmental scanning is practised in top performing South African companies. Emphasis is also placed on describing the specific modes of environmental scanning that the participating used to acquire environmental information. The results indicate the manner in which environmental scanning contributes to competitive advantage, as well as the way information obtained through environmental scanning is used in the strategic planning process. Next, findings on the sources of information that companies regard as very important when scanning the external environment are discussed. The section concludes with a discussion of findings regarding the elements of the external environment that participating companies analyse when conducting environmental scanning.

In question 7 of the questionnaire, respondents were asked: "Is there a formal environmental scanning office or unit in your company?" Table 6.7 summarises the findings related to this question.

Table 6.7: The proposition of participating companies with a formal environmental scanning office or unit (n=32)

	Frequency	Valid Percentage
Yes	18	56.3
No	14	43.8
Don't know	0	0
Total	32	100.0

Note: The column labelled “frequency” indicates the raw frequency counts for the two response options.

The results in Table 6.7 indicate that over half (56.3%) of the companies have a formal environmental scanning office or unit, which supports the companies’ strategic planning processes. This finding further suggests that environmental scanning is an essential management tool, which corresponds with the work of Du Toit (2016:20), who found that 50% of the respondents in her study indicated that their company had a formal environmental scanning office.

In question 8, respondents were asked: “Which option below best describes the time your company typically spends scanning its external environment?” Table 6.8 describes the amount of time the participating companies typically spend scanning the external environment.

Table 6.8: The amount of time participating companies typically spend scanning the external environment (n=32)

	Frequency	Valid Percentage
Average: Spend a reasonable amount of time scanning the external environment	13	40.6
Lengthy: Continuously scanning the external environment	11	34.4
Sporadic: Sometimes spend a great deal of time and at other times spend little time scanning the external environment.	8	25.0
Minimal: Do not really spend time scanning the external environment.	0	0
Total	32	100.0

Note: The column labelled “frequency” indicates the raw frequency counts for the different response options.

The results in Table 6.8 show that 40.6% of the participating companies spend an “average” amount of time scanning the external environment, while 34.4% of companies

conduct environmental scanning on a continuous basis. Companies that conduct continuous environmental scanning make a deliberate effort to obtain environmental information on a continuous basis in order to identify emerging and new markets (Babatunde & Adebisi, 2012:27).

As indicated in Section 4.8.3.1, Question 9 in the questionnaire was specifically designed for this study to determine the mode of environmental scanning used by the participating companies. Because of the small sample size, it was not possible to evaluate the underlying factor structure of responses to the items in this scale through exploratory or confirmatory factor analysis. It was also not feasible to evaluate the internal consistency reliability of responses to the items in this scale by calculating Cronbach's alpha as one should first investigate the factor structure of a scale and then calculate Cronbach's alpha for each factor. The discussion below consequently focuses on descriptive statistics related to the individual items in the scale instead of on composite scores calculated across multiple items.

Table 6.9 provides a description of the respondents' perceptions regarding the modes of environmental scanning their respective companies employed. This table also show how companies differ in their environmental scanning practices and how the environmental scanning information obtained is used to support corporate strategic planning.



Table 6.9: Respondents' perceptions of the modes of environmental scanning employed in their respective companies (n=33)

	Mean	Std. Dev.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Environmental scanning enables us to make sense of changes and trends in our company's external environment.	4.09	0.77	3.0%	0.0%	6.1%	66.7%	42.2%
We scan the environment in a broad and comprehensive way.	3.94	0.75	0.0%	6.1%	12.1%	63.6%	18.2%
Environmental scanning is a routine and continuous activity in our company.	3.76	1.09	6.1%	12.1%	0.0%	63.6%	18.2%
We do extensive environmental scanning on many aspects of our external environment.	3.76	0.94	3.0%	9.1%	12.1%	60.6%	15.2%
We do environmental scanning to influence events and outcomes in the external environment.	3.55	0.90	0.0%	15.2%	27.3%	45.5%	12.1%
Our environmental scanning efforts rely heavily on external sources of information (e.g., publications or databases) that are widely used and respected in our industry.	3.52	0.80	0.0%	15.2%	21.2%	60.6%	3.0%
Our environmental scanning efforts emphasise experimentation and leaning by doing.	3.42	0.97	3.0%	15.2%	27.3%	45.5%	9.1%
We tend to follow an established, standard procedure when scanning the environment.	3.36	1.06	3.0%	24.2%	15.2%	48.5%	9.1%
We often expose external stakeholders to new product concepts or business ideas to get their feedback as part of our environmental scanning efforts.	3.27	0.98	6.1%	15.2%	27.3%	48.5%	3.0%

	Mean	Std. Dev.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Our environmental scanning efforts are narrowly focused on a small number of well-defined issues.	3.03	1.24	6.1%	42.4%	6.1%	33.3%	12.1%
We rely primarily on informal, personal contacts for information about trends in the external environment.	2.94	1.25	12.1%	30.3%	21.2%	24.2%	12.1%
In our company, environmental scanning is typically done informally.	2.79	1.29	15.2%	36.4%	15.2%	21.2%	12.1%
Our company's external environment is so complex and dynamic that it is difficult, if not impossible to analyse.	2.45	0.94	9.1%	54.5%	21.2%	12.1%	3.0%
Our goals for environmental scanning are fuzzy and ill-defined.	2.24	1.09	24.2%	48.5%	9.1%	15.2%	3.0%
Our company believes that there are no perceived benefits of environmental scanning.	1.70	0.81	45.5%	45.5%	3.0%	6.1%	0.1%

Note: All scale items were measured on a 5-point Likert scale from 1 (“strongly disagree”) to 5 “strongly agree”. The higher the mean score for an item, the higher the average level of agreement associated with that aspect.

The results in Table 6.9 showed that, on average, the respondents agreed most strongly with the statement that “Environmental scanning enables us to make sense of changes and trends in the external environment” (M=4.09, SD=0.77). This suggests that the external environment in which the participating companies operate is continuously changing, and their environmental scanning processes enable them to make sense of these trends. The results indicate that on average, the respondents agreed with the statement, “We scan the external environment in a broad and comprehensive way” (M=3.94, SD=0.75). Furthermore, environmental scanning is a continuous activity in these companies (M=3.76, SD=1.09). The results also indicate that on average, the companies do extensive environmental scanning on many aspects of the external environment (M=3.76, SD=0.94). The participating companies generally acquired information from external sources of information (e.g. publications) (M=3.52, SD=0.80). The lowest mean

score ($M=1.70$, $SD=0.81$) was associated with the statement, “Our company believes that there are no perceived benefits of environmental scanning.” On average, respondents acknowledged the benefits of environmental scanning to their companies’ success.

In terms of the modes of environmental scanning, the findings in Table 6.9 show that the participating companies in the quantitative phase of this study adopted one of the four modes of environmental scanning: searching, enacting, conditioned viewing or undirected viewing (Choo, 2001:13-20):

A *searching* mode of environmental scanning is one in which the company scans its external environment in a comprehensive and detailed manner (Choo, 2001:19). Such a mode of environmental scanning is expensive and the company has a separate environmental scanning office where people continuously scan all dimensions of the external environment. On average, the respondents agreed with the statement “We scan the environment in a broad and comprehensive way” ($M=3.94$, $SD=0.75$). Almost two-thirds (i.e., 63.6%) of the respondents agreed with this statement, while 18.2% strongly agreed with it. No respondent strongly disagreed with the aforementioned statement. On average, the participating companies adopt a searching mode of environmental scanning.

In an *enacting* mode of environmental scanning, the company influences the results in its external environment by employing new strategies. It also focuses on ‘testing the waters’ by experimenting and learning by doing (Choo, 2001:18). On average, the respondents agreed with this statement “We do environmental scanning to influence events and outcomes in the external environment” ($M=3.55$, $SD=0.90$). Almost half (i.e., 45.5%) of the respondents agreed with this statement, while 12.1% strongly agreed with it. This result indicates that they adopt an enacting mode of environmental scanning. It would seem that those companies that are enacting are being innovative, initiating new business concepts in their external environment to determine what the outcomes are. However, 27.3% of the respondents were neutral. Perhaps their companies were still studying their external environment before initiating any new strategy in order to influence the outcomes in their external environment.

Another mode of environmental scanning is *conditioned viewing*, which involves a standard procedure for gathering information. When companies employ this mode there is a relatively small number of well-defined goals and the companies rely mainly on secondary sources of information that are regarded as important sources within their respective industries (Choo, 2001:16). On average, the respondents agreed with the statement “We tend to follow an established, standard procedure when scanning the environment” ($M=3.36$, $SD=1.06$). Almost half (i.e., 48.5%) of the respondents agreed with this statement and 9.1% strongly agreed with it. The results showed that their companies practise a conditioned viewing mode of environmental scanning.

On the other hand, the *undirected viewing* mode of environmental scanning entails normal awareness of the external environment without any specific reason and the purpose for gathering information is not well-defined (Choo, 2001:13). The results in Table 6.9 showed that on average, the respondents did not agree with the statement “Our company goals for environmental scanning are ill-defined” ($M=2.24$, $SD=1.09$). Almost half (i.e., 48.5%) of the respondents disagreed with this statement, while 24.2% disagreed with it. The results indicate that most of the participating companies do not adopt an undirected viewing mode of environmental scanning.

The managerial implication of this finding is that all these companies engage in some form of environmental scanning, either formally or informally, although their environmental scanning practices differ from one company to another in their respective industries.

In question 10, respondents were asked to indicate the extent to which they agreed or disagreed that each of a number of statements described the way environmental scanning contributed to competitive advantage. This scale was adapted from Du Toit (2016:29). The statements in Table 6.10 deal with the different benefits resulting from environmental scanning and include competitive advantage.

Table 6.10: Benefits resulting from environmental scanning constituting competitive advantage (n=32)

	Mean	Std. Dev.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Our environmental scanning efforts help us to identify emerging trends.	4.19	0.69	0.0%	3.1%	6.3%	59.4%	31.3%
Our environmental scanning efforts help us to respond to new trends as they arise.	4.13	0.66	0.0%	3.1%	6.3%	65.6%	25.0%
In our company, environmental scanning alerts managers to issues not currently on their agenda.	4.13	0.49	0.0%	0.0%	6.3%	75.0%	18.8%
Environmental scanning helps us to keep up to date with emerging technologies and the benefits of these technologies.	4.06	0.50	0.0%	0.0%	9.4%	75.0%	15.6%
Our environmental scanning efforts enable us to develop more attractive new products than our competitors.	3.66	0.60	0.0%	3.1%	31.3%	62.5%	3.1%

Note: All scale items were measured on a 5-point Likert scale from 1 (“strongly disagree”) to 5 “strongly agree”. The higher the mean score for an item, the higher the average level of agreement associated with that aspect.

The results in Table 6.10 indicate that, on average, the respondents agreed that environmental scanning helped their companies to identify emerging trends ($M=4.19$, $SD=0.69$). Environmental scanning alerts managers to issues not currently on their agenda ($M=4.13$, $SD=0.49$). A frequency count indicates that 75.0% of respondents agreed with the statement that “... environmental scanning alerts managers to issues not currently on their agenda.” The implication of this result is that respondents perceived that environmental scanning had the benefits reflected in these statements.

In question 11, respondents were asked: “Please indicate to what extent you agree or disagree with the following three statements regarding the way environmental scanning information is used in your company.” This scale was also adopted from Du Toit (2016:20). Table 6.12 provides information on management’s use of environmental scanning information in companies.

Table 6.11: Use of environmental scanning information (n=31)

	Mean	Std. Dev.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Our company makes use of environmental scanning information for strategic planning.	4.35	0.61	0.0%	0.0%	6.5%	51.6%	41.9%
Our company makes use of environmental scanning information for decision making.	4.23	0.62	0.0%	0.0%	9.7%	58.1%	32.3%
Our company makes use of environmental scanning information to make strategic choices.	4.23	0.56	0.0%	0.0%	6.5%	64.5%	29.0%

Note: All scale items were measured on a 5-point Likert scale from 1 (“strongly disagree”) to 5 “strongly agree”.

The descriptive statistics in Table 6.11 indicate that environmental scanning information is used for strategic planning (M=4.35, SD=0.61). Furthermore, the results indicate a situation where, on average, the information obtained through environmental scanning is fed into the participating companies’ strategic planning process. The information is also used for corporate decision making (M=4.23, SD=0.62). Moreover, the respondents indicated that their respective companies used the information obtained through environmental scanning to make strategic choices (M=4.23, SD=0.56).

In question 12, respondents were asked: “How important are each of the following primary sources of information to your company when scanning the external environment?” The mean scores reported in Table 6.12 indicate the relative importance of different primary sources of information used in scanning the external environment.

Table 6.12: The relative importance of different primary sources of information (n=31)

	Mean	Std. Dev.	Not at all important	Of little importance	Relatively important	Very important	Extremely important
Direct customer feedback	4.10	1.08	6.5%	0.0%	12.9%	38.7%	41.9%
Industry experts/analysts	3.87	0.88	0.0%	9.7%	16.1%	51.6%	22.6%
Market research commissioned by the company	3.87	0.67	0.0%	0.0%	29.0%	54.6%	16.1%
Company staff	3.71	0.90	3.2%	3.2%	29.0%	48.4%	16.1%
Analysis of competitor's products	3.70	0.88	0.0%	10.0%	26.7%	46.7%	16.7%
Distributors / Suppliers	3.45	0.85	0.0%	9.7%	48.4%	29.0%	12.9%
Staff attending conferences / seminars	2.94	0.81	3.2%	25.8%	45.2%	25.8%	0.0%
Employees in rival companies	2.68	1.17	12.9%	38.7%	25.8%	12.9%	9.7%

Note: All scale items were measured on a 5-point Likert scale from 1 (“Not at all important”) to 5 “Extremely important”, 31 respondents assessed each of the above primary sources of information except for analysis of competitor’s products, where 30 respondents did this.

The most important primary sources of information for environmental scanning is “direct customers’ feedback” (M=4.10, SD=1.08), while the least important primary source of information is “Employees in rival companies” (M=2.68, SD=1.17). Overall, industry experts/analysts (M=3.87, SD=0.88) and market research commissioned by the company (M=3.87, SD=0.67), were perceived as very important sources of primary information. This finding indicates that, on average, companies regard their customers as important sources of primary information, a finding that corresponds with the findings of Aldehayyat (2015:472) and Du Toit (2016:22). From this one can deduce that management pays attention to customers to improve the company’s products and services, which ultimately enhance customers’ satisfaction. The more customers that purchase a company’s product, the more revenue is generated and this tends to improve financial performance.

In question 13, respondents were asked: “How important are each of the following secondary sources of information to your company when scanning the external environment?” The mean scores reported in Table 6.13 indicate the relative importance of different secondary sources of information used in scanning the external environment.

Table 6.13: The relative importance of different secondary sources of information (n=31)

	Mean	Std. Dev.	Not at all important	Of little importance	Relatively important	Very important	Extremely important
Industry analyst reports	4.10	0.92	0.0%	6.7%	16.7%	36.7%	40.0%
Information generated by regulatory bodies	3.94	0.77	0.0%	3.2%	22.6%	51.6%	22.6%
Publications / Research reports	3.84	0.82	0.0%	6.5%	22.6%	51.6%	19.4%
Information on potential business partners	3.74	0.86	0.0%	9.7%	22.6%	51.6%	16.1%
Internal company documents	3.65	0.95	0.0%	9.7%	38.7%	29.0%	22.6%
Annual reports	3.45	0.93	0.0%	16.1%	35.5%	35.5%	12.9%
Newspapers	3.29	0.94	6.5%	6.5%	45.2%	35.5%	6.5%
Corporate websites	3.23	0.88	3.2%	16.1%	38.7%	38.7%	3.2%

Note: All scale items were measured on a 5-point Likert scale from 1 (“Not at all important”) to 5 “Extremely important”, 31 respondents assessed each of the above secondary sources of information, except for industry analysts report where 30 respondents did this.

The most important secondary source of information for environmental scanning is “industry analyst reports” (M=4.10, SD=0.92). The frequency count indicates that 51.6% of respondents indicated that publications or research reports are very important sources of secondary information. The findings in Table 6.13 indicate that top performing South African companies perceived industry analyst reports to be of great importance when conducting environmental scanning. The findings also indicate that, for the purpose of regulatory compliance, these companies regard information generated by regulatory bodies as very important sources of secondary information.

In question 14, respondents were asked: “How often does your company monitor each of the following environments?” Table 6.14 shows how frequently the participating companies monitor specific macro- and market environmental dimensions.

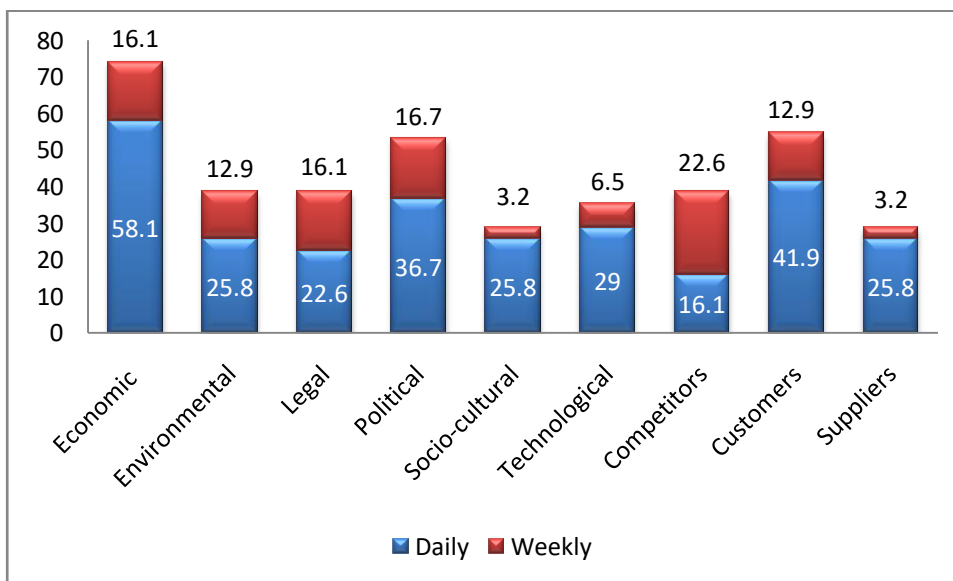
Table 6.14: The frequency with which participating companies monitor specific macro- and market environmental dimensions (n=31)

	Daily	Weekly	Monthly	Quarterly	Yearly	Never
Macro-environment						
Economic	58.1	16.1	12.9	9.7	3.2	0
Environmental	25.8	12.9	6.5	35.5	19.4	0
Legal	22.6	16.1	25.8	25.8	9.7	0
Political	36.7	16.7	13.3	26.7	6.7	0
Socio-cultural	25.8	3.2	22.6	32.3	16.1	0
Technological	29.0	6.5	22.6	22.6	19.4	0
Market environment						
Competitors	16.1	22.6	32.3	25.8	3.2	0
Customers	41.9	12.9	19.4	19.4	0	6.5
Suppliers	25.8	3.2	32.3	19.4	12.9	6.5

Note: The external environment was sub-divided into the macro- and market environment. The numbers listed in the columns labelled “Daily” to “Never” represent percentage of responses.

The information in Table 6.14 is also illustrated in Figure 6.1 below which shows the percentage of respondents who indicated that their companies monitored each environmental dimension daily or weekly.

Figure 6.1: The way the participating companies monitor the dimensions of the external environment on a daily and weekly basis



In terms of the macro-environment, the results in Table 6.14 show that the economic environment (58.1%) and political environment (36.7%) are the two environmental dimensions that are most frequently monitored by the participating companies on a daily basis. It seemed that the participating companies perceived the economy in South Africa to have an influence on their financial performance; these companies frequently monitored the economic environment. The results in Table 6.14 also show that 74.2% (i.e., 58.1% and 16.1%) of the respondents indicated that their companies monitored the economy either daily or weekly, 9.7% only did so quarterly.

The environmental dimension also seemed to be of importance, because of the 31 respondents, 25.8% indicated that their companies monitor it on a daily basis, while 12.9% did so weekly. Similarly, the socio-cultural environment was frequently monitored as the environmental dimension, where 25.8% of the respondents indicated that their companies monitored it daily, but only 3.2% did so weekly. The socio-cultural environment (3.2%) and the technological environment (6.5%) were the least monitored on a weekly basis.

With regard to the legal environment, 22.6% of the participating companies monitored it daily. This finding differs slightly from that of Du Toit (2016:22), where only 15% of the respondents indicated that their companies monitored the *legal* environment daily. It appears that companies are increasingly becoming aware of how essential it is to monitor the legal environment frequently. In South Africa, there are many regulations that companies need to keep abreast with because they have an impact on their businesses.

In terms of the market environment, the answers from the 31 respondents indicated that 41.9% of companies monitored *customers* on a daily basis; 12.9% indicated that their companies did so weekly, 19.4% indicated that customers were monitored monthly, 19.4% indicated quarterly monitoring of customers. In the answers of the 31 respondents, 32.3% indicated that their companies monitored their *competitors* monthly. Similarly, in the answers of the 31 respondents, 32.3% indicated that their companies monitored *suppliers* monthly. Of the three environmental dimensions of the market environment, suppliers (3.2%) were the least monitored on a weekly basis.

6.4 SUMMARY

From the findings reported above, it is clear that environmental scanning is an essential management tool in top performing South African companies. It supports corporate strategic planning and affords benefits to companies, including enhancing their financial performance.

The findings also indicate that top performing companies actively monitor the external environment. This supports the notion that companies are scanning their business environment to identify emerging trends, opportunities and threats (Cancellier *et al.*, 2014:612; Yoo & Sawyerr, 2014:29).

Although 91.0% of respondents acknowledged the benefits of environmental scanning, only 56.3% of the companies that participated in the quantitative phase have a formal environmental scanning office or unit. Literature on environmental scanning indicates that it is expensive to have such an office or unit (Choo, 2001:20). Conducting formal environmental scanning requires the company to invest resources to search for information in its external environment. However, this type of searching enables a company to obtain significant information, which allows it to adjust its strategy and actions in the light of new knowledge.

Since this study used a convergent parallel mixed methods research design, the qualitative and quantitative findings have to be integrated. In Chapter 7, the qualitative and quantitative findings are summarised and discussed in an integrated manner. This is followed by a discussion of the study's managerial implications. The dissertation concludes with an acknowledgement of the study's limitations and with recommendations for future research.

CHAPTER 7: DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Chapter outline:

The purpose of this chapter is to:

- Restate the main purpose of this study and research questions as well as the main contributions of this study;
- Integrate the findings from the qualitative and quantitative research phases of this study;
- Discuss the findings from both phases regarding the participating companies environmental scanning practices;
- Discuss the findings from both phase regarding the participating companies use of environmental information for strategic planning;
- Discuss the managerial implications of the study's findings;
- Acknowledge the limitations of this study; and
- Provide recommendations for future research.

7.1 INTRODUCTION

Chapters 5 and 6 presented the findings of the qualitative and quantitative phases of this study respectively. Since this study used a convergent parallel mixed methods design in which the qualitative and quantitative phases are given equal priority, this chapter discusses the study's findings in an integrated manner. The chapter starts by reiterating the study's overall purpose and by restating the research questions that guided this enquiry. The main contributions that this study has made are also reaffirmed in this chapter. Thereafter, the main findings of the study's qualitative and quantitative phases are summarised and discussed in an integrated manner. The managerial implications of the study's findings are discussed next. The chapter concludes with a discussion of the study's limitations and with recommendations for future research.

7.2 MAIN PURPOSE OF THE STUDY

The main purpose of this study was to investigate the environmental scanning practices in top performing South African companies. The study specifically sought to answer the following research questions:

- What is environmental scanning?
- What is strategic planning and how does environmental scanning relate to it?
- Which dimensions of the external environment are of specific relevance to the companies' business environments?
- Which modes of environmental scanning do companies use to acquire environmental information?
- Which sources do companies use to acquire environmental information?
- How, if at all, do companies use environmental information for strategic planning?

The above research questions aimed to address the research topic of this study.

Environmental scanning practices in South African top performing companies

This study contributed to the body of knowledge on environmental scanning by examining the way top performing South African companies practise environmental scanning and described the specific mode of environmental scanning these companies used. Moreover, the researcher conducted this study using a convergent parallel mixed methods research design, which involved the collection and analysis of both qualitative and quantitative data. The findings in the qualitative and quantitative phases of this study revealed that the participating companies adopted one of the four modes of environmental scanning in their business practices. The environmental scanning practices of the participating companies differ, but all of these companies use the information collected through environmental scanning for corporate strategic planning.

7.3 DISCUSSION OF THE INTEGRATION OF THE QUALITATIVE AND QUANTITATIVE RESEARCH FINDINGS

The findings from the qualitative and quantitative phases reveal that the participating companies in this study conduct environmental scanning. These companies scan the dimensions of the external environment that are seen as relevant and that have an impact on their business operations. The environmental scanning practices used by the participating companies differ from one company to another within their respective industries. For example, a company that operates in the mining industry would use a searching mode of environmental scanning, where a deliberate attempt is made to acquire information. In the qualitative phase of this study, 6 of the 11 participating companies were found to adopt a searching mode of environmental scanning, while 18 of the companies adopted this mode in the quantitative phase of this study. On the other hand, a company from the financial and insurance industry used an enacting mode of environmental scanning, where the company enacted with its external environment to influence outcomes.

This section compares and contrasts the main findings of the qualitative and quantitative phases of the study in order to yield an integrated understanding of the way environmental scanning is practised in top performing South African companies.

The discussion begins with the nature of environmental scanning and the relationship between strategic planning and environmental scanning. Next, the external environments relevant to the participating companies are discussed. This is followed by a detailed discussion of the way environmental scanning is being practiced in the participating companies, including the modes of environmental scanning used and the sources from which they obtain environmental information. Thereafter, the use of environmental information for strategic planning in these companies is discussed.

7.3.1 THE NATURE OF ENVIRONMENTAL SCANNING

The first research question is theoretical in nature, namely, “What is environmental scanning?” Environmental scanning was defined in Chapter 1 and was discussed in detail in Chapter 3 (see Sections 1.8 and 3.2 respectively). Environmental scanning is the collection of useful information about trends and events in the macro- and market environment, knowledge of which enable senior managers to plan the course of action for the future (Bhardwaj & Kumar, 2014:638; Haase & Franco, 2011:1642).

During the semi-structured interviews it became evident that environmental scanning is an essential management tool, which enables the participating companies to understand trends in the external environment and to prepare better for the future. This finding corresponds with the results of the quantitative phase. Of the 33 respondents in the quantitative phase who responded to the statement, “Environmental scanning enables us to make sense of changes and trends in our company’s external environment”, 42.2% strongly agreed and 66.7% agreed with the statement.

These findings are in agreement with the reviewed literature on environmental scanning. Environmental scanning is a company-based phenomenon where senior managers gather information about trends in the external environment; this knowledge assists them in directing the future course of action of their companies (Aldehayyat, 2015:461; Babatunde & Adebisi, 2012:27; Cancellier *et al.*, 2014:613; Haase & Franco, 2011:1642; Yoo & Sawyerr, 2014:29).

7.3.2 THE RELATIONSHIP BETWEEN STRATEGIC PLANNING AND ENVIRONMENTAL SCANNING

The second research question asked: “What is strategic planning and how does environmental scanning relate to it?” From a theoretical perspective, strategic planning was defined in Chapter 1 and was discussed in detail in Chapter 2 (see Sections 1.8 and 2.4 respectively). Strategic planning is a process that involves scanning the environment,

strategy formulation, implementation, strategic evaluation and control (Cheng *et al.*, 2014:439).

The findings of the qualitative phase showed that all 11 participating companies' environmental scanning processes were linked to corporate strategic planning. These findings are similar to the results of the quantitative phase. Of the respondents who responded to the statement, "Our company makes use of environmental scanning information for decision making", 58.1% agreed and 32.3% strongly agreed with this statement.

Scanning for information to facilitate decision-making implies that such information supports the strategic planning processes of their companies. It is evident that environmental scanning relates to strategic planning. Strategic planning includes environmental scanning, enabling companies to take a holistic view of the companies and designing strategies to achieve the companies' overall goals (Albrechts & Balducci, 2013:19; Aldehayyat, 2015:461; Cheng *et al.*, 2014:440; Klag & Langley, 2014:274).

7.3.3 DIMENSIONS OF THE EXTERNAL ENVIRONMENT RELEVANT TO THE PARTICIPATING COMPANIES

The discussion in this section and the next two sub-sections address the third research question: "Which dimensions of the external environment are of specific relevance to the companies' business environments?" As mentioned previously, the external environment was categorised into two dimensions, namely the macro- and market environments. This categorisation scheme was adopted from previous studies (Aldehayyat, 2015:461; Jogaratnam & Law, 2006:174).

The 11 companies participating in the qualitative phase of this study identified 10 dimensions of the external environment that are relevant in terms of environmental scanning. These 10 dimensions include the political, economic, socio-cultural, regulatory, ecological and global environments as macro-environmental dimensions and customers, competitors and suppliers as dimensions of the market environment. With the exception of

the global environment, the remaining 9 environmental dimensions were also viewed as important and were monitored by 31 of the companies that participated in the quantitative phase of this study. The global environment was unfortunately not included as a response option in question 14 of the questionnaire. This oversight represents an important limitation of the study (also see Section 7.5).

Table 7.1 summarises the 10 dimensions of the external environment identified in this study and found in other research.

Table 7.1: Dimensions of the external environment identified in this study and found in other studies

Dimensions of the external environment	Other studies on environmental scanning in which the dimensions of the external environment were also found
MACRO-ENVIRONMENT	
Political environment	Aldehayyat (2015:470); Bhardwaj and Kumar (2014:642); Cancellier <i>et al.</i> (2014:620); Du Toit (2016:20); Jogaratnam and Law (2006:180); Yoo and Sawyerr (2014:43)
Economic environment	Aldehayyat (2015:470); Cancellier <i>et al.</i> (2014:620); Bhardwaj and Kumar (2014:642); Du Toit (2016:20); Jogaratnam and Law (2006:180); Yoo and Sawyerr (2014:43)
Socio-cultural environment	Bhardwaj and Kumar (2014:642); Cancellier <i>et al.</i> (2014:620); Du Toit (2016:20); Yoo and Sawyerr (2014:43)
Technology environment	Bhardwaj and Kumar (2014:642); Cancellier <i>et al.</i> (2014:620); Du Toit (2016:20); Jogaratnam and Law (2006:180); Yoo and Sawyerr (2014:43)
Regulatory/legal environment	Bhardwaj and Kumar (2014:642); Du Toit (2016:20); Yoo and Sawyerr (2014:43)
Ecological environment	Bhardwaj and Kumar (2014:642)
Global/international environment	Bhardwaj and Kumar (2014:642)
MARKET ENVIRONMENT	
Customers environment	Aldehayyat (2015:470); Bhardwaj and Kumar (2014:642); Jogaratnam and Law (2006:180); Yoo and Sawyerr (2014:43)
Competitors environment	Aldehayyat (2015:470); Bhardwaj and Kumar (2014:642); Jogaratnam and Law (2006:180); Yoo and Sawyerr (2014:470)
Suppliers environment	Aldehayyat (2015:470); Bhardwaj and Kumar (2014:642); Jogaratnam and Law (2006:180)

The following is a discussion of the seven macro-environmental dimensions of the external environment.

7.3.3.1 The macro-environment

This section discusses the seven dimensions of the macro-environment identified in this study, starting with the political environment.

Political environment: The political environment in South Africa was monitored by ten of the 11 companies participating in the qualitative phase, including those in the financial, mining, nuclear energy, transportation and construction industries. The political situation in South Africa seemed to be very important to these companies, perhaps because investment decisions are affected by the politics in a country. The government's BBBEE policy seems to have a big impact on all companies in South Africa, because it requires companies to restructure the number of black and white individuals who are being hired in their companies' leadership. This finding is similar to the results in the quantitative phase of the study, which showed that the participating companies regularly monitor the political environment. Of the respondents who monitor the political environment, 36.7% indicated that their companies monitored the political environment daily, 16.7% of the companies monitored it weekly; 13.3% monitored it monthly, while 26.7% monitored it quarterly and 6.7% did so yearly. Although the respondents in the quantitative phase all agreed about the importance on the political environment, the quantitative results reflect that companies differ widely in how frequently they scan this environmental dimension. These findings are consistent with those of Aldehayyat (2015:473), who found that in developing and less politically stable countries, the political-legal environment is frequently monitored. The findings also confirm that the political environment in a country can affect businesses (Asdullah & Ahmad, 2015:31; Samnani, 2014:39).

Economic environment: The economic environment is relevant to all the participating companies. The findings in this study indicated that 10 of the companies that participated in the qualitative phase monitored this environment daily. Economic trends such as the prices of commodities, inflation, exchange rates and the general economy were regarded as being of prime importance, especially to their strategic planning processes. The

participating companies in the financial, banking and insurance industries viewed the economic environment as the most important dimension linked to their business success. Because of the weight that these companies placed on such economic trends, the quantitative results supported the findings in the qualitative phase. In the quantitative phase of the study, the economic environment was also identified as very important. The importance of the economic environment was reflected in the high percentage of participating companies who scanned the economic environment daily, weekly and monthly. For example, 58.1% of 31 participating companies monitored the economic environment on a daily basis, 16.1% monitored it weekly and 12.9% did so monthly. This finding is confirmed by Jogaratnam and Law (2006:178), who found that of the 179 respondents in their study, 67% rated the economic environment as being more frequently monitored than other dimensions of the macro-environment. Companies need to monitor the economic environment, including currency exchange rates and the rate of growth in an economy. Currency exchange rates affect the competitiveness of companies' products in international markets (Hill & Jones, 2013:72; Hill & Jones, 2012:73). The rate of growth in an economy can also influence companies' profits and business growth (Pallapothu & Krause, 2013:38; Samnani, 2014:38).

Socio-cultural environment: In the qualitative phase of this study, the findings show the impact of socio-cultural elements on 6 companies operating in the mining, financial services, nuclear energy and transportation industries. The tendency of these companies to monitor public perceptions on social issues such as the prevalence of HIV/AIDS and inequality in educational background and unemployment confirms that these social issues are important and affect their business operations. For example, a company in the nuclear energy industry monitor the perceptions of the public regarding the use of nuclear energy and its benefits. Other socio-cultural issues, such as crime and corruption, were also considered crucial by the participating companies in view of the tendency of such social elements to affect business costs. The impact of socio-cultural issues is also evident from the findings of the quantitative phase. Of the 31 respondents who answered question 14 in the questionnaire, 25.8% indicated that their companies monitored the socio-cultural environment daily, 3.2% of the companies did so weekly, 22.6% monthly, 32.3% quarterly and 16.1% annually. These findings are in line with the literature on environmental

scanning of the socio-cultural environment and its impact on business operations (David & David, 2015:231; Hill & Jones, 2013:73; Pallapothu & Krause, 2013:30-31).

Technology environment: The magnitude of changes in the technological environment affects companies' business practices as is evident in the qualitative findings of this study. Seven of the 11 companies that participated in the qualitative phase, including those in the financial, banking, chemical, oil and gas, nuclear energy and transportation industries, monitored the technological environment. The participants indicated that technology enabled them to transact with ease and compete effectively. This finding is in line with the literature, which indicates that technology enables companies to compete locally and globally (Babatunde & Adebisi, 2012:28; Pallapothu & Krause, 2013:31). Technology can pose a challenge to a company's business operations. For one company in the banking industry, the findings indicated that technology poses a major challenge. For this company, the challenge is to ensure that the degree of security with which clients' information is handled is not breached. Therefore, being cognisant of technological risks, the company has strategies in place to prevent such incidents. While technology is an enabling resource, the finding regarding a company operating in the nuclear energy industry indicated that the high proportion of costs could have an impact on its ability to compete globally. The extent to which technology is monitored in companies is fairly similar in both the qualitative and quantitative phases of the study. In comparison, in 31 companies studied in the quantitative phase of this study, 29.0% monitor technological developments that can either enhance or pose a risk to their business operations on a daily basis. Whereas 6.5% of the companies monitor these developments weekly, 22.6% do so quarterly, 22.6% monthly and 19.4% annually. Companies need to be informed about technological developments that could affect their businesses (Asdullah & Ahmad, 2015:32; Barney & Hesterly, 2015:51).

Regulatory environment: The fact that companies consistently comply with regulations indicates how relevant they are in business practice. In the qualitative phase, 9 participating companies, including those in the mining, construction and insurance industries, indicated that there are several regulations that necessitate compliance. For instance, the revised Mining Charter, Employment Equity Act, taxation law and safety regulations are regulatory requirements to which the companies have to adhere. This

corresponds with the results of the quantitative phase, where 22.6% of the respondents indicated that their companies monitored the regulatory environment daily; 16.1% did so weekly; 25.8% monthly, 25.8% quarterly and 9.7% annually. These findings show that companies are increasingly monitoring the regulatory environment in South Africa. The findings of Du Toit (2016:22) specified that only 15% of the respondents indicated that their companies monitored the regulatory environment daily, whereas in this study 22.6% of the respondents indicated that they monitored the regulatory environment daily. These findings on the regulatory environment correspond with those of the quantitative phase of this study, where companies are increasingly monitoring the legal environment, which includes regulation requirements (see the quantitative findings in Table 6.14).

Ecological environment: The findings of the qualitative phase show that ecological issues such as climate change, water scarcity, land shortages, waste disposal, energy shortages and the current drought in South Africa have an influence on the sustainability of businesses. Eight companies that participated in the qualitative phase of this study monitor the ecological environment. Water scarcity appeared to be critical to the companies operating in the mining and construction industries, because a lot of water is used in their business activities. These companies try to recycle water and also purify some water that can be delivered to local communities. Companies that operate in the chemical, oil and gas and nuclear energy industries have to find alternative ways of dealing with the disposal of waste. Moreover, reducing carbon dioxide emissions is another ecological issue with which two participating companies have to deal with. Ecological legislation requiring companies to reduce carbon dioxide emissions influences companies' corporate strategies (Hitt *et al.*, 2011:50). The percentages identified in the quantitative phase indicating how companies monitor ecological issues supports the qualitative findings regarding this environmental dimension to some extent. The results of the quantitative phase show that 25.8% of 31 participating companies monitor the ecological or natural environment daily, 12.9% of the companies do so weekly, 6.5% monthly, 35.5% quarterly and 19.4% annually. The profits of the companies that do not monitor the ecological environment more frequently are apparently not directly affected by trends in this environment.

Global environment: From the responses received in the qualitative phase, it is clear that all the participating companies monitor global trends. For instance, in the financial, insurance, transportation and construction industries, entry barriers, the political situation and the economic conditions in other countries are important aspects to monitor. Some of the participating companies, such as those in the mining, chemical oil and gas and nuclear energy industries, export their products to other African and overseas markets to increase their revenues. This finding relates to the essence of globalisation, which enables companies to transact in more than one market (Min & Smyth, 2014:373).

Although, for reasons explained in Section 7.5, the global environment was not measured in the quantitative phase of this study, one can surmise that the participating companies in the quantitative phase also monitor global trends. For instance, the five mining companies that participated in the quantitative phase need to be informed about the price of gold in the global market, which would require them to monitor such information. The findings on the global environment in the qualitative phase confirm the importance of aspects such as entry barriers to and the economic situation in a foreign market. Although these findings are not supported or refuted in the quantitative phase, they still carry weight in the interpretation of the overall findings of the study.

Table 7.2 summarises the dimensions of the macro-environment identified in the qualitative and quantitative research phases. The table also lists the specific elements of each dimension of the macro-environment identified in the qualitative phase. These specific elements are unique to this study and may not be found in other studies.

Table 7.2: The dimensions and specific elements of the macro-environment identified in the qualitative and quantitative research phases

Qualitative research findings on the dimensions of the macro-environment	Quantitative research findings on the dimensions of the macro-environment	Specific elements of each dimension of the macro-environment identified in the qualitative phase
Political environment	Political environment	BBBEE in South Africa Government pricing Political changes Political instability
Economic environment	Economic environment	Commodity prices (e.g., oil prices) Currency exchange rates Inflation The general economy in South Africa

Qualitative research findings on the dimensions of the macro-environment	Quantitative research findings on the dimensions of the macro-environment	Specific elements of each dimension of the macro- environment identified in the qualitative phase
		The rating agencies Trading in central banks
Socio-cultural environment	Socio-cultural environment	Corruption Crime HIV / AIDS Inequality Lack of skills Unemployment
Technology environment	Technology environment	Disruptive technology Ease of technology to transact High costs of technology Technology depersonalising human relationship Technology used to compete
Regulatory/legal environment	Regulatory/legal environment	Company law Employment Equity Act Health and litigation claim King Code Report on Governance Labour-related issues Revised Mining Charter Safety regulations Taxation law
Ecological/environmental environment	Ecological/environmental environment	Climate change Current drought in South Africa Energy shortage Shortage of land for waste disposal Water scarcity
Global/international environment	N/A	All aspects of each dimension above are monitored in other countries Customers' demand for products exported Globalisation Freedom fighter movements in other countries Political instability in other countries

Note: N/A means the global environment is not applicable in the quantitative research phase.

This section discussed the seven macro-environmental dimensions of the external environment identified in the study. The next section focuses on the three dimensions of the market environment, which are discussed in an integrated manner.

7.3.3.2 The market environment

This section discusses the three dimensions of the market environment, also known as the task or industry environment, identified in this study. The discussion starts with the customer environment.

Customer environment: All 11 of the companies that participated in the qualitative phase of this study conduct environmental scanning on their customers in order to understand their needs. The findings in the qualitative phase confirm that customers are a key source of revenue. The extent to which the participating companies monitor their customers indicates how much they value the information obtained from scanning them. Similarly, the results in the quantitative phase indicated that customers were monitored frequently. In this regard, 41.9% of the 31 respondents who answered question 14 in the questionnaire indicated that their companies monitored customers daily, 12.9% monitored customers weekly, 19.4% did so monthly and 19.4% did so quarterly. When assessing the results, 0.0% of these respondents indicated that their companies did monitor customers annually, while 6.5% indicated that they never monitored customers' needs. This surprising finding seems irregular, probably because those companies' products do not require frequent monitoring of customers to generate revenue. However, the findings of both the qualitative and quantitative phases clearly show that the participating companies regard their customers as the most important market environmental dimension to monitor. This is because customers are a company's primary source of revenue. These findings are also consistent with that of Jogaratnam and Law (2006:178), who found that customers were viewed as the most important dimension of the task (i.e., market) environment.

Competitor environment: The qualitative findings indicate that all 11 participating companies monitor what their competitors are doing. The qualitative findings show that the business environment in South Africa is intensely competitive. During the semi-structured interviews, one participant remarked:

I think for us, competition is coming from traditional banking organisations, but much [competition also comes from] other sectors outside of the market. So, we are in a competitive environment from a banking perspective, from other sectors, like retail, mobiles and so on. (P11, Female, Performance and Wealth Management Manager)

However, the results in the quantitative phase diverge from the qualitative findings. When assessing the responses of those who commented on the construct, that is, intensity of competition in the market environment, descriptive statistics were ($M=3.29$, $SD=0.85$) (see Section 6.3.2). These statistics indicate that respondents were, on average, neutral about the intensity of competition in their companies' market environments. On average, respondents did not seem to feel that they operated in a highly competitive business environment. Moreover, the result suggests that perceptions of competitive intensity vary quite widely across respondents and thus across the participating companies and probably also across industries. Many companies operate in an environment where a few competitors or at times a single competitor may dominate their actions (Hitt *et al.*, 2011:60).

Supplier environment: Suppliers are those individuals or companies that provide relevant inputs, such as labour, materials and services, in an industry (Hill *et al.*, 2015:56; Porter, 2008:83). From this perspective, the findings in the qualitative phase show that only 4 of the 11 participating companies indicated that suppliers, logistics, procurement, supply and demand of products are important factors in their businesses. Furthermore, from this one could surmise that these 4 companies have subsidiaries or business units in their companies that share the same vision and mission and are responsible for supplying their companies' products. Seven of the 11 companies did not comment on the regularity of monitoring suppliers, which suggests that these companies have possibly established relationships with their suppliers and do not have to monitor them.

The results of the quantitative phase to some extent support the findings of the qualitative phase. In the quantitative phase of this study, 25.8% of the 31 respondents who answered question 14 indicated that their companies monitored suppliers daily, while 3.2% did so weekly, 32.3% monitored suppliers monthly, 19.4% did so quarterly and 12.9% yearly. The statistical results indicated that 6.5% of the companies never monitored their suppliers. This percentage (6.5%), though not high, suggests that these companies may have internal supply chain or logistic divisions. Probably, the 6.5% of companies who never monitor suppliers have established relationships with their suppliers or internal systems that ensure that the growth of their businesses is not affected.

Table 7.3 summarises the dimensions of the market environment identified in the qualitative and quantitative research phases. The last column of the table also lists the specific elements of each dimension of the market environment that participants identified in the qualitative phase. These specific elements are unique to this study and may not be found in other studies.

Table 7.3: The dimensions and specific elements of the market environment identified in the qualitative and quantitative research phases

Qualitative research findings on the dimensions of the market environment	Quantitative research findings on the dimensions of the market environment	Specific elements of each dimension of the market environment identified in the qualitative phase
Customers	Customers	Clients'/customers' behaviour Clients'/customers' purchasing patterns
Competitors	Competitors	Competitive actions of competitors Competition from direct competitors in the same industry Competition from other players from different industries
Suppliers	Suppliers	Logistics Procurement Supply and demand for products Types of suppliers

The three dimensions of the market environment identified in both the qualitative and quantitative phases, as well as the specific elements thereof identified in the qualitative phase of this study were summarised in Table 7.3. Moreover, the ten dimensions of the external environment, which consists of the macro-and market environments, were discussed above.

The next section discusses the ways in which environmental scanning is being practised in the participating companies.

7.3.4 ENVIRONMENTAL SCANNING PRACTICES IN THE PARTICIPATING COMPANIES

The fourth research question asked: “Which modes of environmental scanning do companies use to acquire environmental information?”, while the fifth research question asked: “Which sources do companies use to acquire environmental information?” These two research questions are addressed in the next two sub-sections. Hence, the following sub-section is a comparison of the qualitative and quantitative phases in terms of environmental scanning practices, with the emphasis on the modes of environmental scanning. The next sub-section focuses on the sources of environmental information.

7.3.4.1 *The four modes of environmental scanning*

This sub-section address the fourth research question: “Which modes of environmental scanning do companies use to acquire environmental information?” Four modes of environmental scanning, namely searching, enacting, conditioned viewing and undirected viewing, as described by Choo (2001:13-20), assisted in the interpretation of the findings.

Searching: The findings of the qualitative phase of this study indicated that 6 of the 11 participating companies conducted environmental scanning by using a searching mode (see Section 5.6.1.1). Similarly, the results in the quantitative phase indicated that the participating companies conduct environmental scanning using a searching mode (also see Table 6.9 in Chapter 6). For example, the answers of 33 respondents to the statement, “We scan the environment in a broad and comprehensive way”, showed that 0.0% (0) strongly disagreed, 6.1% (2) disagreed, 12.1% (4) were neutral, 63.6% (21) agreed and 18.2% (6) strongly agreed. This confirms a searching mode, which entails a systematic and detailed scanning of the external environment, is critical to identify new markets, produce forecasts and intelligence reports (Choo, 2001:19; Du Toit, 2016:17).

Enacting: In the qualitative phase, 4 of the 11 participating companies are actively enacting with their external environment (see Section 5.6.1.2,). In the quantitative phase the results indicate that participating companies conduct environmental scanning in an enacting mode to a similar extent (also see Table 6.9 in Chapter 6). For example, of the 33

participating companies that responded to the statement, “We do environmental scanning to influence events and outcomes in the external environment”, 0.0% (0) strongly disagreed, 15.2% (5) disagreed, 27.3% (9) were neutral, 45.5% (15) agreed and 12.1% (4) strongly agreed. When approaching environmental scanning in an enacting mode, companies obtain information to experiment new ways of doing things in their business practices (Choo, 2001:18; Du Toit, 2016:17).

Conditioned viewing: The qualitative findings indicate that only one participating company adopted a conditioned viewing mode of environmental scanning (see Section 5.6.1.3). This finding differs with the result in the quantitative phase (also see Table 6.9 in Chapter 6). For example, in the quantitative phase, 33 respondents responded to the statement: “We tend to follow an established, standard procedure when scanning the environment”. Of these, 3.0% (1) strongly disagreed, 24.2% (8) disagreed, 15.2% (5) were neutral, 48.5% (16) agreed and 9.1% (3) strongly agreed. Companies that adopt a conditioned viewing mode rely on established industry norms when conducting environmental scanning. However, Choo (2001:17) argued that these established industry norms about the external environment could miss detecting emerging opportunities or disruptive technology developments.

Undirected viewing: The findings of the qualitative phase show that none of the participating companies adopted an undirected viewing mode of environmental scanning. This finding is in line with the results of the quantitative phase (see Table 6.9 in Chapter 6). For example, the responses of the 33 respondents who rated the statement, “Our goals for environmental scanning are fuzzy and ill-defined”, indicate that 24.2% (8) strongly disagreed, 48.5% (16) disagreed, 9.1% (3) were neutral, 15.2% (5) agreed and only 3.0% (1) strongly agreed. From these percentages, it is evident that the participating companies do not concentrate on an undirected viewing mode of environmental scanning. This is in line with the literature, which states that undirected viewing is a kind of stimulus and response approach to environmental scanning. Moreover, the company maintains the status quo, until a powerful stimulus is acknowledged and requires action (Choo, 2001:14; Du Toit, 2016:17). In view of the above, Hyde (2000:59) suggests that a company should employ a combination of the four modes in order to do effective environmental scanning.

7.3.4.2 Sources from which the participating companies obtained information for environmental scanning

The discussion in this sub-section deal with the fifth research question: “Which sources do companies use to acquire environmental information?” The sources from which the participating companies obtain information for environmental scanning are also important. The discussion integrates findings from the qualitative and quantitative phases with the aim of showing the importance of sources of information as a strategic tool for decision-making.

Primary sources of information: All 11 the companies that participated in the qualitative phase of this study acquired information from primary sources such as customers and consultants. These primary sources of information also included financial advisors, suppliers, the police, members of industry associations and internal employees. Customers and consultants or industry experts were the two main sources of primary information mentioned in the qualitative phase (see Section 5.6.3). These findings were confirmed in the quantitative phase, where similar sources of primary information were regarded as important. For example, when respondents were asked to indicate the importance of customer feedback as a primary source of information, 6.5% perceived it as not important at all, 0.0% as of little importance, 12.9% as relatively important, 38.7% as very important, while 41.9% perceived direct customer feedback as an extremely important source of primary information (also see Table 6.12 in Chapter 6).

Secondary sources of information: The 11 companies that participated in the qualitative phase mentioned an array of secondary sources of information. These secondary sources of information included publications or reports from major foreign and local universities (e.g., Harvard Business School, MIT, GIBS, University of Pretoria), research institutions (e.g. CSIR), international organisations (e.g., World Bank) and consultants (e.g., McKinsey), as well as newspaper articles and electronic sources such as Google and Twitter. Research reports were viewed as a very important secondary source of information in the qualitative phase of this study (see Section 5.6.3). These findings are similar to the results of the quantitative phase. Of the respondents who evaluated the importance of secondary sources of information, 40.0% and 36.7% regarded industry

analyst reports as extremely important and very important respectively. Secondly, information generated by regulatory bodies was emphasised; 22.6% of the respondents perceived it as extremely important, while 51.6% viewed it as very important. Thirdly, research reports were mentioned with 19.4% of the respondents perceiving such reports as extremely important and 51.6% as very important sources of secondary information (also see Table 6.13 in Chapter 6).

It is evident that all the participating companies obtained information from both primary and secondary sources. Both the primary and secondary sources of information identified in this study are consistent with those identified in other studies (Aldehayyat, 2015:471; Du Toit, 2016:21; Haase & Franco, 2011:1650; Jogaratnam & Law, 2006:181; Yoo & Sawyerr, 2014:43). The literature on environmental scanning indicates that the type of industry influences a company's preference and ways of obtaining information (Aldehayyat, 2015:475; Haase & Franco, 2011:1643).

Twenty-eight primary and secondary sources of information were identified in this study. Of these, 23 sources are also mentioned in one or more of three previous studies. First, the 23 sources of information identified in this study which are also listed in other studies are discussed. Thereafter, the five sources of information that are unique to this study are discussed. Table 7.4 lists the 23 sources of information identified in this study and confirmed in other studies. These 23 sources are categorised as either primary or secondary sources.

Table 7.4: Sources of information identified in this study and in other studies

Sources of information	Classification	Other studies in which sources of information were also found
PRIMARY SOURCES		
Analysis of competitors' products	External impersonal	Du Toit (2016:21); Sewdass and Du Toit (2014:189)
Consultants	External personal	Aldehayyat (2015:471); Haase and Franco (2011:1650); Hyde (2000:114); Jogaratnam and Law (2006:183)
Customers/clients	External personal	Aldehayyat (2015:471); Begg (2007:143); Haase and Franco (2011:1650); Yoo and Sawyerr (2014:43)
Direct customers' feedback	External personal	Du Toit (2016:21); Jiang and Gallupe (2015:18); Sewdass and Du Toit (2014:189)
Distributors/suppliers	External personal	Begg (2007:143); Du Toit (2016:21), Haase and Franco



Sources of information	Classification	Other studies in which sources of information were also found
		(2011:1650); Yoo and Sawyerr (2014:43)
Industry experts/analysts	External personal	Begg (2007:143); Du Toit (2016:21); Sewdass and Du Toit (2014:189)
Employees in rival companies	External personal	Begg (2007:143); Du Toit (2016:21)
Internal company documents	Internal impersonal	Aldehayyat (2015:471); Begg (2007:141); Jogaratnam and Law (2006:183)
Library	Internal impersonal	Aldehayyat (2015:471); Yoo and Sawyerr (2014:43)
Board members and executives	Internal personal	Aldehayyat (2015:471); Hyde (2000:114); Jogaratnam and Law (2006:183); Yoo and Sawyerr (2014:43)
Company staff	Internal personal	Aldehayyat (2015:471); Du Toit (2016:21); Jogaratnam and Law (2006:183); Sewdass and Du Toit (2014:189); Yoo and Sawyerr (2014:43)
Staff attending conferences/seminars	Internal personal	Aldehayyat (2015:471); Begg (2007:143); Du Toit (2016:21); Haase and Franco (2011:1650); Sewdass and Du Toit (2014:189)
SECONDARY SOURCES		
Annual reports	External impersonal	Du Toit (2016:21); Haase and Franco (2011:1650)
Corporate websites	External impersonal	Du Toit (2016:21); Jiang and Gallupe (2015:15); Sewdass and Du Toit (2014:189)
Government publications	External impersonal	Aldehayyat (2015:471); Begg (2007:141); Haase and Franco (2011:1650)
Industry analysts reports	External impersonal	Begg (2007:141); Du Toit (2016:21); Jiang and Gallupe (2015:15)
Information generated by regulatory bodies	External impersonal	Du Toit (2016:21); Sewdass and Du Toit (2014:188)
Internet (WWW)	External impersonal	Aldehayyat (2015:471); Begg (2007:144); Haase and Franco (2011:1650); Jogaratnam and Law (2006:183); Yoo and Sawyerr (2014:43)
Media (CNN/radio/TV)	External impersonal	Aldehayyat (2015:471); Begg (2007:141)
Newspapers	External impersonal	Aldehayyat (2015:471); Du Toit (2016:21); Jogaratnam and Law (2006:183)
Publications/research reports	External impersonal	Aldehayyat (2015:471); Du Toit (2016:21); Haase and Franco (2011:1650)
Universities	External impersonal	Haase and Franco (2011:1650)
Information on potential business partners	Both external impersonal/personal	Du Toit (2016:21); Sewdass and Du Toit (2014:189)

The sources of information summarised in Table 7.4 above are consistent with the information sources identified in other studies.

Table 7.5 lists the unique sources of information identified in this study. These unique information sources include international organisations, such as the World Health Organisation and the World Bank, as well as the police.

Table 7.5: Unique sources of information identified in this study

Sources of information	Classification
PRIMARY SOURCES	
Local informers in communities	External personal
Members of various trading chambers, including those in South Africa and Nigeria	External personal
Police/private investigators	External personal
SECONDARY SOURCES	
International organisations	External impersonal
Market research commissioned by the company	Internal impersonal

Table 7.5 above listed the sources of information that are unique to this study. The findings show that companies use different sources of information to satisfy their information-seeking needs. It seems that companies operating in the financial services and insurance industries consider World Bank reports as important sources of information about economic trends. On the other hand, it seems that companies operating in the mining industry consider information from the police useful for information on crime syndicates.

Table 7.6 list sources of information identified in other research that could not be confirmed in the current study.

Table 7.6: Sources of information found in other studies that were not confirmed by this study

Sources of information	Other studies in which sources of information were found
Exhibitions/promotional materials	Du Toit (2016:21), Haase and Franco (2011:1650)
Specific databases	Haase and Franco (2011:1650)
Trade journals	Du Toit (2016:21); Jiang and Gallupe (2015:15)

The sources listed in Table 7.6 were not identified in this study.

Companies in South Africa obtain environmental information from a variety of sources. After obtaining this information, the senior management team in the respective companies

need to use the information in their strategic planning processes and for other strategic purposes, such as making strategic decisions. The next section discusses the use of environmental information as input for corporate strategic planning.

7.3.5 USING ENVIRONMENTAL INFORMATION FOR STRATEGIC PLANNING

The discussion in this section deals with the final research question: “How, if at all, do companies use environmental information for strategic planning?” Obtaining information through environmental scanning is irrelevant if this information is not used in the strategic planning process (Jogarathnam & Law, 2006:173). The findings in the qualitative phase of the study indicated that all 11 of the participating companies use information from environmental scanning for strategic planning purposes (see Section 5.7.1). One participant remarked that:

First of all, we do a lot of work on our strategy ... take all the information that we have gathered ... all that information obtained through environmental scanning is fed into the strategic planning process. Strategic plan ... [we] do plans for one, three to five years. The other piece we tend to look at is what we do with the information to reposition the company. (P9, Female, Executive Vice-President for Human Resources and Strategy)

The above quotation corresponds with the results in the quantitative phase, which indicated that the participating companies consider the use of information obtained from environmental scanning as critical in strategic planning, decision-making and strategic choices (see Table 6.11 in Chapter 6). These results are confirmed by the following percentages indicating how the 31 respondents who answered question 11 responded to the three statements in this question dealing with the use of environmental scanning information for strategic planning, decision-making and making strategic choices respectively (also see Table 6.11 in Chapter 6). First, regarding the use of environmental scanning information for strategic planning, 0.0% of the respondents strongly disagreed with the applicable statement, 0.0% disagreed, 6.5% were neutral, 51.6%, agreed and 41.9% strongly agreed. Second, regarding the use of environmental scanning information for decision-making, 0.0% of the respondents strongly disagreed with the applicable

statement, 0.0% disagreed, 9.7% were neutral, 58.1% agreed and 32.3% strongly agreed. Third, on the use of environmental scanning information for strategic choices, 0.0% of the respondents strongly disagreed, 0.0% disagreed, 6.5% were neutral, 64.5% agreed and 29.0% strongly agreed. The high percentage of respondents who agreed or strongly agreed with each of these statements show that top executives view the process of obtaining information through environmental scanning as critical to their strategic planning processes. This is in line with the literature stating that information obtained through environmental scanning is used by senior managers for strategic planning, decision-making and making strategic choices for their companies to enhance business practices (Albright, 2004:43; Bezold, 2010:1514; Cheng, *et al.*, 2014:439).

7.4 MANAGERIAL IMPLICATIONS

This section discusses the main managerial implications of the study's findings:

- First, the findings indicate that effective environmental scanning enhances corporate strategic planning. Environmental scanning efforts should enable companies to adapt to changes in the external environment and to be future-oriented. These efforts should also assist management to develop strategies that are aligned with their companies' internal and external environments (Babatunde & Adebisi, 2012:25; Cancellier *et al.*, 2014:612).
- Second, the findings confirm that management should continuously engage with their stakeholders, including their employees and investors, as well as the government, because each stakeholder has different expectations and influences the company's success (Kenny, 2013:38; Mayfield, 2014:70). Engaging with their key stakeholders will afford management the opportunity to consider stakeholders' needs and to design strategies that are sustainable and able to maximise the value of their companies.
- Third, the results in the quantitative phase of the study indicated that 43.8% of top performing companies do not have formal environmental scanning offices or units. Top management should consider supporting the establishment of a formal environmental scanning office in order to assist their companies to identify opportunities and threats that could influence their businesses (Albright, 2004:43; Du

Toit, 2016:17). Such an office also enables companies to identify new markets and opportunities that exist in the external environment (Cancellier *et al.*, 2014:616; Parnell, 2010:306).

- Fourth, participants in the qualitative phase revealed that there are many changes occurring in their companies' external environments, such as an increase in regulations and political changes. In view of this, one participant's remarks point to the effect of such changes on his company:

There are quite a lot [of factors]. One of them is political changes. You know that we operate in the nuclear space. Not everybody supports nuclear. So when so and so don't support nuclear [Laughs] ... it becomes challenging to operate in the nuclear environment. So we have to keep in the loop from time to time. (P13, Male, Group Strategy and Risk Manager)

This remark illustrates that environmental scanning should be a continuous activity in any organisation. Moreover, a specific number of people should be dedicated to the environmental scanning task. Choo (2001:20) highlighted that companies that continuously scan the external environment invest resources to obtain environmental information. As a result, they tend to predict future events and threats about the external environment more accurately (Jansen van Vuuren, 2002:140).

- Finally, information collected from the external environment should be critically analysed and interpreted to support senior managers' decision-making processes. Companies should ensure that they appoint experts to analyse and interpret the data (Xu *et al.*, 2011:187).

7.5 LIMITATIONS OF THE STUDY

Despite the important findings summarised above, there are some limitations to the study that should be acknowledged.

The study specifically focussed on the environmental scanning practices of large, top performing companies in South Africa and did not include small and medium-sized firms. The study's findings may, therefore, not be generalisable beyond the companies that participated in the current study. The findings can also not be generalised to other African

countries, as previous research has revealed that the external environment of companies varies from one country to the other (Aldehayyat, 2015:476).

The normal limitations associated with qualitative research, such as tentative generalisation and a small sample size, apply to this study.

Similarly, the small sample size achieved in the quantitative research phase of this study is an obvious limitation. Because of the small quantitative sample size, exploratory factor analysis could not be performed to statistically evaluate the dimensionality of the scale measuring the four modes of environmental scanning in question 9. This represents an important limitation.

Two questions in the questionnaire can be regarded as limitations. In question 8, which deals with the typical amount of time the participating companies spend scanning the external environment, the adjectives lengthy, average, sporadic and minimal are vague. Consequently, this question may have been interpreted differently by different respondents. Question 14, which deals with the way a company monitors different dimensions of the external environment, was adopted from other studies (Aldehayyat, 2015:469; Jogaratnam & Law, 2006:177), but did not include the global environment. The omission of the global environment is another important limitation to be considered.

Finally, the Cronbach's alpha calculated for question 6, the three-item measure of competitive intensity, was 0.65. This value is less than the generally-used cut-off of 0.70, which indicates that the internal consistency reliability of the scores obtained with this scale was inadequate. Future researchers should, therefore, consider using a more reliable measure of the construct competitive intensity.

7.6 RECOMMENDATIONS FOR FUTURE RESEARCH

This dissertation concludes with the six recommendations for future research highlighted below:

- First, the findings of the qualitative phase show that many of the participating companies conduct business in other African countries. Further research should investigate the environmental scanning practices of large companies in different African countries to determine whether environmental scanning enhances these companies' business success.
- Second, this study specifically examined the way environmental scanning is practised in top performing South African companies. The participating companies in this study were all large companies. The findings from the qualitative and quantitative phases of the study showed that environmental scanning supports the participating companies' corporate strategic planning processes. Hence, future research could examine the environmental scanning practices of SMEs in South Africa to determine how environmental scanning enhances their strategic planning.
- Third, past research has examined the relationship between environmental scanning and companies' performance in countries such as Russia and the USA and found a positive relationship (Aldehayyat, 2015:466). Further research could examine the relationship between environmental scanning and companies' performance in South Africa to determine if environmental scanning also influences their financial performance positively.
- Fourth, future research may include other qualitative data collection methods, such as focus groups and observations, and should also increase the sample size of both the qualitative and quantitative phases by including other large companies listed on the JSE.
- Fifth, question 8 in the questionnaire could be revised by including specific time frames such as daily, weekly, monthly, every quarter or every six months, in order to determine the typical amount of time a company spends scanning the external environment. Future researchers will have to investigate the dimensionality of the items in question 9 using EFA in a large sample and, thereafter, also evaluate the internal consistency reliability of the resulting factors or dimensions in the scale.

Question 14 of the questionnaire should also be revised to include the global environment as a dimension of the external environment.

- Finally, as was indicated in Section 7.5, future researchers should consider using a more reliable measure of the construct competitive intensity.

7.7 RESEARCH CONCLUSION

This study investigated the way environmental scanning is being practiced in top performing South African companies. The study was guided by the research questions outlined in Section 1.4. A convergent parallel mixed methods research design was used in this study in which both qualitative and quantitative data were gathered and analysed simultaneously. The findings from the qualitative and quantitative phases were combined and presented in this dissertation.

The findings reveal that environmental scanning is essential in business management. Environmental scanning is also useful in corporate strategic planning as it assists senior management in making strategic decisions. Environmental information assists executives in the formulation of deliberate and emergent strategies, enabling companies to adapt to changes occurring in the external environment. The political, economic and customers dimensions of the external environment were regarded as having specific relevance to the participating companies because these environmental dimensions impact their businesses. The participating companies obtain information from various primary and secondary sources. Customers, consultants and research reports were viewed as particularly useful when obtaining environmental information. The participating companies employed all four modes of environmental scanning. Whilst all the participating companies conduct environmental scanning, the environmental scanning practices differ from one company to another across diverse industries in South Africa.

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APPENDIX A:
**Request for permission to involve a company's staff members as
participants in the study**

10 Jack Nicklaus Drive
Pecan Wood Estate
Hartebeespoort Dam

The Manager

For attention:

Re. Request for permission to conduct research among staff members of XYZ

Dear Mr/Mrs/Ms/Dr

I am an MCom student in Business Management in the Department of Business Management at the University of Pretoria. As part of my studies, I have to conduct research on environmental scanning practices in top performing South African companies.

I hereby request permission to conduct semi-structured interviews with 3 senior managers in your organization on a date and time to be arranged with each manager. Each interview will last approximately 30 minutes.

The study will be guided by the following principles:

- Once I have received permission from you, the study will be submitted to the University of Pretoria's Research Ethical Committee for final approval. The study already complies with all the ethical requirements of this committee.
- Participants will participate in the interviews on an anonymous and voluntary basis and will not receive any incentives to encourage their participation.
- I will schedule appointments with each of the managers at a time convenient to them.
- The name of your organization and the names of the interviewees will not be mentioned in the research report.
- I will provide you with a copy of the final research report on request.

Please feel free to contact me if you need additional information about the study. You are also welcome to contact my study leader, Mr. Theuns Kotzé (tel. 012 420-4844, e-mail: theuns.kotze@up.ac.za) to confirm that this is a legitimate research project.

Your kind co-operation is highly appreciated.

Sincerely,

Miss Tanneh Tarpeh
Cell: 0766681148
E-mail: tanneht@yahoo.com



APPENDIX B:
Example of e-mails sent to participants and respondents

Example of e-mail sent to participants

1 March 2016

Subject: **University of Pretoria: 2016 Environmental scanning study**

Dear Ms/Mr/Dr

I am approaching you following today's referral from [(Title) (Surname)]. I write to request your participation in my Master's study on environmental scanning. I am conducting the study under the supervision of Mr. Theuns Kotzé (tel. 012 420-4844, theuns.kotze@up.ac.za) from the Department of Business Management at the University of Pretoria.

My study focuses on the environmental scanning practices of top performing South African companies, including your company.

I would like to conduct a 30 minute personal, semi-structured interview with you on how your company's environmental scanning practices are used in support of the organisation's strategic planning. Since the interviews are anonymous and confidential, neither your identity nor that of your company will be revealed in my dissertation.

Whilst knowing that you are very busy, I would greatly benefit from your participation. Could you please give me a date and time for the interview, preferably during March or April 2016 if at all possible?

Attached is a copy of the main questions I wish to discuss with you.

Thank you for your kind consideration of this request.

Yours faithfully,

Ms. Tanneh Tarpeh
MCom student: University of Pretoria
Cell: 076 668 1148

Examples of e-mails sent to respondents

From: Theuns Kotze (University of Pretoria) [mailto:noreply@qemailserver.com]

Sent: 15 March 2016 09:49 AM

To:

Subject: University of Pretoria: Environmental scanning study

Dear [Title, Surname]

Because the environment in which South African companies function is uncertain and unstable, environmental scanning is often described as vital tool for strategic planning.

You are invited to participate in an academic research study conducted by Ms Tanneh Tarpeh, a Master's student from the Department of Business Management at the University of Pretoria. The purpose of this survey is to investigate the environmental scanning practices of top performing South African companies such as yours.

The questionnaire is short and will take no more than 10 minutes to complete. Your responses to the questionnaire are anonymous and the information you provide will be treated as confidential.

To begin the survey, please click on this link:

Take the Survey

Alternatively, copy and paste the URL below into your internet browser:

https://tuks.qualtrics.com/SE?Q_SS=3PlEh01NLqukjZj_eJQINOCNOBsvGU5&Q_CHL=email

Sincerely,

Mr. Theuns Kotzé

Lecturer: Department of Business Management

University of Pretoria

Tel: 012 420-4844

Email: theuns.kotze@up.ac.za

From: Theuns Kotze (University of Pretoria) [mailto:noreply@qemailserver.com]

Sent: 06 April 2016 07:01 AM

To:

Subject: University of Pretoria: Environmental scanning study

Dear [Title, Surname]

We invited you previously to participate in the University of Pretoria's 2016 environmental scanning study. While we know that you are very busy, we could greatly benefit from your participation in the study, as we need another 34 responses to ensure valid and reliable findings.

We, therefore, invite you to complete the questionnaire by 18:00 on 15 April if possible.

In this survey, environmental scanning refers to the collection and use of information about events, trends and relationships in an organisation's external environment as input into an organisation's strategic planning processes.

The questionnaire will take less than 10 minutes to complete. Your participation is voluntary and the answers you give will be treated as anonymous and confidential.

To begin the survey, please click on this link:

Take the Survey

Alternatively, copy and paste the URL below into your internet browser:

https://tuks.qualtrics.com/SE?Q_SS=0GLy90iifgOBAhf_eJQINOCNOBsvGU5&Q_CHL=email

Thank you in advance for your kind participation.

Sincerely,

Mr. Theuns Kotzé

Lecturer: Department of Business Management

University of Pretoria

Tel: 012 420-4844

Email: theuns.kotze@up.ac.za

From: Theuns Kotze (University of Pretoria) [mailto:noreply@qemailserver.com]

Sent: 14 April 2016 07:01 AM

To:

Subject: Reminder: “University of Pretoria: 2016 environmental scanning study”

Dear [Title, Surname]

I am writing to ask your help with the University of Pretoria's 2016 environmental scanning study. Ms Tanneh Tarpeh, a postgraduate student in Business Management, is conducting the study for her Master's dissertation. Unfortunately, only 28 respondents have completed the survey so far. We need at least 30 more responses to ensure reliable and valid results.

We, therefore, request that you complete the questionnaire by 18:00 on Friday, 22 April if at all possible.

In this survey, environmental scanning refers to the collection and use of information about events, trends and relationships in an organisation's macro- and market environments as input into the organisation's strategic planning processes.

The questionnaire will take less than 10 minutes to complete. Your participation is voluntary and the answers you give will be treated as confidential and anonymous. Your name and the name of your company will not be mentioned in Ms Tarpeh's dissertation.

To begin the survey, please click on this link:

[Take the Survey](#)

Alternatively, copy and paste the URL below into your internet browser:

https://tuks.qualtrics.com/SE?Q_SS=ereQprEzUqtMa69_eJQINOCNOBsvGU5&Q_CHL=email

Please ignore this e-mail if you have already completed the survey.

Thank you in advance for your kind participation.

Sincerely,

Mr. Theuns Kotzé

Lecturer: Department of Business Management

University of Pretoria

Tel: 012 420-4844

Email: theuns.kotze@up.ac.za



APPENDIX C:
Discussion guide

DISCUSSION GUIDE FOR THE SEMI-STRUCTURED INTERVIEWS

Opening of the semi-structured interview:

Thank you for taking time out of your busy schedule to meet with me. I would like to take a few minutes to explain the research project to you.

I am a Liberian and a Master's student from the University of Pretoria and am trying to understand how environmental scanning is being practiced in top performing South African companies. This study focuses on environmental scanning in support of corporate strategic planning. Environmental scanning is the collection of useful information about events, trends and links in the company's external environment; knowledge of which would help senior managers in planning the course of action for the future. I would like to interview you because I feel I can learn a lot from your perspectives.

I would like for our interview today to be open and conversational. There are no right or wrong answers; you are the expert and I am here to learn from you. Our interview is anonymous and confidential. Your identity and that of your company will not be revealed in my dissertation. In order to keep the conversation flowing, I would like your permission to record our conversation. Is that OK?

Interview questions:

Question 1: Could you please tell me about your position in this company and what your responsibilities include?

Question 2: What are the major changes currently occurring in your company's external business environment?

Can you please describe the changes taking place in the macro- and market environments?

Question 3: What are the ways in which your company respond to changes in the external environment?

Question 4: Does your company engage in a formal strategic planning process?

If (yes) can you please tell me who participates in the strategic planning process?

How often is the company's strategic plan revised and why?

Question 5: Does your company engage in a formal environmental scanning as part of its strategic planning process?

Can you please tell me who is responsible for the environmental scanning task in your company?

Question 6: How frequently does your company perform environmental scanning?

Question 7: What are your main areas when scanning the external environment?

Question 8: Which specific sources of primary information does your company use when scanning the external environment?

Where or from whom does your company collect secondary information?

How does the company check the quality of the collected information?

In what format is the information presented to top management?

Question 9: How does you company use the collected information?

Question 10: In what ways are your company's senior managers directly involved in environmental scanning?

In what ways does your company's senior management support environmental scanning?

Floating prompts:

Can you explain that in more detail?

That is interesting - please go on.

Can you please give me an example?

Concluding comments:

Thank you for taking the time out of your busy schedule to meet with me. You have been very helpful. Would you like to like a copy of my formal report? If yes, please give me and e-mail address where I can send you an electronic version. If you have any questions, or think of anything else, please don't hesitate to contact me.



APPENDIX D:
Informed consent form



Consent for participation in an academic research study

Dept. of Business Management

ENVIRONMENTAL SCANNING PRACTICES IN SOUTH AFRICAN TOP PERFORMING COMPANIES

Research conducted by:

Ms. T. Tarpeh (14337152)

Cell: 0766681148

Dear participant

You are invited to participate in an academic research study conducted by (Tanneh Tarpeh), a Master's student from the Department of Business Management at the University of Pretoria.

The purpose of the qualitative phase of this study is to explore the environmental scanning practices of top performing South African companies.

Please note the following:

- This study involves a semi-structured personal interview. Your name will not appear in the final research report and the answers you give during the interview will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
- Your participation in this study is very important to me. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- The interview will take about 30 minutes of your time.
- The results of the study will be used for academic purposes only and may be published in an academic journal. I will provide you with a summary of the findings on request.
- Please contact my study leader, Mr. Theuns Kotzé, on tel. (012) 420-4844 (e-mail: theuns.kotze@up.ac.za) if you have any questions or comments regarding the study.

Please sign the form to indicate that:

- You have read and understand the information provided above.
- You give your consent to participate in the study on a voluntary basis.

Participant's signature

Date



APPENDIX E:
Environmental scanning questionnaire

ENVIRONMENTAL SCANNING QUESTIONNAIRE

Thank you for starting the survey. Your participation is voluntary, anonymous and confidential. Your name and that of your company name will not be published in the final research report.

Please complete the questionnaire in one session without closing your browser. You will receive one question per screen. There are no correct or wrong answers and we are interested in your honest responses to all the questions. Please click on the >> button to go to the next screen.

SECTION A: BACKGROUND INFORMATION

1) Please indicate the main industry in which your company operates.

Agriculture, hunting, forestry and fishing industry	
Community, social and personal services	
Construction industry	
Electricity and water supply industry	
Financial, insurance, real estate and business services	
Manufacturing industry	
Mining and quarrying industry	
Tourism industry	
Transport, storage and communication industry	
Wholesale and retail trade industry	
Other (Please specify)	

2) Please indicate your position in the company.

Executive management (e.g., CEO, MD, CFO, COO)	
Senior management	
Middle management	
Line management	
Other (Please specify)	

3) How many employees work in your company in South Africa?

Less than 1 000	
1 000 to 3 000	
3 001 to 5 000	
5 001 to 10 000	
More than 10 000	

4) How long have you been employed in your company? Please give an answer in complete years.

SECTION B: COMPETITIVE SITUATION

- 5) In your opinion, how well does your company cope with changes in its external business environment?

Extremely well	
Very well	
Fairly well	
Slightly well	
Not well at all	

- 6) Please indicate your agreement with each of the following statements with respect to the market environment in which your company operates?

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
There are many "promotion wars" in our company's market environment.	1	2	3	4	5
In our market environment, anything that one competitor can offer; others can match readily.	1	2	3	4	5
One hears of a new competitive move almost every day in our market environment.	1	2	3	4	5

SECTION C: ENVIRONMENTAL SCANNING

- 7) Is there a formal environmental scanning unit within your company?

Yes.	
No.	
Don't know.	

- 8) Which option below best describes the time your company typically spends scanning its external environment?

Lengthy: Continuously scanning the environment.	
Average: Spend a reasonable amount of time scanning the external environment.	
Sporadic: Sometimes spend a great deal of time and other times spend little time scanning the external environment.	
Minimal: Do not really spend time scanning the external environment.	

- 9) **Companies differ in their environmental scanning practices and how they use environmental scanning information to support corporate strategic planning. Please indicate the extent to which you agree or disagree that each of the statements below describes your company’s environmental scanning practices in support of corporate strategic planning.**

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Our company’s external environment is so complex and dynamic that it is difficult, if not impossible to analyse.	1	2	3	4	5
Environmental scanning enables us to make sense of changes and trends in our company’s external environment.	1	2	3	4	5
In our company, environmental scanning is typically done informally.	1	2	3	4	5
Our environmental scanning efforts are narrowly focused on a small number of well-defined issues.	1	2	3	4	5
We do environmental scanning to influence events and outcomes in the external environment.	1	2	3	4	5
Environmental scanning is a routine and continuous activity in our company.	1	2	3	4	5
Our environmental scanning efforts emphasise experimentation and learning by doing.	1	2	3	4	5
We tend to follow an established, standard procedure when scanning the environment.	1	2	3	4	5
We do extensive environmental scanning on many different aspects of our external environment.	1	2	3	4	5
Our goals for environmental scanning are fuzzy and ill-defined.	1	2	3	4	5
We rely primarily on informal, personal contacts for information about changes and trends in the external environment.	1	2	3	4	5
We often expose external stakeholders to new product concepts or business ideas to get their feedback as part of our environmental scanning efforts.	1	2	3	4	5



	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Our environmental scanning efforts rely heavily on external, secondary sources of information (e.g., publications or databases) that are widely used and respected in our industry.	1	2	3	4	5
We scan the environment in a broad and comprehensive way.	1	2	3	5	5
Our company believes that there are no perceived benefits of environmental scanning.	1	2	3	4	5

10) Please indicate the extent to which you agree or disagree that each of the statements below describes the way environmental scanning contributes to competitive advantage.

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
Our environmental scanning efforts help us to identify emerging trends.	1	2	3	4	5
Our environmental scanning efforts help us to respond to new trends as they arise.	1	2	3	4	5
Our environmental scanning efforts enable us to develop more attractive new products than our competitors.	1	2	3	4	5
In our company environmental scanning alerts managers to issues not currently on their agenda.	1	2	3	4	5
Environmental scanning helps us to keep up to date with emerging technologies and the benefits of these technologies.	1	2	3	4	5

- 11) Please indicate to what extent you agree or disagree with the following three statements regarding the way environmental scanning information is used in your company.

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Our company makes use of environmental scanning information for strategic planning.	1	2	3	4	5
Our company makes use of environmental scanning information for decision making.	1	2	3	4	5
Our company makes use of environmental scanning information to make strategic choices.	1	2	3	4	5

- 12) How important are each of the following primary sources of information to your company when scanning the external environment?

	Not at all important	Very unimportant	Relatively important	Very important	Extremely important
Analysis of competitor's products.	1	2	3	4	5
Company staff.	1	2	3	4	5
Direct customer feedback.	1	2	3	4	5
Distributors / Suppliers.	1	2	3	4	5
Employees in rival companies.	1	2	3	4	5
Industry experts / analysts.	1	2	3	4	5
Market research commissioned by the company.	1	2	3	4	5
Staff attending conferences / seminars.	1	2	3	4	5

- 13) How important are each of the following secondary sources of information to your company when scanning the external environment?

	Not at all important	Very unimportant	Relatively important	Very Important	Extremely important
Annual reports.	1	2	3	4	5
Corporate websites.	1	2	3	4	5
Industry analyst reports.	1	2	3	4	5
Information generated by regulatory bodies.	1	2	3	4	5
Information on potential business partners.	1	2	3	4	5



	Not at all important	Very unimportant	Relatively important	Very Important	Extremely important
Newspapers.	1	2	3	4	5
Publications/Research reports.	1	2	3	4	5
Internal company documents.	1	2	3	4	5

14) How often does your company monitor each of the following environments?

		Daily	Weekly	Monthly	Quarterly	Yearly	Never
	Macro-environment						
14.1	Economic						
14.2	Environmental						
14.3	Legal						
14.4	Political						
14.5	Socio-cultural						
14.6	Technological						
	Market environment						
14.7	Competitors						
14.8	Customers						
14.9	Suppliers						

Thank you for your time!

