

Strategic use of data visualisation and storytelling in marketing research firms

by

VANESSA MARITZ

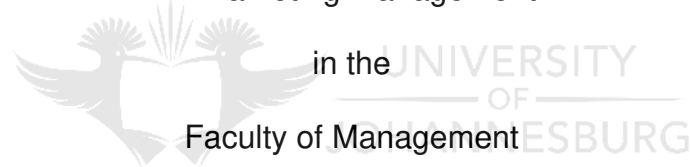
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31 October 2012

DECLARATION

I, the undersigned, hereby declare that this dissertation entitled, '*The strategic use of data visualisation and storytelling in marketing research firms*', is my own work and all the sources I have used have been indicated or acknowledged by means of completed references. It is submitted in fulfilment of the requirements for the degree of Master of Commerce at the University of Johannesburg. It has not been submitted before for any degree or examination at this or at any another university.

Vanessa Maritz

31 October 2012



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ABSTRACT

The marketing research industry is a highly competitive environment with over one hundred marketing research firms competing for business in the South African market. Literature suggests that one of the biggest challenges the industry faces is poor positioning. Marketing research firms are seen as data suppliers rather than business or strategic thought partners. This is mainly the result of marketing research firms traditionally providing masses of data with no or limited insights, practical use and strategic value (also known as actionability of research results).

This state of affairs in the industry needs to be addressed, otherwise marketing research firms will become less profitable and effective data / research information suppliers. To warrant future business and increased revenues, marketing research firms need to position themselves as professionals who can deliver actionable research results that assist clients strategically. Literature suggests various methods in which marketing research firms can achieve this; amongst which data visualisation and storytelling are identified as two such methods to deliver actionable research results which impact clients' business.

Therefore, the primary research objective of this study was to uncover the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports. To address this objective, this study was conducted in two phases, first literature on the topic was presented, followed by an empirical study. The empirical study independently followed an exploratory and descriptive research design where two samples were used. The main study (qualitative phase) sampled individuals, working for South African marketing research firms, who oversee teams who create quantitative research reports by means of in-depth interviews; and the small-scale complementary study (quantitative phase) sampled clients of marketing research firms who receive these quantitative reports by means of an computer-administered, Internet-based survey. The studies were conducted sequentially; the small-scale complementary study followed after the main study had been completed.

The Morse and Field approach was used to analyse the empirical research results of the main study which indicated that marketing research firms do not claim to have a traditional approach to quantitative reporting; the focus is not on data supply, but rather on providing actionable research results to clients which adds value to their business decision-making. The results also indicate that marketing research firms use storytelling to deliver actionable research so as to increase the strategic value thereof, while data visualisation is not used strategically. The results of the small-scale complementary study indicated that although 62% of clients feel that current quantitative research reports (received from marketing research firms) can be used to make strategic decisions, clients also feel that quantitative research reports need improvement regarding the delivery of strategic and actionable research reports.

The exploration of the current quantitative reporting landscape and the evaluation of whether South African marketing research firms strategically use data visualisation and storytelling, have helped in identifying barriers to adoption of these methods and recommended how these could be overcome; it also identified specific measures to bridge the gap between data supply and strategic (actionable) research. The study found that marketing research firms should continue and strengthen their focus on actionable research as client demand therefor will continue; this can be achieved through a number of ways such as by focusing on understanding the client's business, demonstrating thought leadership, being future focused, strengthening storytelling capabilities and developing / possibly investing in data visualisation capabilities.

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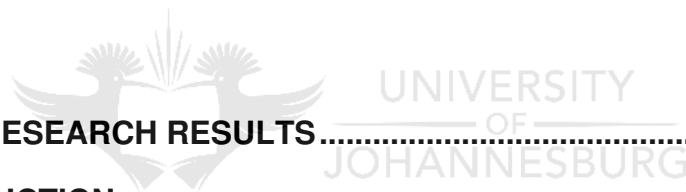
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CHAPTER 1

STUDY RATIONALE AND OUTLINE

1.1 INTRODUCTION

The purpose of this chapter is to present a rationale for the problem statement of the study. The chapter commences with a detailed background to contextualise the problem statement whereafter a conceptual framework is presented as basis of the study. A formal problem statement is then presented, followed by the research objectives and propositions of the study. The chapter continues to explain how the research problem and objectives are addressed by outlining details of the chosen research methodologies. The chapter concludes with a detailed definition of marketing research and definitions of other key terms used in the study.

1.2 BACKGROUND

The current Information Age is characterised by people having access to more data than ever before, which leads to information overload (Digit, 2011; Doyle & Tharme, 2011). Few (2007) emphasises that information becomes stagnant as it and the collection thereof increase, while the ability to make sense of data and communicate it remains inert. As the amount of data increases, it multiplies the efforts of people to make sense of it (Finn, 2011). This is particularly applicable to the marketing research industry, which mainly focuses on the collection and interpretation of data and information for clients.

The marketing research industry is a highly competitive environment with over one hundred marketing research firms competing for business in the South African market (refer to section 2.3.2.2) (Bizcommunity, 2011; SAMRA, 2010). Being successful in this industry is increasingly difficult due to a number of challenges, which include (refer to section 2.5):

- **Client demand:** Clients increasingly demand faster and more cost effective research, strategic recommendations and insights, insight management, value creation and concise deliverables (Bain, 2012a; Appleton, 2011a; Bain, 2011a; Zorfas, 2011; Burns & Bush, 2010:83,84; Moran, 2010:9-14; Burns & Bush, 2001:54-56).

- **Macro-economic factors:** The world economic recession and continual advancements in technological developments have put constant pressure on marketing research firms to innovate and adapt their offering (Bain, 2011a; Burns & Bush, 2010:81,84; Moran, 2010:6,9).
- **Fieldwork:** The conducting of fieldwork is increasingly difficult due to a decline in respondent cooperation and respondents are harder to reach (Bain, 2011a; Burns & Bush, 2010:81; Research 10, 2008a; 2008b; Von Bormann, 2000).
- **Competition:** The marketing research industry is characterised by fierce and increased competition (GreenBook, 2011:14; Van Slooten & Verheggen, 2011:2,3).
- **Positioning:** Many literature sources suggest that the marketing research industry is poorly or inappropriately positioned (Burns & Bush, 2010:85; Moran, 2010:6,7; Research 10, 2008b).
- **Pricing:** Marketing research is a costly process which means marketing research firms usually charge high prices (Appleton, 2011a; Burns & Bush, 2010:85, Research 10, 2008b).
- **Skills:** Skill shortages in the industry exist and high employee turnover within marketing research firms is evident (Bain, 2011a; GreenBook, 2011:13,14,16; Burns & Bush, 2010:81; Moran, 2010:9).

All these challenges increasingly place pressure on marketing research firms. Literature suggests that the biggest challenge concerns the poor / inappropriate positioning of the marketing research industry; marketing research firms are seen as data suppliers rather than business or strategic partners (Dowsett, 2012; Cambiar, 2011:2-10; GreenBook, 2011:13-15; Moran, 2010:14; Research 10, 2008b). This is the result of marketing research firms traditionally providing masses of data with no or limited insights, practical use and strategic value (actionability). These shortcomings in assisting clients to interpret data have led to marketing research firms' poor perception amongst clients (Von Bormann, 2000). As a result, indirect competitors like marketing research consultants have entered the industry to bridge this gap (GreenBook, 2011:14; Van Slooten & Verheggen, 2011:3). These consultants are typically perceived to be more professional and they are able to charge a premium for interpreting data and

delivering insights that are actionable (GreenBook, 2011:14; Van Slooten & Verheggen, 2011:3; Von Bormann, 2000).

This state of affairs in the industry needs to be addressed otherwise marketing research firms will simply become data suppliers that will become commoditised and marginalised (Moran, 2010:14; Von Bormann, 2000). To warrant future business and increased revenues, marketing research firms need to position themselves as professionals who can deliver actionable research results that assist clients in decision-making i.e. fulfilling a strategic role. Doyle and Tharme (2011) state that marketing research firms have the responsibility to help clients who are overloaded with masses of data to turn it into useful information and insights on which decisions can be based. In essence, marketing researchers should add value to marketing decision-making (Malhotra & Peterson, 2006:13). Sound decisions can only be made if marketing research firms provide clients with relevant and actionable information (Malhotra & Birks, 2006:19).

Marketing research firms typically provide information by compiling research reports noting the key research findings by presenting it in tables, graphs and words (refer to section 4.3) (Berndt & Petzer, 2011; Friedman, 2007; Hair, Bush & Ortinau, 2006:629). It is in this representation that many clients fail to see the impact of the research on the business and consequently battle to make sense of the data to make sound decisions and to take action. Hence, a renewed focus on the subject of how to provide relevant information and how to add value by providing actionable research is noticeable (Bain, 2011a; Digit, 2011; Doyle & Tharme, 2011). To get clients to act on these research results, marketing research firms need to have an appealing and engaging communication and report approach (Precourt, 2010:3; Rubinson, 2010:9; McCall, Rabson & Dimopoulos, 2004:9). Literature suggests that actionable research reports with strategic impact can be achieved through a number of methods, two of which include better data visualisation design and storytelling (Digit, 2011; Micu, Dedeker, Lewis, Moran, Netzer, Plummer & Plummer, 2011:10; Lewis, 2010:9; Shaw, 2010:1-12).

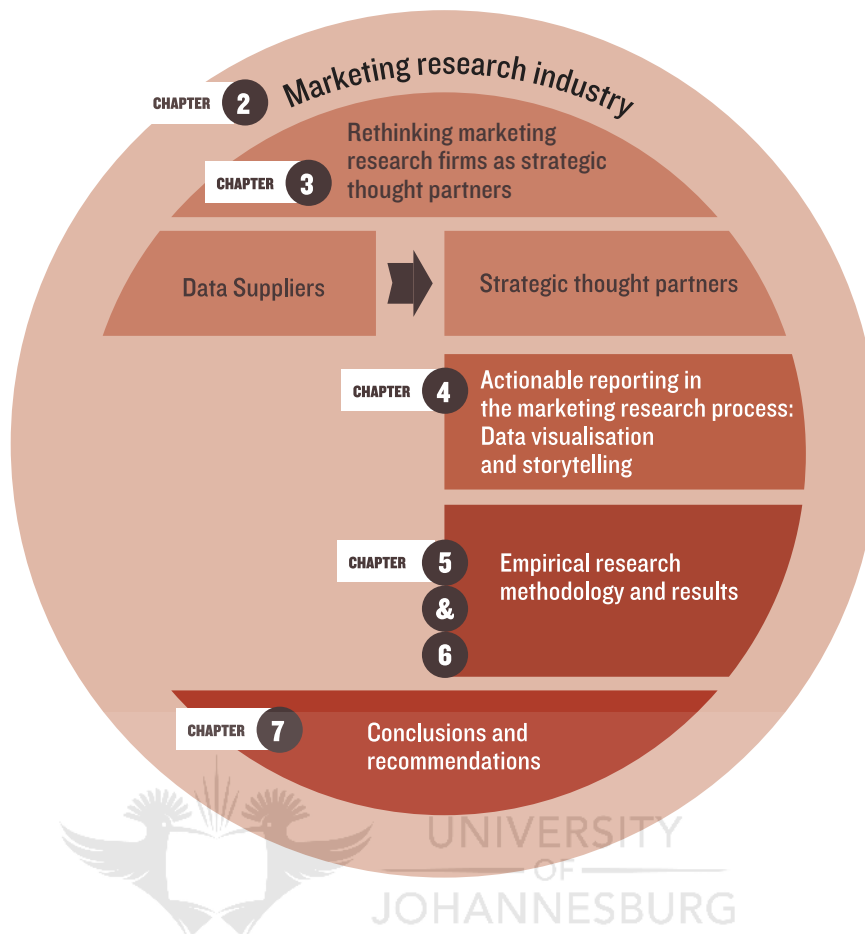
This study is concerned with the extent to which South African marketing research firms use data visualisation and / or storytelling in the final step of the research process. This step involves the reporting of research results to clients in an understandable and powerful way (it is important to note that this study only focuses on the application hereof in **quantitative** research, as data visualisation considers the visual representation of quantitative data and not qualitative data).

It is important in today's Information Age, which is characterised by information overload and problems experienced in making sense of data, for marketing research firms to break through information clutter when presenting research results to clients (Digit, 2011; Doyle & Tharme, 2011; Finn, 2011; Few, 2007). Traditional reporting methods are being used but often contribute to the problem of information overload (Digit, 2011). Implementation of appropriate data visualisation and / or storytelling could thus be used to overcome this problem (Bain, 2011a; Digit, 2011; Micu *et al.*, 2011:10).

1.3 CONCEPTUAL FRAMEWORK OF THE STUDY

With reference to the background of the study (section 1.2) a conceptual framework is presented next in Figure 1.1 and explained subsequently.

Figure 1.1: Conceptual framework of the study



This study is presented in context of the marketing research industry as a whole – this includes an overview of the structure, operating marketing research firms within the industry (globally and locally) and the challenges the industry faces. As previously mentioned, one of the biggest challenges marketing research firms face is poor positioning – this is due to marketing research firms offering a lack of strategic impact on clients’ business and being perceived as data suppliers (Chapter 2). For marketing research firms to improve their positioning, the majority of literature suggests that marketing research firms should consider positioning themselves as strategic thought partners instead. Once these positioning concepts (of data suppliers versus strategic thought partners) were understood, the researcher presented different guidelines for marketing research firms to achieve a strategic positioning (Chapter 3). Amongst others, actionable reporting and the communication thereof was identified as one such guideline. The focus of this study is on two methods of actionable reporting, namely the use of data visualisation and application of storytelling (Chapter 4).

Against this backdrop, the empirical phase of the study presented how South African marketing research firms view the use of data visualisation and storytelling in quantitative research reports. Upon completion of the empirical study and with the inclusion of the literature understanding, the researcher could provide conclusions and recommendations for each research objective.

The framework presented in Figure 1.1 also provides knowledge on how the study is structured. This study comprises seven chapters, including the current chapter. Chapters 2 to 4 cover the literature component and Chapters 5 and 6 focus on the empirical component. Chapter 7 provides the conclusions and recommendations based on both the literature review and the empirical study presented in Chapters 2 to 6 (excluding Chapter 5, research methodology). This framework is presented at the beginning of each chapter.

1.4 PROBLEM STATEMENT AND SIGNIFICANCE OF THE STUDY

Marketing research firms are beginning to realise and understand the need that exists to report and present research findings and insights more visual palatably, actionably and with more engaging formats (Bain, 2011a; Doyle & Tharme, 2011; Micu *et al.*, 2011:10). Some authors state that current research report formats and data visualisations (charts) are a “dying breed” whilst a need for simpler, clearer and more insightful reports has emerged (Doyle & Tharme, 2011). This can mainly be attributed to:

- **Client demand:** Clients continuously pressure marketing research firms to deliver actionable research with strategic impact as opposed to large data sets (Bain, 2012a; Appleton, 2011a; Bain, 2011a; Doyle & Tharme, 2011; Zorfas, 2011; Burns & Bush, 2010:83,84; Moran, 2010:9-14; Few, 2007; Friedman, 2007; Burns & Bush, 2001:54-56).
- **Competition:** Marketing research consultancies are bridging the gap between supplying data and delivering insights (GreenBook, 2011:14; Van Slooten & Verheggen, 2011:2,3).
- **Data commoditisation:** The result of the Information Age is a wealth of data that overloads people and clients with too much information and leads to the commoditisation thereof (Digit, 2011; Doyle & Tharme, 2011; Few, 2007).

These factors are affecting the reporting approach of marketing research firms. The following section summarises the challenges faced by marketing research firms in using the so-called visually palatable, actionable and engaging formats for presenting and reporting research results:

- **Software:** Computer chart-software is an established (for example Microsoft Excel and PowerPoint), proven and effective means to create data visualisation (charts) and report output, changing to new methods requires time, money, new skills and possibly additional resources (Christiansen, 2011; Davison, 2011:5,6; Tufte, 2003).
- **Design illiteracy:** Marketing researchers are usually only data literate and not design literate. To use certain data visualisation techniques, new skills will need to be brought into the marketing research firm or current researchers will have to acquire new skills; in addition storytelling skills are beyond the traditional analysis role of a researcher (Bain, 2011a; Davison, 2011:7,8; Doyle & Tharme 2011; Micu *et al.*, 2011:11; Thun & Brandt, 2007:14; Silverman, 2006:165; Fry, 2004:110).
- **Costs:** Major investments in soft skills and hard resources will be required (Bain, 2011a; Davison, 2011:12; Micu *et al.*, 2011:11; Fry, 2004:110,121).

As previously mentioned, even though these barriers are difficult to overcome, increasing pressure on marketing research firms exists to deliver more simplified and actionable research results, and data visualisation and storytelling are identified as a solution to this requirement. Against this backdrop the following problem statement is formulated for this study:

Marketing research firms' traditional quantitative reporting to clients commonly results in large amounts of user-unfriendly information that does not often add value to their clients' businesses. If alternative methods to data visualisation or storytelling are not adopted, marketing research firms run the risk of becoming strategically irrelevant; providing only data services and being replaced by independent consultants. These developments may result in lower revenues, weakened and non-strategic relationships with clients, and a loss of a competitive advantage for marketing research firms. From an academic perspective, it is important for marketing research as discipline to develop and present innovative

ways of presenting research results in both the academic and industry environment.

A study's significance is determined by the value it adds and by the contribution it makes. If marketing research firms stay stagnant in their research report delivery, business might be lost, client relationships ruined and competitive advantage sacrificed. This necessitates marketing research firms to understand and evaluate the current skills level in this regard to identify areas for improvement so as to counter the negative effects of failing to keep up to date with new developments. The researcher is of the opinion that this study will be valuable by accessing the current reporting landscape and the use of data visualisation and / or storytelling by South African marketing research – something that, to the researcher's knowledge, has not been done before.

1.5 RESEARCH OBJECTIVES

This section considers the primary and secondary research objectives of the study. The primary research objective is:

To uncover the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports.

Consequently the secondary research objectives that inform this objective are formulated as follows:

- **A:** To provide a literature overview of data visualisation and storytelling, and the use thereof by marketing research firms in quantitative research reports.
- **B:** To determine the current approaches marketing research firms follow in quantitative research reporting.
- **C:** To investigate the use of data visualisation by marketing research firms in quantitative research reports.
- **D:** To investigate the use of storytelling by marketing research firms in quantitative research reports.
- **E:** To determine the perceptions of clients regarding quantitative research reports prepared by marketing research firms.

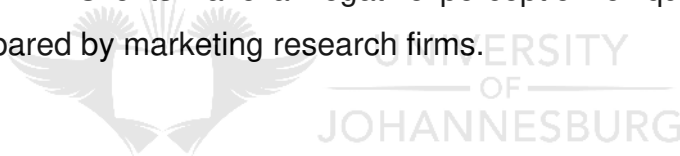
1.6 RESEARCH PROPOSITIONS

This section considers the propositions for the primary and secondary research objectives of the study. The proposition for the primary research objective is:

- **Proposition A:** Data visualisation and storytelling are not strategically used by marketing research firms in quantitative research reports.

The propositions for the secondary research objectives are as follows:

- **Secondary research objective A:** A proposition has not been formulated for the literature overview relating to secondary research objective A.
- **Proposition B:** Marketing research firms have a traditional approach to quantitative research reporting.
- **Proposition C:** Marketing research firms do not use non-traditional data visualisation techniques in quantitative research reports.
- **Proposition D:** Marketing research firms do not use storytelling in quantitative research reports.
- **Proposition E:** Clients have a negative perception of quantitative research reports prepared by marketing research firms.



1.7 RESEARCH METHODOLOGY

The choice of research methodology follows after the definition of the research problem and objectives (addressed in sections 1.5 and 5.2) and considers the actual methods that are used to collect the required data so as to solve the research problem and objectives (Burns & Bush, 2010:117; Hair *et al.*, 2006:170). To collect the required data, this study included both the use of secondary and primary research and this is explained as follows:

- **Secondary research:** Information was collected by means of a literature review on key concepts of the research problem and objectives and is presented in Chapters 2, 3 and 4.
- **Primary research:** Information was collected by conducting an empirical study amongst South African marketing research firms and clients and is presented in Chapters 6 and 7.

For the secondary research, data was gathered by referring to textbooks, Internet scholarly journals and industry related publications. The primary research (the empirical study) was further divided into two phases namely a:

- **Main study:** Which presented the research problem and objectives from the marketing research firm's point of view (supplier of the research report and user of data visualisation and storytelling).
- **Small-scale complementary study:** Which presented the research problem and objectives from the point of view of the marketing research firm's clients (user of the research report).

The primary research methodology choices are presented next. First the main study is detailed, followed by the details of the small-scale complementary study.

1.7.1 Main study (qualitative phase)

The main study was explorative in nature and therefore a qualitative research design fitted best, since the researcher wanted to gain an in-depth understanding of how marketing research firms in South Africa use data visualisation and storytelling as opposed to the validation of facts (refer to section 5.5.1). Data was collected from qualifying sampling elements, client service directors / executives / managers who oversee or work with quantitative reporting processes within marketing research firms, by means of in-depth interviews (a detailed sampling plan is presented in section 5.5.2.1, Table 5.3). The sampling frame consisted of marketing research firms listed in the 2011 SAMRA classifieds which deliver quantitative research reports to clients and the researcher also considered revenue contribution (refer to section 2.3.2.2, Figure 2.2). From this list, each sampling element was selected by means of a non-probability purposive sampling method meaning that the researcher deliberately chose each sampling element to fit certain criteria expecting that they are involved with, or have an influence on, quantitative reporting processes in positions such as client service directors / managers (refer to section 5.5.2.1) (Bradley, 2010:167; Churchill & Iacobucci, 2010:286).

A total of 26 sampling elements participated in the main study, which represented 15 marketing research firms across South Africa (sampling units). The researcher

conducted 20 to 30 minute in-depth interviews with each participant and used a semi-structured interview guide to collect the data (refer to Appendix A). Each interview was recorded and transcribed and the researcher recorded field notes (refer to Appendix B and C). Upon completion, the Morse and Field approach (1996) was used to analyse the data. This approach has four steps where the researcher seeks to achieve comprehension and when saturation is reached, data patterns are categorised according to thematic meanings to form a theory and are then placed in context of established knowledge (refer to section 5.5.3).

It was the researcher's aim to deliver truthful results and to limit error in the qualitative research design by focusing on achieving trustworthiness throughout the research process (Roberts, Priest & Traynor, 2006:41; Rolfe, 2006:305; De Vos, 1998:83; Lincoln & Guba, 1985:290,291). To achieve this, Guba's (1981:75-91) model of trustworthiness was applied in this study and this involved checking the four criteria of trustworthiness: truth value, applicability, consistency and neutrality (refer to section 5.5.4 and Table 5.6).

1.7.2 Small-scale complementary study (quantitative phase)

The small-scale complementary study was descriptive in nature and therefore a quantitative research design fitted best, since the researcher wanted to compare clients' perceptions of quantitative research reports (refer to section 5.6.1). Data was collected from qualifying sampling elements by means of a computer-administered, Internet-based survey (a detailed sampling plan is presented in section 5.6.2.1, Table 5.7). The main criterion for qualification was that sampling units had to be South African firms which commissions quantitative research, and sampling elements had to have received a quantitative research report(s) from a marketing research firm(s) in the three months prior to undertaking the study. Each sampling element was selected by means of a non-probability referral (snowball) sampling method. The researcher asked participating sampling elements from the main study to invite their clients to participate and identified other respondents based on previous experience of the researcher. Thereafter respondents were asked to supply contact details of others like themselves who could potentially qualify to participate in the study.

A total of 31 sampling elements participated in the small-scale complementary study. A structured questionnaire was used to collect the data (refer to Appendix D) and upon completion basic statistical analysis in Excel was used to analyse the data (refer to section 5.6.3).

Similar to the main study the researcher sought to deliver quality data by providing results with limited errors – in quantitative research designs, reliability and validity is considered (Bradley, 2010:60; McDaniel & Gates, 2002:195). Reliability in quantitative research designs refers to the consistency with which a measure produces the same results, while validity refers to how accurate a measure reflects the characteristic of interest (Bradley, 2010:60; Malhotra, 2009:315,316; McDaniel & Gates, 2002:195). For this study the researcher applied face validity and used a number of measurements to increase data reliability (pre-testing the questionnaire, ensuring respondent anonymity, consistency in data collection and a closed-question format) (Zikmund & Babin, 2010:25; Hair *et al.*, 2006:355) (refer to section 5.6.4 and Table 5.8).

1.8 DEFINITION OF MARKETING RESEARCH AND KEY TERMS

This section provides a detailed discussion on the definition of marketing research whereafter the key terms that are used in this study, are presented in Table 1.1.

Literature suggests a number of ways to define marketing research – some of these definitions are listed next. The core aspects of marketing research are subsequently highlighted.

- **Scientific:** Marketing research is the application of scientific methods to search for the truth about specific marketing phenomena (Zikmund & Babin, 2013:6).
- **Process-rich:** Marketing research is a process that designs, gathers, analyses and reports information that could be used to solve a specific marketing problems (Burns & Bush, 2010:35).
- **Link:** Marketing research is the function that links the customer to the marketer through information – it specifies the information required to address problems / opportunities, designs the method for collecting the information, manages and implements the data collection processes, analyses the results

and communicates the findings and their implications (American Marketing Association, 2010).

- **Data source:** Marketing research collects and analyses data from a sample of individuals or organisations – it includes all forms of marketing and social research (Marketing Research Society, 2010:4).
- **Decision-making:** Marketing research is the collection, analysis and communication of information undertaken to assist decision-making (Wilson, 2006); marketing research is a systematic and objective process that identifies, collects, analyses, disseminates and uses information to improve decision-making concerning specific marketing problems (Malhotra & Peterson, 2006:5).

The following core aspects can be taken from the definitions to best describe marketing research: it is a process of collecting and analysing information, the information is collected from individuals and / or organisations, it is focused on the marketing problems and opportunities that clients face, and it ultimately aids clients in decision-making.

The terms marketing and market research are almost used interchangeably. However, marketing research covers a broader scope of the marketing activity with market research as a subset thereof (Berndt & Petzer, 2011:4; Housden, 2010:18). For the purposes of this study, the term marketing research will be used throughout the text – so as to encompass both concepts. The term **marketing research firm** is furthermore used to refer to the organisation that delivers the service of collecting and analysing information, whereas the term **client** will be used to refer to the individual or organisation that is the recipient of the information supplied – as represented in Table 1.1.

Table 1.1: Definition of key terms

Terminology	Definition	Reference
Marketing research firm	The organisation that delivers the service of collecting and analysing information.	GreenBook (2011:4,30) Malhotra and Peterson (2006:15)
Client	The individual or organisation that is the recipient of the information collected by the marketing research firm.	GreenBook (2011:4,30) Malhotra and Peterson (2006:18)
Data supplier	A marketing research firm that merely provides a service at arm's length (usually the effective and efficient collection of data) with no strategic focus or impact on the client's business.	Hutt and Speh (2010:93) Lewis (2010:18) Dexter and Page (2008:11,22) McSwain (2008:7)
Strategic thought partner	A marketing research firm that focuses on partnering with clients through research that shapes strategy for accurate decision-making and implementation.	Cambiar (2011:4) Ghoshal (2011:4) GreenBook (2011:15) Lewis (2011; 2010:18) Verrinder (2011a) Moran (2010:14)
Research report	The final deliverable of the research process that interprets the information gathered and that notes key research findings for client decision-making.	Berndt and Petzer (2011:34) Burns and Bush (2006:598) Hair <i>et al.</i> (2006:629)
Actionable research	Research that aids decision-making and that leads to workable actions within the client's business.	Arnell (2011) Lewis (2011:19; 2010:19) Daume (1999:3)
Data visualisation	The conversion of complex quantitative data into understandable and intuitive visual representations.	EthicsPoint (2012) Singer (2011) Lapierre and Pierre (2010:6) Adams (2003:128,132) Tuft (2003)
Storytelling	Focuses the marketing researchers' effort to report research results coherently and in an order that is easy for clients to follow.	Grimshaw (2011:2) Lowell (2011:5) Segel and Heer (2010:1) Silverman (2006:162)

1.9 CONCLUSION

This chapter provides the background of the study by considering relevant literature. It also presents a conceptual framework to further provide the context against which the problem statement and research objectives are presented. It briefly outlines the research methodology followed, and specifically detailed the two phases of the primary research, the empirical study. The main study followed an exploratory qualitative approach while the small-scale complementary study fitted a descriptive quantitative approach. The chapter concludes with a definition for marketing research and a presentation of the key terms used in the study.

Chapter 2 details the marketing research industry from an academic point of view and then uncovers marketing research in practice. It provides a brief history and detailed classification of the marketing research industry whereafter industry trends and challenges are presented.



CHAPTER 2 MARKETING RESEARCH INDUSTRY



2.1 INTRODUCTION

The purpose of this chapter is to describe and explain the classification of the marketing research industry and then to provide some insight into the top marketing research firms, based on revenue contribution, operating within the South African environment. The chapter commences with a summary of the history, origin and development of the marketing research industry. It further provides a detailed classification of marketing research firms and looks at the global marketing research landscape. The latter presents the context against which the South African marketing research industry and the firms which operate within it, are reviewed. The chapter concludes with the key trends and challenges the industry faces.

2.2 A BRIEF HISTORY OF THE MARKETING RESEARCH INDUSTRY

The establishment and formal beginnings of the marketing research industry date back to 1911 (Kinnear & Taylor, 1996:32). Burns and Bush (2006:42) together with Kinnear and Taylor (1996:32) comment on the origins of marketing research.

According to these authors, Charles Coolidge Parlin was appointed by the Curtis Publishing Company in 1911 to manage the Commercial Research Division of the organisation. His job was to gather information about customers and markets in order to help sell advertising space. He was reported as very successful in doing just that (Advertising Hall of Fame, 2011; Burns & Bush, 2006:42). Here the pioneering work and origins of the marketing research industry were established (Ward, 2010:1,3).

The success of Parlin's work encouraged many other advertising and media organisations to establish research divisions (Kinnear & Taylor, 1996:32). Nonetheless, it was not until the 1930s that marketing research services became widespread in the United States of America (Burns & Bush, 2006:42). Before 1930, organisations typically interacted on a personal basis with their customers almost on a daily basis, and they knew their customers' needs and wants, but when the industrial revolution led to products being manufactured for distant markets, the need for marketing research emerged since organisations could not interact on a personal basis with their customers anymore (Ward, 2010:3-7; Burns & Bush, 2006:42; Kinnear & Taylor, 1996:31).

As Ward (2010:6) further postulates, the industry did not instantly appear; marketing research related services had to be sold to clients as a necessity they cannot do without. Initially there were many small and private marketing research firms in the industry – but in the 1950s the industry boomed due to a surge in the consolidation of these small firms into large marketing research firms (Ward, 2010:6; Burns & Bush, 2006:41). Burns and Bush (2006:42) state that by the 1960s, marketing research had gained acceptance in many organisations and was recognised as valuable information source to understand distant and fast-changing markets. Growth in the industry has been evident ever since, and it is said to continue as technology advances and globalisation increases (Burns & Bush, 2006:42).

However, since the 1990s the industry experienced many ownership changes (Burns & Bush, 2006:41, Bradley, 2010:7). For example, from 1990 to 2005 there were 528 marketing research firms which changed ownership worldwide; and in

2011 alone, the Top 25 global marketing research firms bought 24 marketing research firms around the world (Honomichl, 2012:13; Burns & Bush, 2006:41). As a result few big marketing research firms dominate this industry in many different countries with fierce competition between these top firms (Burns & Bush, 2006:41,45). During the 2000s, Ward (2010:7) reports that firms were relying on marketing research even more in their day-to-day operations so that consumer needs could be translated into revenues.

In summary it can be said that the marketing research industry was rather calm, predictable and orderly in the past. However, the marketing research industry is now characterised by uncertainty and fast change (Moran, 2010:2). Bain (2012a) believes that because of this, the industry is struggling to define itself. According to the 2011 GreenBook Research Industry Trend Report (GRIT), 68% of both clients and marketing research firms anticipate significant change in the industry within a five-year period (GreenBook, 2011:12). Moran (2010:5) professes that the industry will change radically in years to come. In support, Lewis (2011) adds that a quarter of research experts anticipate that the leading marketing research firm of 2020 does not yet exist. Consequently, it can be concluded that the marketing research industry is in a volatile and uncertain era. The only certainty is change. The subsequent section addresses the classification of marketing research firms in the industry.

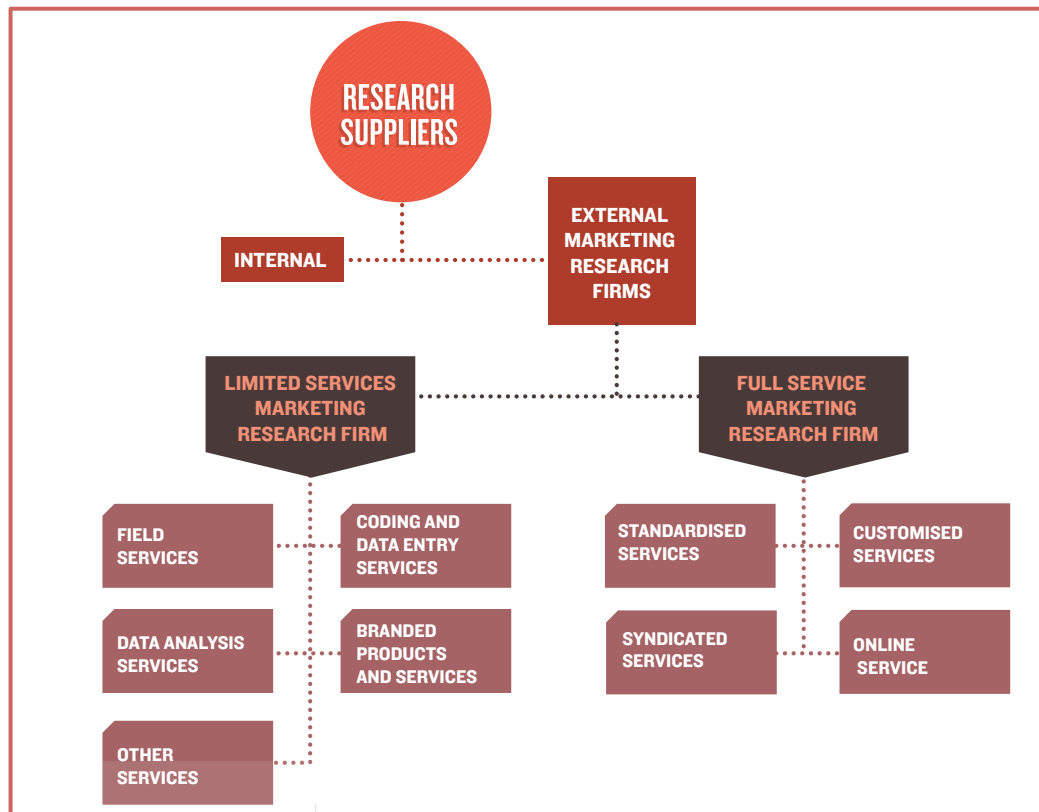
2.3 CLASSIFICATION AND OVERVIEW OF THE MARKETING RESEARCH INDUSTRY

In this section, the classification of marketing research firms is presented, followed by an overview of the international and South African marketing research landscape.

2.3.1 Classification of the marketing research industry

Malhotra has developed a widely used academic classification system of research suppliers, which also includes marketing research firms (Malhotra & Birks, 2006:11; Malhotra & Peterson, 2006:16). This classification is presented in Figure 2.1.

Figure 2.1: A classification of research suppliers



Source: Adapted from Burns and Bush (2010:74), Malhotra and Birks (2006:11), Malhotra and Peterson (2006:16) and Aaker, Kumar and Day (2001:31).

As illustrated in Figure 2.1, marketing research firms are classified as either **internal** research suppliers or **external** research suppliers to the client (the organisation for which the marketing research is conducted). These classifications are subsequently discussed.

An **internal** research supplier is a marketing research division within the client organisation that supplies marketing research to other divisions within the business (Burns & Bush, 2006:45; Malhotra & Birks, 2006:11; Malhotra & Peterson, 2006:16). While most large organisations have an in-house marketing department, they do not all have a dedicated marketing research division (Malhotra & Birks, 2006:11; Aaker *et al.*, 2001:31). Aaker *et al.* (2001:30) refer to this division as **in-house** marketing research supplier. An in-house division occasionally seeks the help of external research suppliers to fulfil specific marketing research activities such as data collection, sample design or research design (Aaker *et al.*, 2001:31). Malhotra and Peterson (2006:18) add that the

need for external research suppliers may come about when in-house divisions lack the technical expertise or resources to perform a certain marketing research activity.

Internal research suppliers usually organise themselves into a formal marketing research division which is centralised, or alternatively, the marketing research responsibility is spread across independent divisions which are decentralised (Aaker *et al.*, 2001:30; Burns & Bush, 2001:48). For decentralised operations each business unit operates its own research division; contrary, centralised divisions provide information to the various business units (Malhotra & Peterson, 2006:16; Aaker *et al.*, 2001:30). Literature suggests that there is a movement towards centralising research divisions (Aaker *et al.*, 2004:34,35).

In contrast, **external** research suppliers are outside organisations hired to supply research data or to fulfil a business's specific marketing research needs, and they are known as marketing research firms (Burns & Bush, 2006:49; Malhotra & Birks, 2006:11). According to Malhotra and Peterson (2006:16), these external research suppliers range from small operations to large global organisations. However, most external research suppliers have a global presence, with branch offices in major cities (Honomichl, 2011:17; Bradley, 2010:18). Based on the service(s) offered by external research suppliers, they can be further classified into full- or limited-service research suppliers.

Limited-service research suppliers, do not offer the full range of marketing research services. According to Malhotra and Peterson (2006:18) as well as Burns and Bush (2001:51), these marketing research firms specialise in only one or, at most, a few steps of the marketing research process (refer to section 4.2). Limited-service research suppliers are further categorised on the basis of their specialisation into field services, coding and data entry services, data analysts, branded products and services together with other services and are discussed next (Aaker *et al.*, 2004:38).

- **Field service:** These marketing research firms specialise in collecting data (Burns & Bush, 2001:51). They either use the full range of data collection methods (mail, personal, telephone or electronic interviewing), or they specialise in a single method (Sesha Marketing Resources, 2012; Malhotra & Peterson, 2006:18; Burns & Bush, 2001:51).
- **Coding and data entry service:** These marketing research firms provide support services after the data has been collected and include questionnaire editing, developing coding schemes and data transcribing (Bizcommunity, 2012; Malhotra & Peterson, 2006:18).
- **Data analysis service:** These marketing research firms specialise in the computer analysis of quantitative data and provide the technical support necessary to analyse and interpret data (Bizcommunity, 2012; Malhotra & Birks, 2006:14; Burns & Bush, 2001:52). Initially, these marketing research firms solely offered tabulations and cross-tabulations, but currently many also offer sophisticated data analysis by means of advanced statistical techniques (Malhotra & Birks, 2006:14; Malhotra & Peterson, 2006:18).
- **Branded products and service:** These marketing research firms conduct specialised data collection and analysis activities, developed to specifically address certain marketing research problems (Clandestine, 2012). These procedures are usually given brand names and are patented; respective marketing research firms market these products and services as branded products (Bizcommunity, 2012; Malhotra & Birks, 2006:14; Aaker *et al.*, 2001:35).
- **Other service:** These marketing research firms' services include analytical services (research design support), market segmentation (collect data for special market segments), sample design and distribution (only design and distribute samples), specialised research techniques (for example eye movement research) and selective services (address specific types of marketing research problems) (TouchBase Consulting, 2012; Burns & Bush, 2010:79,80; Malhotra & Birks, 2006:14; Malhotra & Peterson, 2006:18; Aaker *et al.*, 2001:35; Burns & Bush, 2001:52).

Full-service research suppliers offer a full range of marketing research services and typically conduct research projects in their entirety (Malhotra & Birks, 2006:13; Malhotra & Peterson, 2006:16; Burns & Bush, 2001:50). These research suppliers perform all steps of the research process, i.e. define the research problem, specify the research design, collect and analyse the data and prepare the final written report (refer to section 4.3) (Malhotra & Birks, 2006:13; Malhotra & Peterson, 2006:16; Burns & Bush, 2001:50). As indicated in Figure 2.1, the services of these marketing research firms can be further categorised into standard services, customised services, syndicated services and online services which are detailed next (Malhotra & Birks, 2006:13; Malhotra & Peterson, 2006:16; Aaker *et al.*, 2001:34; Burns & Bush, 2001:50).

- **Standard services:** These are research studies conducted for different clients but in a standardised and pre-specified manner (Malhotra & Birks, 2006:13; Aaker *et al.*, 2001:34). Hair *et al.* (2006:17) add that these marketing research firms provide more general services, but that the research is conducted in a similar manner so that the results of one study can be directly compared to the results of another study conducted by the particular marketing research firm.
- **Customised services:** In contrast to standard services, the marketing research firm offers a variety of marketing research services that are tailored to meet clients' specific needs (Malhotra & Birks, 2006:13). Each client's problem is treated as a unique research project (Malhotra & Peterson, 2006:18; Burns & Bush, 2001:50).
- **Syndicated services:** These services are described by Burns and Bush (2010:77) as well as Malhotra and Peterson (2006:16) as marketing research firms that collect and sell common pools of data, specifically designed to serve the information needs of several different clients or multiple subscribers. Aaker *et al.* (2001:34) add that this information is collected routinely and provided to clients who subscribe to these services.
- **Online services:** These include marketing research firms that specialise in providing research services through the Internet (Malhotra & Peterson, 2006:18; Burns & Bush, 2001:51). Malhotra and Birks (2006:13) add that these services offer a combination or variety of secondary data gathering, qualitative interviewing / analysis and publication of research findings through the Internet.

Irrespective of external marketing research firms' classification, the organisational structure usually centres by means of one of the following: function (e.g. data collection, project management, logistics), by type of research application (e.g. advertising effectiveness, new product development), by geography (e.g. national versus international, central versus coastal), by type of customer (e.g. automotive, fast-moving consumer goods, government), or by a combination of these (Burns & Bush, 2001:50).

This classification centres on the type of services the external research supplier offers. The next section details the marketing research landscape. First from an international point of view, and then the South African context is presented.

2.3.2 The marketing research landscape

This section considers the size of the marketing research industry and the top performing marketing research firms in terms of revenue. An overview of the international marketing research landscape is presented before the South African context is studied.



2.3.2.1 The international context

The Honomichl Global Top 25 report is published annually and it reports the top 25 marketing research firms ranked in terms of worldwide revenues (Burns & Bush, 2010:69). The top 10 global marketing research firms, based upon revenue figures for 2010, are tabulated in Table 2.1 (MRweb, 2011; Murphy, 2011a; Tarran, 2011).

Table 2.1: Top 10 global marketing research firms

Rank 2010	Rank 2009	Marketing research firm	Revenue \$US million (rounded)	Growth percentage
1	1	Nielsen	4 958	6.5%
2	2	Kantar	3 184	3.9%
3	3	IMS Health*	2 212	0.3%
4	4	GfK	1 716	7.3%
5	5	Ipsos	1 513	8.3%
6	6	Synovate	885	5.9%
7	7	SymphonyIRI Group	727	4.6%
8	8	Westat	455	-9.4%
9	10	Intage**	416	4.7%
10	9	Arbitron	395	2.6%

*Estimated by top 25 authors **For fiscal year ending March 2011

Source: MRweb (2011), Murphy (2011b) and Tarran (2011).

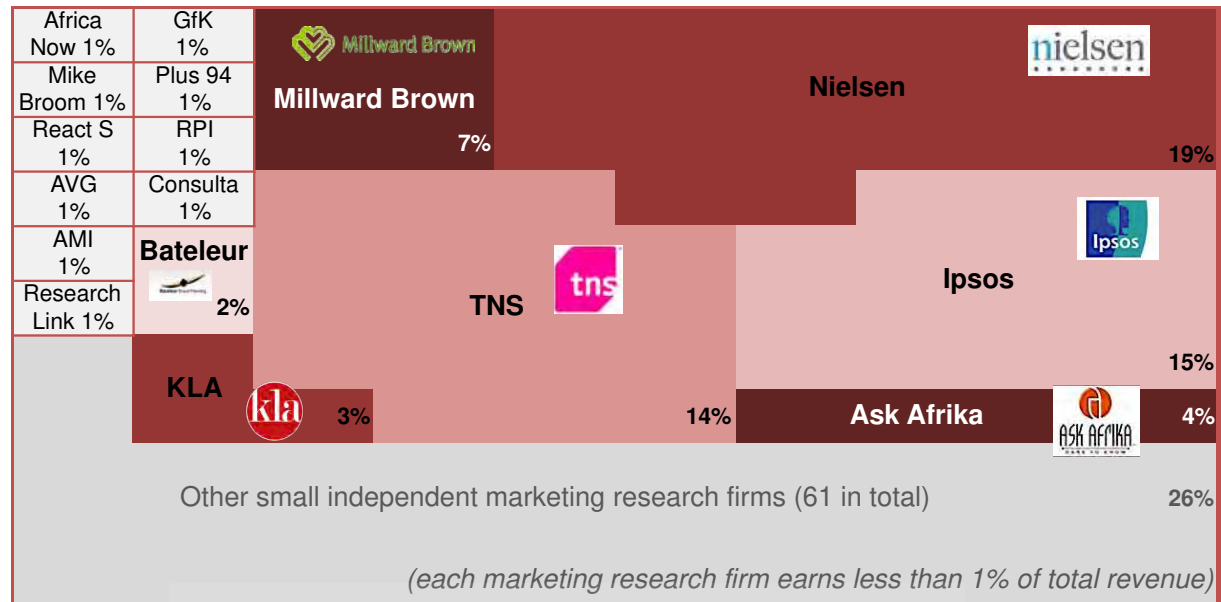
According to Marketing Research Industry Online and Marketing News the global research industry's 2010 revenue growth was healthy, but not enough to recover the shortcoming of 2009's revenues (MRweb, 2011; Honomichl, 2009). The world's 25 biggest marketing research firms had revenues of \$18.8 billion in 2010, which is up 4.9% compared to 2009 (MRweb, 2011; Murphy, 2011a). However, according to Tarran (2011), seven of the top 25 marketing research firms saw revenues decrease in 2010, six of them based in the USA. Table 2.1 shows that the top five marketing research firms which outperform other global marketing research firms are: Nielsen, Kantar, IMS Health, GfK and Ipsos.

2.3.2.2 The South African context

The South African research industry is highly fragmented with one-hundred-and-six marketing research firms listed on Bizcommunity (2011) and approximately 80 registered with the Southern African Marketing Research Association (SAMRA, 2010; TNS, 2004). To the researcher's knowledge, the only available figures (2003) indicate that the marketing research industry is estimated at R1-billion with the top 9 marketing research firms accounting for almost three quarters (74%) of the industry's total revenue (TNS, 2004; Burn, 2003). The revenue distribution

amongst marketing research firms (as a percentage of the total revenue) is illustrated in Figure 2.2.

Figure 2.2: Revenue contribution of South African marketing research firms



Source: Adapted from TNS (2004).

The four marketing research firms which constitute the biggest contribution to the industry's revenue in South Africa are all classified as full-service and include Nielsen, Ipsos, TNS and Millward Brown (refer to Figure 2.2). Together they contribute over half (55%) of the marketing research industry's revenue. A further 19% is contributed by marketing research firms with a 1% to 5% revenue contribution such as Ask Afrika, KLA, Bateleur, Consulta, GfK and React Surveys. The remainder of the revenue contribution (26%) are all contributed by small independent marketing research firms. The next section focuses on the marketing research firms that contribute close to two-thirds (64%) of the marketing research industry's revenue. These seven marketing research firms are presented in order of percentage revenue contribution and include Nielsen, Ipsos, TNS, Millward Brown, Ask Afrika, KLA and Bateleur. These firms are subsequently discussed, focusing on their size and the main services they offer.

The Nielsen Company (Nielsen) is a global information and media organisation with the following leading subbrands: AC Nielsen, Nielsen Media Research,

Billboard, The Hollywood Reporter, Adweek and Scarborough Research (Nielsen, 2011; SAMRA, 2010:96). This marketing research firm is active in more than 100 countries and has approximately 32 900 full-time employees with headquarters in the USA (Murphy 2011b; SAMRA, 2010:96). The key services offered in South Africa are: retail management, consumer panel, assortment and in-store space, customised research, retailer services, advanced analytical consulting and decision support (Nielsen, 2011; SAMRA, 2010:96).

Ipsos is also a global marketing research firm which in 2007 acquired one of South Africa's leading marketing research firms, Markinor (Alacra Store, 2012; Verrinder, 2011b). In 2011, Ipsos also acquired another leading marketing research firm, Synovate, as part of its stable (Alacra Store, 2012; Ipsos, 2012a). Ipsos now has offices in over 84 countries and headquarters in the USA (Ipsos, 2012b; Honomichl, 2011:17). Ipsos' main service offerings in South Africa include: loyalty research, public opinion and public affairs research, marketing, advertising testing and tracking, media research, qualitative solutions and omnibus studies (Ipsos, 2012b).



TNS (Research Surveys) in South Africa forms part of the world's largest custom marketing research firm and the world's largest qualitative research service namely the Kantar group (TNS Global, 2011; Honomichl, 2009:29,30). TNS has offices in over 80 countries with headquarters in the UK (TNS Global, 2011; Honomichl, 2009:30). The marketing research firm's specialised service offering in South Africa includes: product development and innovation, brand and communication, stakeholder management, retailer and shopper, as well as qualitative research (SAMRA, 2011:138; SAMRA, 2010:97).

Millward Brown operates in 53 countries and like TNS, falls under the Kantar group with headquarters in the USA (MillwardBrown, 2011; SAMRA, 2011:133; Honomichl, 2009:30). The marketing research firm provides a full range of qualitative, quantitative and consulting services focusing on brands, marketing communications, media and marketing effectiveness (SAMRA, 2010:89; Honomichl, 2009:30). In South Africa expertise service areas include: brand and communication research, tracking, brand equity, pre and post-testing,

neuroscience insights, digital and social media evaluation, cross media analysis, media and ROI modelling (SAMRA, 2011:133; SAMRA, 2010:89).

Ask Afrika primarily operates in South Africa, with its headquarters in Pretoria, but also has particular strength and presence in Africa (Ask Afrika, 2011; SAMRA, 2010:84). Research services include: advertising, brand equity, brand name testing, concept testing, consumer research, customer satisfaction, Internet strategic intelligence, positioning research, segmentation and tracking (Ask Afrika, 2011). Competitively, the marketing research firm couples its expertise with a multidisciplinary approach through combining psychology, marketing and statistics for a unique positioning (SAMRA, 2011:128).

Like Ask Afrika, **KLA** conducts research in South Africa and Africa (ESOMAR Directory, 2012). KLA offers both qualitative and quantitative research services, with headquarters in Johannesburg, South Africa (ESOMAR Directory, 2012; KLA, 2011). It is one of the largest locally owned, independent marketing research firms in South Africa and has become South Africa's largest qualitative marketing research firm (Bizcommunity, 2011; KLA, 2011). The KLA website, the SAMRA directory and the ESOMAR Directory fail to give information on KLA's specialised services in South Africa.

Bateleur is also a South African marketing research firm that offers a full range of services with headquarters in Johannesburg (Bateleur, 2012). This marketing research firm specialises in a range of services, which include: segmentation, brand positioning, brand tracking, new product development and advertising (Bateleur, 2012).

In addition to the top seven marketing research firms discussed, recognition of academic research institutions are given. These institutions include: the Bureau of Market Research (BMR) at Unisa, Business Enterprises and Consulta at the University of Pretoria, South Africa Labour and Development Research Unit (SALDRU), Development Policy Research Unit (DPRU) and DataFirst at the University of Cape Town, Wits Institute for Social and Economic Research (WISER) at Wits, the Bureau of Economic Research (BER) at Stellenbosch, and

the School of Development Studies (SDS) at the University of KwaZulu-Natal (van Aardt, 2012).

SALDRU, DPRU, BER, WISER and SDS specialise in social- and/or economic research (BER, 2011; DPRU, 2011; SALDRU, 2011; SDS, 2011; WISER, 2011) whilst BMR's main services include: income and expenditure-, behavioural and communication-, economic- and demographic research (BMR, 2011). DataFirst focuses on data preparation and cleaning consultation, web services and data-centre provision services (DataFirst, 2011). Business Enterprises and Consulta's main service areas include a mixture of qualitative and quantitative research with some specialised services like Customer Relationship Management, Trade-off Analysis and Client Conversation Modelling (Consulta, 2011; ESOMAR Directory, 2011).

In essence it can be said that the South African marketing research industry's top revenue performing firms reflect that of the international landscape. The following sections provide more insight into marketing research industry trends and challenges.



2.4 INDUSTRY TRENDS

Numerous trends in the marketing research industry have been observed and reported. There is an increasing body of industry literature that addresses these trends. For the purposes of this study, only the main trends are presented:

- **Data explosion:** The volume of (free) data grows rapidly each day. These datastreams are not a scarce resource anymore; instead it is publically accessible and is quickly becoming a commodity (refer to section 3.3.3) (Bain, 2012a; Micu *et al.*, 2011:4,5; Moran, 2010:1).
- **Closeness to customers:** Clients want to be as close to their customers as possible which drives a need for innovation and insights-on-demand (Micu *et al.*, 2011:5; Burns & Bush, 2010:83; Moran, 2010:2,12,13).
- **New competitors:** New competitors increasingly enter the market with unique capabilities that have overcome specific industry challenges (refer to sections 2.5.1.4 and 3.3.2) (Bain, 2012a ; Micu *et al.*, 2011:5).

- **Mergers and acquisitions:** Increasingly, global marketing research firms are acquiring local marketing research firms or merging with each other (Research 10, 2008a). In South Africa, TNS and Research International officially merged in 2011 (TNS Research Surveys, 2011), Ipsos and Markinor in 2007 (Alacra Store, 2012), and last year (2011), Ipsos officially acquired Synovate (Alacra Store, 2012; Verrinder, 2011b).
- **Technology advancements:** As traditional research collection techniques become more difficult to implement, technological methods offer improved solutions to overcome this. More marketing research firms make use of social media analytics, online communities, data mining, mobile surveys and text analytics (GreenBook, 2011:9).

Some other trends include: delivering multicountry data and insights, neuroscience and understanding the role of emotion in human behaviour, online, and social media research, modelling and analysis and DIY (do-it-yourself) self-service research (GreenBook 2011:113,114; Moran, 2010:9,13). These trends shape the future of the industry. Another future shaper is the challenges that are evident in the marketing research industry. In the next section these challenges are discussed in detail.

2.5 INDUSTRY CHALLENGES

The marketing research industry is a highly competitive environment. To remain successful in this industry is increasingly difficult due to many challenges. Marketing research firms will need to overcome these challenges to ensure survival in the next few years to come. The overview of these challenges provides context for the successive chapters. A distinction is made between external and internal challenges to the industry and is discussed next.

2.5.1 External challenges

The external environment poses six main challenges to the industry.

2.5.1.1 Increased client demand

Clients demand more and more from marketing research firms in many different aspects. They want:

- **Quicker research:** Clients increasingly demand quicker turnaround times and accurate research results (Appleton, 2011a; Bain, 2011a; Research 10, 2008a, 2008b; Von Bormann, 2000). Moran (2010:9,12) adds that this 24/7 nature of business challenges traditional research timelines and threatens the quality of data. In particular, speed of delivery is a threat to traditional marketing research firms that are not geared for this kind of deliverable (Moran, 2010:13).
- **Strategic / actionable recommendations:** Moran (2010:12) states that it has been a continuing criticism that marketing research firms do not deliver actionable or strategic insights. Van Slooten and Verheggen (2011:2) furthermore comment that researchers will decreasingly have to provide the answers to “what” and “how many,” instead they will have to answer the “why” (implication) questions (refer to sections 3.3.1, 3.4.1 and 3.4.7). Instead of simply providing technical reports, clients demand that marketing research firms expand their strategic impact.
- **Insights management:** Marketing research firms have access to more data streams than ever before – to make sense of this new data in context of previous research is very important to clients i.e., they require marketing research firms to manage insights (Moran, 2010:13). Marketing research firms should take an integrative approach as opposed to operating in silos which separate them from other existing information sources like client databases, external databases and customer complaints (Burns & Bush, 2001:54-56).
- **Value-add:** Client demand for value is greater than ever before (Moran, 2010:14). Bain (2012a) states that marketing research firms need to rethink what they are doing and assess their positioning. If they realise they are in the business of commodities (data supply) they are most probably not delivering on value and they will either have to move up the value-chain (become strategic thought partners – refer to Chapter 3, in particular section 3.2) or become extremely efficient data suppliers (Moran, 2010:14).

- **Concise deliverables:** Clients and executive boards are constantly pressured for time, but marketing research firms still provide large amounts of data to clients, expecting from and assuming that clients will discover insights (Zorfas, 2011; Moran, 2010:12). Zorfas (2011) states that in addition to these time pressures, clients do not have the patience or capacity to work through large amounts of data. Moran (2010:12) adds that the industry will need to refocus. Marketing research firms need to filter through data so that concise insights with strategic value and actionability are delivered.

2.5.1.2 Changing macro-economic factors

In the macro-economic environment, the world economic situation and the fast advances in technology have a significant impact on research.

- **Economic recession:** The world's economy has been struggling since 2008 and continues to place pressure on all organisations and their operations. The unfavourable economic situation demands that, more than ever before, marketing research firms prove the value that is added by their services (Burns & Bush, 2010:81). Burns and Bush (2010:81) are of the opinion that those marketing research firms that assist clients in dealing with their uncertainties and are flexible in pricing, will survive during hard times. Moran (2010:9) observes that the world economic situation is only a short-term challenge. The author adds that the long-term economic challenge is attributed to commoditisation threats (data is quickly becoming a commodity) and new competitor research entrants.
- **Technology factors:** Technological advancement influences research methodologies' effectiveness through Internet and mobile media (Bain, 2011a; Burns & Bush, 2010:81; Research 10, 2008a, 2008b; Von Bormann, 2000). In addition, technology can be used to speed up the research process and in turn deliver better cost returns (Burns & Bush, 2010:84). Moran (2010:6) summarises five basic technological challenges. These are: decrease of landline phone usage and increase of mobile usage, growth in (cheap/free) online DIY research, consumers have media freedom – they can watch what they want whenever they want (i.e. marketing has less influence than ever before), an increasingly bigger gap between data processing and people's ability to analyse and extract insights from it, and creating new processes and

tools to get data and insights from research, such as eye tracking or text analytics. In essence, these factors ultimately influence the way in which researchers approach potential respondents as well as the process of data collection and analysis.

2.5.1.3 Difficulty of conducting fieldwork

Furthermore, fieldwork is becoming increasingly difficult due to the following factors:

- **Respondent cooperation:** Response rates (agreeing to participate in research) are on a steady and continuous decline (Burns & Bush, 2010:81). Without consumers participating in research, research services will become redundant.
- **Respondent reach:** Respondents are harder to reach than ever before due to security reasons and the constant decline in landline telephone penetration, specifically in South Africa. (Bain, 2011a; Burns & Bush, 2010:81; Research 10; 2008a, 2008b; Von Bormann, 2000).

2.5.1.4 Fierce and increased competition

Competitively, the industry sees more and more direct and indirect competitors entering the marketing research environment (refer to section 3.3.2) (GreenBook, 2011:14). Low entry barriers also exist, it is easy for new researchers to enter the industry (Van Slooten & Verheggen, 2011:2). Van Slooten and Verheggen (2011:3) state that these competitors could take over the place of marketing research firms if they do not adapt to serve the needs of their clients in a superior way.

2.5.1.5 Poor positioning

The challenges of increased client demand, changing economic factors, difficulty of conducting fieldwork and especially new competitors entering the market, question and pose a threat to the industry's current positioning. Most marketing research firms are seen as data suppliers with no strategic role whatsoever (Moran, 2010:6). This leads to the industry being seen as a commodity and not as a high value consultative service (also see section 2.5.1.1, value-add) (Moran, 2010:7).

2.5.1.6 High prices

Lastly, clients question the prices marketing research firms charge – there is a lack of balance between charged prices and the value clients believe to receive from marketing research firms (Appleton, 2011a). Burns and Bush (2010:85) agree and explain that in many cases, the price of research is high, relative to its value.

The four internal challenges are discussed next and include: the lack of strategic impact, inappropriate positioning, skills shortage and high employee turnover, as well as high cost associated with delivering insights.

2.5.2 Internal challenges

The first two internal challenges overlap with the external challenges discussed in sections 2.5.1.1 and 2.5.1.5. The other two challenges have not yet been discussed.

2.5.2.1 Lack of strategic impact

The lack of strategic impact can be explained through a discussion of the following aspects. Marketing research firms which fail to have a strategic impact on clients' business, are typically (refer to sections 3.3.1 and 3.4.7):

- **Narrowly focused:** Instead of using marketing research to test solutions for specific products or services, marketing research firms need to diagnose market needs first (Burns & Bush, 2001:54-56). This narrow focused research is also the result of clients constraining marketing research firms to report to lower levels only, and hence researchers fail to be part of a strategic planning process i.e., marketing research is not addressing issues at a strategic level (Burns & Bush, 2010:83).
- **Isolated:** This challenge is closely related to the previous one, but different. Marketing research is usually reported to limited functions within the client's organisation (usually the marketing function) and does not communicate with other functions in the business (Burns & Bush, 2010:83). This means that marketing research operates in a silo with little interaction and knowledge-share between functions.

- **Tool-orientated:** Burns and Bush (2010:84) state that in the past, marketing research firms have been criticised for mainly focusing on finding a use and application for their 'sophisticated' tools, instead of first diagnosing the market situation and then coming up with a creative solution. In other words, the tools are more important than solving the market situation and not the other way around. Dexter and Page (2008:3) as well as Willis and Webb (2007:5) support this view and state that the industry is more tool-led than problem-led.

2.5.2.2 Inappropriate positioning

It is said that the industry is too focused on surveys and not focused on getting a real understanding of the client's problems before conducting research (Burns & Bush, 2010:85). The perception of being ordinary is mainly attributed to a lack of creativity and being seen as data suppliers (Moran, 2010:7). Therefore, to be creative, researchers need to ask questions to understand clients' business needs better and to find out what decisions are made based on the research (Research 10, 2008a). Research should be positioned as a creative profession, with a foundation in good scientific methods (Research 10, 2008a). This implies that marketing research firms should focus on more than data supply; they need to deliver a value-added service in a creative manner.

2.5.2.3 Skill shortages and high employee turnover

Clients are complaining that marketing research firms are not delivering beyond the basics of research and this negative perception can be mainly attributed to a lack of skills, training and high employee churn and not keeping them in the research world (Bain, 2011a; GreenBook, 2011:13,14; Burns & Bush, 2010:81; Research 10, 2008a). Moran (2010:9) is of the opinion that while most researchers are intellectual and curious, they are content to conduct quality research and deliver data with no or little strategic impact. In turn this reinforces the industry's perception of their being data suppliers only. The Marketing Mix Journal (Research 10, 2008a) adds that the modern researcher looks different compared to the traditional skill set required. They should be able to do more than only working with numbers; they should be able to think critically and strategically.

According to the 2011 GRIT Report, marketing research firms of the future will involve multidisciplinary individuals as illustrated in Figure 2.3 (GreenBook, 2011:16). Different kinds of individuals from different disciplines will work for the future marketing research firm. Some of these disciplines include psychology, information technology, graphic designers and scientists. The GreenBook (2011:16) further reports that the three biggest skill needs are for social media experts, marketing strategists, and data integration / collection experts.

Figure 2.3: Future skills required in the marketing research firm



Source: Adapted from GreenBook (2011:16).

2.5.2.4 High prices

Lastly it is noted that insights delivery is a costly process and sometimes too expensive to provide. The Research 10 report declares that insightful, actionable and valuable research is uncommon due to the high costs associated with delivering it (Research 10, 2008a). It is said that marketing research firms end up using only available information, and make assumptions to fill in the gaps – resulting in unsatisfied clients (Research 10, 2008a).

In summary, a SWOT (strengths, weaknesses, opportunities and threats) analysis of the marketing research industry has been constructed and is presented in Figure 2.4.

Figure 2.4: SWOT analysis of the marketing research industry



The threats and weaknesses illustrated in Figure 2.4, place pressure on marketing research firms to deliver better services and to add value to the client's business. Literature however suggests that one of the biggest challenges of the industry concerns its positioning – marketing research firms are seen as data suppliers, rather than business or strategic thought partners (Dowsett, 2012; Cambiar, 2011:2-10; Moran, 2010:14; Research 10, 2008a; Von Bormann, 2000).

As discussed earlier, it is the result of marketing research firms traditionally providing masses of data with no or limited insights, practical use and strategic value (actionability) (refer to section 1.2).

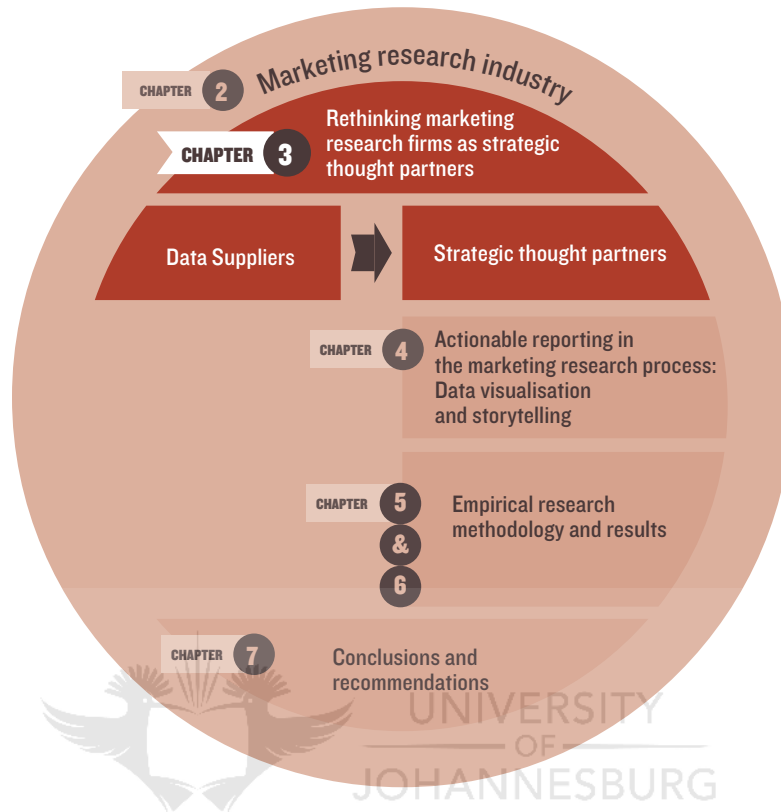
2.6 CONCLUSION

This chapter commences with a brief history of the industry. It specifically examines the classification of marketing research firms and provides context of the global marketing research environment. A detailed exploration of the South African marketing research landscape is reported with specific focus on the top revenue contributing marketing research firms. Grounded in this discussion, a detailed overview of industry trends and challenges is presented so as to present a SWOT analysis of the marketing research industry. One challenge in particular, highlighted that marketing research firms fail to position themselves strategically – marketing research firms need to evaluate their positioning to ensure survival in this competitive and challenging marketing research industry.

Relating to this challenge, Chapter 3 focuses on how marketing research firms could rethink the services they offer by positioning themselves as strategic thought partners as opposed to mere data suppliers.

CHAPTER 3

RETHINKING MARKETING RESEARCH FIRMS AS STRATEGIC THOUGHT PARTNERS



3.1 INTRODUCTION

The purpose of this chapter is to investigate marketing research firms as potential strategic thought partners for clients instead of mere suppliers of data. The chapter commences with highlighting the differences between data suppliers and strategic thought partners. It further provides a detailed discussion as to why marketing research firms should consider becoming strategic thought partners as opposed to being only data suppliers. The chapter concludes with suggested guidelines that marketing research firms can use in becoming strategic thought partners.

3.2 DATA SUPPLIERS VERSUS STRATEGIC THOUGHT PARTNERS

As introduction, this section considers the definitions of data suppliers and strategic thought partners whereafter these concepts are discussed in more detail.

3.2.1 Definition of data suppliers and strategic thought partners

Data suppliers and strategic thought partners can be defined on two levels, based on the type of relationship and / or on the type of service(s) the marketing research firm offers (GreenBook, 2012:4; Hutt & Speh, 2010:93,94; Moran, 2010:14; Willis & Webb, 2007:8,16; Malhotra & Peterson, 2006:14). These two levels are subsequently explored.

3.2.1.1 Relationship-based view

Hutt and Speh (2010:93) state that the core of any relationship is some form of an exchange where each organisation gives something in return for value. Two possible types of relationships between a marketing research firm and client can exist: transactional or relational (Hutt & Speh, 2010:94; Coyle, Bardi & Langley, 2003:419). The transactional relationship level suggests no or relatively low involvement between the organisations, i.e. business happens at “arm’s length” (Coyle *et al.*, 2003:420). On the other hand, a relational level relationship suggests a strategic alliance where both organisations work together to achieve specified objectives (Hutt & Speh, 2010:93,94; Dexter & Page, 2008:11,12; Coyle *et al.*, 2003:420; Mohr & Spekman, 1994:135,136). Transactional exchanges present anonymous transactions while relational exchanges present integration and partnerships between the two organisations (Hutt & Speh, 2010:93). It should be noted that different relationship levels within these two extremes also exist.

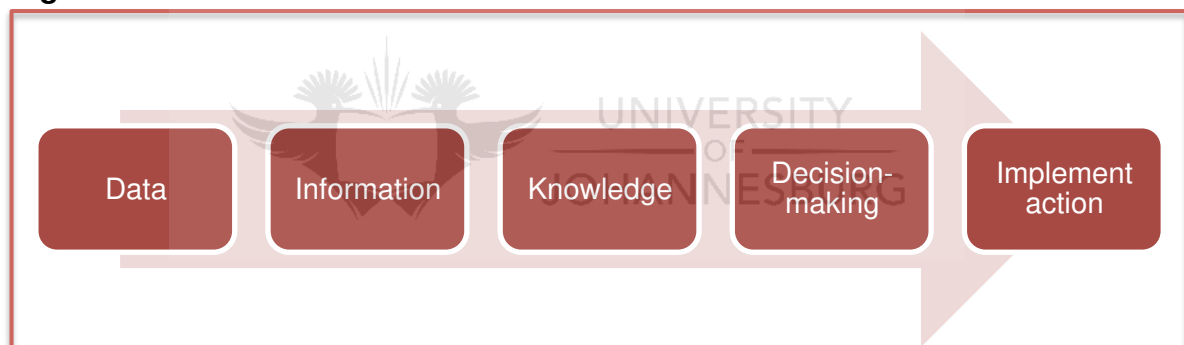
From the client’s perspective, the relative cost of the research and the potential impact it has on the organisation as a whole affect the type of relationship the client wishes to engage in with a marketing research firm (Korostoff, 2009; Willis & Webb, 2007:8). On the one hand you have small ad hoc and tactical research that requires sensible cost control, while on the other hand strategic projects exist that have very high business value and are viewed by clients as strategically critical and therefore strong partnerships with marketing research firms are essential (Willis & Webb, 2007:8,16). Clients thus use different marketing research firms for different projects and accordingly invest in the relationship, based upon the research’s strategic importance (Korostoff, 2009; Dexter & Page, 2008:20; Willis & Webb, 2007:8; Chadwick, 2006:404).

From the marketing research firm's perspective they also decide where to invest time and resources. The client's relative value and the attractiveness of potential business and revenue affect the type of relationship the marketing research firm wishes to have with a client (Willis & Webb, 2007:8,16). If a client does not offer value and is not considered attractive, marketing research firms may decide to divest. If a client presents high value and is considered attractive, it is strategically critical to the marketing research firm's success and performance to build a relationship with this client (Korostoff, 2009; Willis & Webb, 2007:8,16).

3.2.1.2 Service-based view

The marketing research firm's service offering is presented next. The information value chain in Figure 3.1 illustrates the different levels of service that a marketing research firm could offer.

Figure 3.1: The information value chain



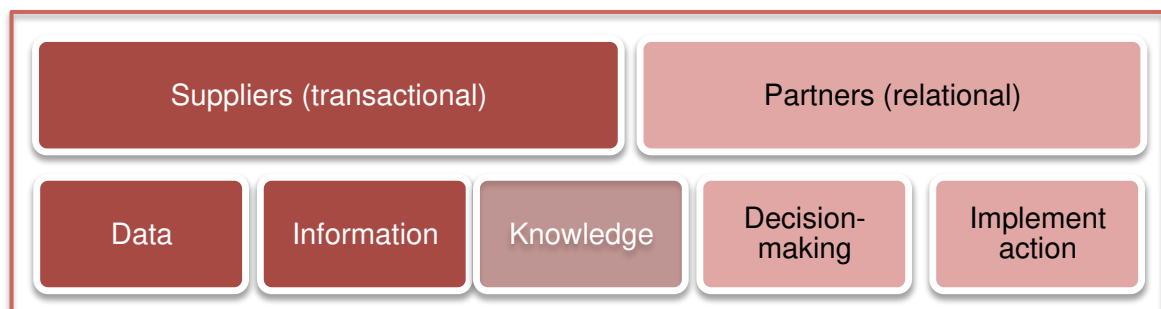
Source: Adapted from Malhotra and Peterson (2006:14).

Figure 3.1 illustrates the process of gathering data in order to make this data useful in decision-making and implementable action plans. Data refers to raw facts or recorded measures of certain phenomena that have not been processed, while information refers to processed data (formatted and structured) that is useful to the client (Berndt & Petzer, 2011:5; Zikmund & Babin, 2010:25). Information can be further converted into knowledge. Knowledge is information endowed with meaning that is typically used to make or support decisions (Berndt & Petzer, 2011:5; Chadwick, 2006:404,407,408; Malhotra & Peterson, 2006:14). Knowledge is also sometimes referred to as market intelligence or insight and refers to information with explanatory power (Bradley, 2010:9; Zikmund & Babin, 2010:25). Based on the gained knowledge, decision-making can be improved,

which in turn can aid in the formation of implementable action plans (Appleton, 2011b; Berndt & Petzer, 2011:5; Bradley, 2010:9; Zikmund & Babin, 2010:25; Chadwick, 2006:404,407,408; Malhotra & Peterson, 2006:14). The combination of these two last steps can also be referred to as **actionable research**; defined as research that aids decision-making and that leads to workable actions within the client's business (Arnell, 2011:1; Lewis, 2011:19; Lewis, 2010:19; Daume, 1999:3).

When marketing research firms choose to focus on the first elements of the value chain (data supply, information or some degree of knowledge delivery illustrated in Figure 3.1), a transactional role is fulfilled and marketing research firms are consequently seen as data suppliers. This is opposed to when marketing research firms focus on delivering knowledge to clients that aids decision-making and the implementation thereof. In this instance, the nature of the relationship becomes relational and the marketing research firm is seen as a strategic thought partner. It can therefore be deduced that as marketing research firms move forward in the information value chain, they move from a transactional to a relational relationship with their clients, consequently progressing on the relationship value continuum as illustrated in Figure 3.2 (Hutt & Speh, 2010:93; Lewis, 2010:19; Dexter & Page, 2008:11,22; Willis & Webb, 2007:5,10; Malhotra & Peterson, 2006:14).

Figure 3.2: Relationship value continuum



Source: Adapted from Hutt and Speh (2010:93), Lewis (2010:19) and Malhotra and Peterson (2006:14).

It is evident from Figure 3.2, and the preceding discussion, that there are suppliers who focus on transactions involving data supply on the one end of the continuum, and there are partners who focus on helping clients with business decisions from a relationship platform on the other end of the continuum. Dexter and Page (2008:11,22) as well as Willis and Webb (2007:5,10) support this finding by stating that marketing research firms are usually one of two types: 1) research and processed focused (quality research is important, relationships are devalued), and 2) client and business issue focused (relationships are valued firstly).

In summary, a **data supplier** can be defined as a marketing research firm that merely provides a service at arm's length (usually the effective and efficient collection of data) with no strategic focus or impact on the client's business (Hutt & Speh, 2010:93; Lewis, 2010:18; Dexter & Page, 2008:11,22; McSwain, 2008:7; Chadwick, 2006:406,407; Huisman & van Meeuwen, 2005:4; Coyle *et al.*, 2003:419; Hashim & Milligan, 2003:2,4,6; Mohr & Spekman, 1994). In contrast, a **strategic thought partner** can be defined as a marketing research firm that focuses on partnering with clients through research that shapes strategy by means of actionable research suitable for accurate decision-making and implementation (Cambiar, 2011:4; Ghoshal, 2011:4; GreenBook, 2011:15; Lewis, 2011; Verrinder, 2011a; Lewis, 2010:18; Moran, 2010:14; Korostoff, 2009; Dexter & Page, 2008:4,19,21; McSwain, 2008:7; Piercy, 2006:253; Hashim & Milligan, 2003:2,4,6,13). It should be noted that literature uses a variety of terminology for strategic thought partners, some examples include: business strategists, trusted advisors or thought leaders (Arnell, 2011:2; Cambiar, 2011:4; GreenBook, 2011:15; Lewis, 2010:14; Precourt, 2010:3; McSwain, 2008:7).

For the remainder of this study the terms "data suppliers" and "strategic thought partners" are used due to their characteristic descriptions. Based on the above discussion, the next section details the differences between data suppliers and strategic thought partners.

3.2.2 Differences between data suppliers and strategic thought partners

The differences between data suppliers and strategic thought partners are highlighted using a number of dimensions to contrast the two. These dimensions include: nature of the relationship, business focus, research deliverables, required research skills and value-add position (Appleton, 2011b; Ghoshal, 2011:4; GreenBook, 2011:15; Van Slooten & Verheggen, 2011:5; Hutt & Speh, 2010:93; Lewis, 2010:18; Moran, 2010:14; Korostoff, 2009; McSwain, 2008:7; Coyle *et al.*, 2003:420; Mohr & Spekman, 1994). Table 3.1 highlights the differences between the dimensions of data suppliers and strategic thought partners.

Table 3.1: Differences between the dimensions of data suppliers and strategic thought partners

Dimension	Data supplier	Strategic thought partner
Nature of the relationship	Transactional	Relational and strategic
	Little or no commitment	Committed
		Trustworthy
		Quality communication
		Joint problem-solving
Business focus	Short-term	Long-term or future focused
	Turns data into information (economies of scale).	Turns information into knowledge and knowledge into decisions and action.
	Answer-driven	Insights-driven
Research deliverables	Leaves clients to do their own insight analysis; execute projects.	Involves the client in the research process; and brings thought leadership to strategic issues.
	Boring and difficult to understand (lots of numbers).	Facilitates understanding through creative, exciting, easy, fast and fun means.
	Basic skills: questionnaire design, data collection and analysis.	High-end skills: advises on business success, rich knowledge source.

Table 3.1: Differences between the dimensions of data suppliers and strategic thought partners (continued)

Dimension	Data supplier	Strategic thought partner
Required research skills	Analytical – focuses on statistical tools.	Creative and analytical; relationship builder; storyteller, problem solver and visionary.
	Data collection and supply	Interpreters
	Low levels: delivers requested services with some tactical impact; unless the supplier is extremely efficient in delivering the service.	High levels: focuses on strategic business impact.
Value-add position	Lower pricing	Higher pricing
	Volume (manufacturing)	Value (service)

Source: Adapted from GreenBook (2012:4), Appleton (2011b), Ghoshal (2011:4), GreenBook (2011:15), Van Slooten and Verheggen (2011:5), Hutt and Speh (2010:93), Lewis (2010:18), Moran (2010:14), Korostoff (2009), McSwain (2008:7), Willis and Webb (2007:6), Chadwick (2006:402), Coyle *et al.* (2003:420) and Mohr and Spekman (1994).

Based upon Table 3.1, data suppliers and strategic thought partners differ as follows in relation to each of the identified dimensions:

- **Nature of the relationship:** Data suppliers focus on turning transactions and express little or no commitment to the client. On the other hand, strategic thought partners specifically focus on creating long-term relationships with clients that are strategic and trustworthy in nature (refer to section 3.2.1.1). Researchers also work together with clients to find solutions to business problems the clients experience (Hutt & Speh, 2010:93; Lewis, 2010:18; McSwain, 2008:7; Coyle *et al.*, 2003:419; Hashim & Milligan, 2003:2,4,6; Mohr & Spekman, 1994).
- **Business focus:** Data suppliers focus on short-term deliverables such as data and information, while strategic thought partners focus on the long-term effect of actionable research; i.e. research that aids decision-making and leads to workable actions (Hutt & Speh, 2010:93; McSwain, 2008:7; Piercy, 2006:253; Coyle *et al.*, 2003:419; Hashim & Milligan, 2003:2,4,6,13).

- **Research deliverables:** Data suppliers are answer-driven and not insight-driven. Furthermore, they tend to be overgenerous when it comes to the analysis of data and do not involve clients in the research (Appleton, 2011b; Ghoshal, 2011:4; Van Slooten & Verheggen, 2011:5; Moran, 2010:1; McSwain, 2008:7; Piercy, 2006:253). Strategic thought partners are insight-driven and focus on helping clients to easily understand what impact the research has on their business by involving them throughout the research process (Appleton, 2011b; Ghoshal, 2011:4; Van Slooten & Verheggen, 2011:5; Moran, 2010:1; McSwain, 2008:7; Piercy, 2006:253).
- **Required research skills:** The research skills of a data supplier are typically limited to basic skills such as questionnaire design and statistical analytics. Strategic thought partners have higher-end skills such as being creative, visionary and focused on problem-solving to facilitate understanding amongst clients of how research impacts their business (Appleton, 2011b; Ghoshal, 2011:4; Verrinder, 2011a; Lewis, 2010:18; Moran, 2010:14; Korostoff, 2009).
- **Value-add position:** Data suppliers usually have limited value-add in their service offerings unless they are process-driven, cost-effective and efficient in data supply (GreenBook, 2012:4; Willis & Webb, 2007:6; Chadwick, 2006:402). The focus is on delivering what is asked and consequently the outcome is limited to tactical impact on the client's business. However, the focus of strategic thought partners is on strategic business impact that results in higher value-add and consequently justifies higher prices (refer to section 3.2.1.2 and Figure 3.2) (GreenBook, 2011:15; Korostoff, 2009; Dexter & Page, 2008:4,19,21; Chadwick, 2006:10; Hashim & Milligan, 2003:2,4,6,13; Mohr & Spekman, 1994). Therefore, marketing research firms that are data suppliers, are perceived as offering limited value to clients, while strategic thought partners are perceived to offer high levels of value since they provide a strategic advisory role in partnership with clients (Dexter & Page, 2008:9-12; Willis & Webb, 2007:5; Hashim & Milligan, 2003:4).

In summary it can be said that data suppliers focus on “getting the job done” as clients request, whereas strategic thought partners focus on adding value over the long-term by providing actionable research that has business impact (Ghoshal, 2011:4; GreenBook, 2011:15; Verrinder, 2011a; Lewis, 2010:18;

Moran, 2010:14; Korostoff, 2009; Dexter & Page, 2008:4,19,21; McSwain, 2008:7; Piercy, 2006:253; Hashim & Milligan, 2003:2,4,6,13).

Although it's acknowledged by some authors that marketing research firms have the option to become efficient data suppliers (Moran, 2010:14; Dexter & Page, 2008:20; Chadwick, 2006:407), most literature suggests that marketing research firms have no option but to become more strategic and business focused in their approach (Dowsett, 2012; Cambiar, 2011:2-10; GreenBook, 2011:13-15; Moran, 2010:14; Dexter & Page, 2008:4,19,21; Piercy, 2006:254). Moran (2010:14) argues that marketing research firms that choose to remain data suppliers will become commoditised and marginalised. The 2012 GRIT Report argues furthermore that marketing research firms should focus on insights that drive clients' business growth (GreenBook, 2012:5). If they fail to do so, marketing research firms run the risk of dying or of becoming unprofitable (Dexter & Page, 2008:16; Thun & Brandt, 2007:5,14). The following section provides specific reasons why many scholars argue that marketing research firms should become strategic thought partners rather than remaining data suppliers.

3.3 REASONS WHY MARKETING RESEARCH FIRMS ARE BECOMING STRATEGIC THOUGHT PARTNERS

It has been acknowledged that marketing research firms have a choice of where they choose to position themselves along the relationship value continuum (refer to Figure 3.2). This section highlights three main reasons why marketing research firms opt to become strategic thought partners instead of remaining mere data suppliers.

3.3.1 Clients demand actionable research with strategic impact

Clients are of the opinion that the results of the marketing research industry's best efforts fall short of expectations and fail to have an impact on their businesses (Davison, 2011:3). Clients experience marketing research firms to have limited strategic business impact and increasingly complain about the low level of value delivered by marketing research firms (Van Slooten & Verheggen, 2011:2; Burns & Bush, 2010:83,84; Moran, 2010:6,7,12; Willis & Webb, 2007:3). A study by

Incite found that only 15% of clients agreed that marketing research firms deliver actionable research (Dexter & Page, 2008:3).

In support, another study amongst 40 clients in the United Kingdom found that close to two-thirds of clients were of the opinion that marketing research firms' strategic insight capabilities needed to improve (Arnell, 2011:1). Moreover, the President of the Marketing Research Association agrees that the future of market research lies in processing data and information into true insights that guide decision-making (Last, 2009:13). More specifically, it is said that clients expect marketing research firms to deliver strategic services such as (also refer to section 2.5.1.1): providing clients with strategic recommendations that impacts their business, ensuring that clients receive concise deliverables and not endless sources of data / information, providing clients with deeper insights into the whole consumer, and managing clients' insight and value (Moran, 2010:11-13).

Moreover, 85% of marketing research firms are unhappy with the impact they have on their clients' businesses 92% of marketing research firms desire to be strategic thought partners, but only 37% claim to currently fulfil this role (Lewis, 2011:1; Lewis, 2010:17). Marketing research firms also acknowledge that their research is too narrow in focus and too tool-orientated and therefore lacks strategic impact (refer to section 2.5.2.1) (Burns & Bush, 2010:83,84; Dexter & Page, 2008:4; Burns & Bush, 2001:54-56). Adding to the problem of marketing research firms being too narrow in focus, they are also challenged with complex data (Micu *et al.*, 2011:10; Von Bormann, 2000:34). Levitt (2006) posits that when data is complex it takes a lot of time to communicate and fails to facilitate understanding. Davison (2011:3) adds that these formats are detrimental in any efforts to create or communicate actionable research. The result is that clients perceive marketing research firms as offering data-driven processes that produce tactical data and deliver poor or no insights (Moran, 2010:7). Precourt (2011a) argues that fewer resources should be spent on developing these tools, and more resources should be invested in helping marketing research firms to think strategically.

In summary, marketing research firms are expected to be strategic thinkers who facilitate insight that adds value to the clients' business. Clients are doubtful about using marketing research firms as they tend to only supply data with no or limited strategic impact (Van Slooten & Verheggen, 2011:2; Moran, 2010:12). As a result clients are increasingly selective about which marketing research firms they choose to work with (Hashim & Milligan, 2003:4). Ultimately, there is a need on the part of clients that marketing research firms sell actionable research with strategic impact instead of data processes (Moran, 2010:14). Data suppliers are not in the business of providing strategic recommendations or insights – only strategic thought partners will be able to deliver actionable research with strategic impact (Appleton, 2011a; Burns & Bush, 2001:54-56).

3.3.2 Increased competition

The 2011 GRIT Report points out that one of the biggest future industry threats is new competitors (refer to section 2.5.1.4) (GreenBook, 2011:14,15). According to a Boston Consulting Group study, less than 45% of marketing research firms believe that their market research or insights provide a competitive advantage or high return on investment (Lewis, 2010:17). New competitors who focus on actionable research with strategic impact that changes and positively influences clients' business, are bound to take over the role of marketing research firms that operate as data suppliers (Van Slooten & Verheggen, 2011:3).

According to literature, three different types of new competitors to marketing research firms in general, can be distinguished namely: management consultants, client-side research employees and freelance contractors (Arnell, 2011:1; Cambiar, 2011; Murphy, 2011b; Van Slooten & Verheggen, 2011:2; Lewis, 2010:17-19; Moran, 2010:1,9,10,17; Silverman, 2006:165). If marketing research firms fail to operate as strategic thought partners, Moran (2010:1) professes that management consultants will replace traditional marketing research firms.

This phenomenon already started to take shape in 2011. Coca-Cola and many other global clients like P&G, Microsoft, Volkswagen, PepsiCo and Reckitt Benckiser warned the marketing research industry that it should meet their needs or they will take their business elsewhere (Murphy, 2011b). Some clients already

work with consultants outside the industry such as Wayin, InfoNow and SurveyMonkey (Murphy, 2011b). Moran (2010:10) is of the opinion that these consultants' strength is twofold: they have the ability to tell an insightful story with data, and the ability to lead clients through a process that results in action. Conversely, marketing research firms are recognised for high quality data collection and analytics (data suppliers) and consequently are being perceived to fall short on the abilities of consultants who are seen as strategic thought partners (Moran, 2010:10).

Lewis (2010:17-19) together with Dexter and Page (2008:3) on the other hand, is of the opinion that client-side research employees are taking over the role of marketing researchers (i.e. internal research suppliers, refer to section 2.3.1). These employees are recognised for their strong ability to think conceptually (i.e. fulfilling a consultant role), convey their business understanding and their ability to drive change (Cambiar, 2011; Lewis, 2010:17-19; Dexter & Page, 2008:3). They are not necessarily career researchers but have a good understanding of marketing research. For example, in the UK Pepsi, Starbucks, Novartis and Best Buy recruited people who once worked for Boston Consulting Group or McKinsey as insight consultants into leadership positions (Cambiar, 2011; Lewis, 2011:1). Arnell (2011:1) adds that freelance contract support from individuals could also be used as a resource, but points out that this is only a short-term solution for businesses.

Van Slooten and Verheggen (2011:5) note that these three competitors' competitive positioning is what differentiates them from marketing research firms. These three types of competitors position themselves typically as: interpreters and **not** as data suppliers, advocating the possibilities of decision-making and **not** methodologies or measurement opportunities, selling simple solutions and **not** statistically reliable research tools, standing next to the client working with them and **not** as client observers, subjective and relevant and **not** objective and representative, and fun, exciting, easy and **not** difficult or boring (Van Slooten & Verheggen, 2011:5).

These positioning attributes establish a competitive advantage for these new competitors over marketing research firms that fulfil a data supplier role. Hence, new direct and indirect competitors challenge marketing research firms' current service offering, product delivery and business approach to clients.

3.3.3 Commoditisation of data and data overload

As technology advances, data becomes increasingly freely available. Specifically, the digital revolution and growth of social conversations on the web lead to an explosion of freely accessible data to the public and therefore clients (Clift, 2011:3). This means that anyone can take data, analyse it and transform it into information, it is no longer a specialised service that can only be offered by researchers (Gelman, 2011:1; Phillips, 2011). Consequently, data supply is easily achievable and fast becoming a commodity (Dexter & Page, 2008:14,20,21). In return, these factors create a problem of information overload for both marketing research firms and clients (Bain, 2012a; Micu *et al.*, 2011:4,5,9; Moran 2010:1).

Information overload is influenced by the data stream that keeps on growing and includes data from: mobiles, user-generated content, social networks, path data, eye tracking, web browsing, shopper-insight, customer-care and many more (refer to section 2.5, technology factors) (Micu *et al.*, 2011:6-9; Precourt, 2011b:1-3). As the volume of data grows, clients require marketing research to be more useable (Dexter & Page, 2008:14,20,21). However, the growing data stream has increased the likelihood of marketing research firms to burden clients with more data – giving clients the responsibility to read through many pages of data / information in search of actionable research results (Moran, 2010:12).

As a result, the marketing research industry is perceived to primarily collect data, and not to add value through strategic thinking or actionable research that clients desire (Dexter & Page, 2008:14,20). Moran (2010:7) adds that marketing research is viewed as a commodity instead of a value-adding strategic service because of poor linguistic positioning. As the name implies, marketing research is process-heavy and data driven and is not focused on the actions that should flow from the process. This too, places a demand on the industry to change its association with masses of data and no strategic impact to delivering data that is

actionable (Von Bormann, 2000). Gelman (2011) states in this regard, that marketing research firms' challenge is to differentiate and distinguish themselves as being able to use the overflow of data together with a creativity process to deliver actionable research.

In summary, the three reasons presented strongly suggest that marketing research firms will struggle to survive if they do not become strategic thought partners (Dexter & Page, 2008:16; Thun & Brandt, 2007:5). Fifty-five per cent of marketing research firms and clients across the world indicated that marketing research firms will perish if they fail to become strategic thought partners who understand their clients' business (GreenBook, 2011:13-15). Marketing research firms which decide to become strategic thought partners, would achieve the following benefits (Appleton, 2011a; Hutt & Speh, 2010:93; Moran, 2010:6,14; Deeiefs, McLean, Michaux & Salters, 2004:1):

- **Increased value:** Increased business and revenues can be achieved – value creation through strategic and actionable research which will warrant higher pricing (premium charge rates) or less price sensitive clients.
- **Long-term relationships:** Long-term client relationships can be achieved (which in turn will lead to client buy-in and increased / repeat business).
- **Differentiation:** Greater differentiation can be achieved which provides strategic thought partners a competitive advantage.

This section presents arguments for marketing research firms to offer the services of strategic thought partners. These marketing research firms need to add value to clients' business by focusing on actionable research with strategic impact to overcome the challenges of increased and fierce competition together with data and information overload. The following section suggests guidelines that could assist a marketing research firm in becoming a strategic thought partner.

3.4 GUIDELINES FOR BECOMING STRATEGIC THOUGHT PARTNERS

The literature suggests a number of different guidelines marketing research firms can utilise to become strategic thought partners. However, the Advertising Research Foundation's Research Transformation Super-Council has specifically developed a concise and actionable "seven-point creed" of how marketing research firms can provide clients with strategic insights i.e. guidelines for becoming strategic thought partners (Precourt, 2010:3). The seven guidelines are detailed subsequently.

3.4.1 Focus on understanding the client's business

Cambiar (2011:6), Precourt (2010:3) as well as Dexter and Page (2008:17) argue that valuable insight can only be achieved by answering the "now what?" question, instead of following the traditional approach of simply answering the "what?" research question. The "now what?" question can only be answered if marketing research firms understand their client's business (Lewis, 2010:19; Willis & Webb, 2007:4). Cambiar (2011:5,6) agrees and professes that marketing research firms should focus on business outcomes instead of research outputs. The Future of Research report states that the top enablers of understanding clients' business are: long-term client relationships, collaborating with clients on insight generation, asking the "now what?" question, ensuring that clients perceive researchers as a strategic asset, data integration of various sources, storytelling and other communication methods (Cambiar, 2011:7).

Quadrangle, one of United Kingdom's most successful and fast growing marketing research firms, emphasises that the focus of their research is both commercial and business-oriented (Tarran, Bain & Verrinder, 2011). In doing so, Quadrangle asks clients to tell them about their business and not about research. Bain (2012b) quotes Steven Gatt, economic and insight manager of the Volkswagen Group, where Gatt professes that it is when marketing research firms fail to understand the clients' business, that they end up producing a lot of information which in most instances is not needed. The value of a good business understanding is that marketing research firms can translate insights into actionable recommendations that make business sense to the client (Appleton,

2011b; Lewis, 2010:19). The focus on understanding the client's business should thus be strengthened.

3.4.2 Become thought leaders

The 2011 GRIT Report states that clients rate "thought leadership" as the number one aspect that differentiates one marketing research firm from the next (GreenBook, 2011:39). Being a thought leader means that marketing research firms shape the way clients think by taking risks, telling clients something new and proving it (Precourt, 2010:3; Dexter & Page, 2008:19). Rubinson (2010:9) adds that thought leaders do not focus on validating hypothesis; instead they tell clients something they did not know so that their thinking is shaped. Chadwick (2006:11) simply defines a thought leader's role as less research orientated and more knowledge driven; knowledge that generates insight and impacts strategy (refer to the information value chain, Figure 3.1).

In support, Lewis (2010:18) also believes that researchers should focus on bringing thought leadership to strategic issues; meaning that marketing research firms should focus on creating business impact for their clients. Further, the Vice President of Marketing Strategy and Insights at the Coca-Cola Company emphasises that marketing research firms ought to become thought leaders by going beyond insight delivery, they should facilitate transformation, inspire and action ideas that lead to growth for the client's business (Precourt, 2011a). As highlighted in section 3.3.1, the author concludes that to be a thought leader, more resources should be devoted to helping marketing research firms think strategically, ultimately so to translate research into action. In conclusion, Lewis (2010:18) professes that marketing research firms which have a desire to be thought leaders, should develop a culture that drives for business impact.

3.4.3 Bring the human into all marketing decision-making

It is important to recognise that marketing research forms part of a greater whole in a client's business; amongst others, clients' decision-making is influenced by marketing research, internal considerations, group dynamics, the macro-environment (political, economic, social, technological and legislation factors), the competitive environment, stakeholders and the market (Smit & Cronje, 2002:65;

Cronje, Du Toit & Motlatla, 2000:64; Keane, 1969:12). Therefore, Precourt (2010:3) suggests marketing researchers should constantly remind themselves of the role they should fulfil, in other words, to be the **link** between their clients and their customers (refer to section 1.8). Increasingly, clients need to understand customers holistically together with their emotional behaviour (Moran, 2010:12-13). Rubinson (2010:9) together with Dexter and Page (2008:17), supports this view and states that marketing research firms should be the voice between the brand (the client) and the consumer (the client's customer).

3.4.4 Be future focused

Moran (2010:16) explains that marketing research is usually seen as a “snapshot in time” being either present-focused or past-focused. Because of this, its predictive value is questioned. If marketing research firms prove that they are focused on the future and not simply on delivering research results, research will be seen as an investment and not an expense (Precourt, 2010:3; Rubinson, 2010:9). The 2011 Future of Research report also points to the success of this endeavour: nearly half (49%) of marketing research firms and their clients desire long-term client relationships – i.e. an expectation exists that marketing research firms are to be focused on the future (Cambiar, 2011:7). In order to achieve a future focused outlook, Chadwick (2006:12) suggests that marketing research firms should add consultative resources to the business, outsource some infrastructure, acquire accumulated knowledge from databases, and seek alliances with data integrators. The marketing research firm can therefore focus on what is important to the client's business.

3.4.5 Maintain professional standards

The marketing research industry should maintain professional standards, principles, and processes for generating insights (Precourt, 2010:3; Rubinson, 2010:9). Various governing bodies support the industry across the world. Some international bodies include the Marketing Research Society (MRS), Marketing Research Association (MRA), World Association for Public Opinion Research (WAPOR), and the World Society for Opinion and Marketing Research formerly known as European Society for Opinion and Marketing Research (ESOMAR) to name a few (ESOMAR, 2012; MRA, 2012; MRS, 2012; WAPOR, 2012). Of

particular importance is ESOMAR – this institution takes responsibility to encourage, advance and elevate market research worldwide (ESOMAR, 2012).

In South Africa, the prominent governing bodies of professional standards include: the South African Marketing Research Association (SAMRA), South African Advertising Research Foundation (SAARF) and Research Suppliers of Southern Africa (RSSA) (Cant, Gerber-Nel, Nel & Kotzé, 2008:19-21). All these institutions have similar but specific objectives to promote and maintain professional standards in the marketing research industry (SAARF, 2012; SAMRA, 2011). In particular, SAMRA's key objectives are to provide an educational, information and social forum for the enhancement of professionalism in marketing research, and to represent the Southern African marketing research industry in the wider world (SAMRA, 2011). By maintaining professional standards and processes for generating grounded insights, marketing research firms can better offer the services of a strategic thought partner.

3.4.6 Become an agent of change

The Research Transformation Super-Council urges marketing research firms to embrace new marketing research ideas and tools to become an advocate of change (Precourt, 2010:3; Rubinson, 2010:9; Huisman & van Meeuwen, 2005:5). In addition, clients are requesting marketing research firms to be enablers of change by being involved in the implementation phase of research (Tsai, 2010:2; Schmalensee & Lesh, 1999:23). Thun and Brandt (2007:11,12) suggest that this could be achieved by means of a three-step process: understand the client's needs, establish who (on client-side) is responsible for taking action to address the need, and work with the relevant client employees who are business enablers. It should be noted that this process can only be successful if marketing research firms have the support of clients' top management, meaning that marketing researchers have to be able to partner with clients' senior management (Cambiar, 2011:6; Dexter & Page, 2008:12; Willis & Webb, 2007:12).

3.4.7 Provide actionable research and communicate it effectively

Shaw (2010:1) is of the opinion that it is one thing to produce insights and another to get clients to act on them i.e., insights should be noticed and acted upon. To get clients to act on research / insights, marketing research firms need to present an appealing and engaging communication and report approach (Precourt, 2010:3; Rubinson, 2010:9; McCall *et al.*, 2004:9). Effective communication helps clients to understand and remember complex business issues in a simple way (Ghoshal, 2011:3,4).

The Research Transformation Super-Council explains it as communicating to clients “with theatre” so that insights can be heard and so that it can be unforgettable (Precourt, 2010:3; Rubinson, 2010:9). Lewis (2010:19) and Schmalensee and Lesh (1999:33) suggest that actionable research can only be achieved if marketing research firms learn to communicate results for impact, make sure that action happens after results have been presented, and by becoming storytellers. Ghoshal (2011:1,3) supports Lewis and adds that storytelling (or “theatre” as the Research Transformation Super-Council refers to it) is the most powerful way to facilitate action, as it collates the worlds of emotion, behaviour and cognition.

Marketing research firms that follow this approach focus on developing the expertise to distil information into clear insights that aid clients in strategic decision-making and to do it in an engaging and memorable way (Murphy, 2011b; Mahmoud, 2004:12). In support, literature suggests that marketing research firms will have to be creative in delivering actionable research to clients and suggest that the best methods to achieve this is through creative data visualisation and storytelling (refer to sections 4.3.4.1, 4.4 and 4.5) (Davison, 2011:2; Digit, 2011; Grimshaw, 2011; Micu *et al.*, 2011:10; Shaw, 2010:1-12).

In addition to the discussed seven-point creed, other literature suggests the following guidelines in becoming strategic thought partners: getting out of the business of surveys and syndicated reports, improving data collection methods, integrating data, obtaining senior staff involvement, appointing a dedicated team who think beyond the client’s brief, recruiting technologists, investing in

developing researchers who really know a sector, embracing multimodal interaction, and behaving like a management consultancy focusing on insight and business impact (Grimshaw, 2011:2; Micu *et al.*, 2011:10; Phillips, 2011; Zorfas, 2011; Dexter & Page, 2008:12,19; Chadwick, 2006:8).

In summary, it should be noted that one single guideline could not facilitate the marketing research firms in becoming strategic thought partners; instead it is a combination of guidelines that enables it (Precourt, 2010; Rubinson, 2010). This study focuses on the importance and application of one of the Advertising Research Foundation's Research Transformation Super-Council's seven guidelines. Particularly, it explores how marketing research firms can provide actionable research and communicate it effectively. This guideline is singled out because of the following properties of which it comprises:

- **Value-add:** The interpretation / reporting phase (where actionable research is communicated) of the research process presents the best opportunity for marketing research firms to add value to clients' businesses as strategic thought partners (Huisman & van Meeuwen, 2005:4).
- **Future imperative:** Some authors believe that this tool will become a research imperative, as data / information will be useless without the ability to communicate insights and actions with creative data visualisation and storytelling (Micu *et al.*, 2011:10; Rubinson, 2010:8).

3.5 CONCLUSION

This chapter commences with a definition of data suppliers and strategic thought partners and examines the difference between these two concepts. This discussion suggests that marketing research firms should think about where they want to position themselves; either as suppliers who focus on efficient data delivery, or strategic thought partners who focus on actionable research with strategic business impact. The reasons for this positioning suggestion are presented. Subsequently, seven specific guidelines are presented for marketing research firms in becoming strategic thought partners. One particular tool is singled out as imperative for marketing research firms to become strategic thought partners, namely actionable research and the effective communication thereof.

Chapter 4 focuses on the step in the marketing research process where marketing research firms have the opportunity to communicate actionable research to clients through the methods of data visualisation and storytelling.



CHAPTER 4

ACTIONABLE REPORTING IN THE MARKETING RESEARCH PROCESS: DATA VISUALISATION AND STORYTELLING



4.1 INTRODUCTION

The purpose of this chapter is to highlight how data visualisation and storytelling can be used as methods for actionable reporting in the marketing research process. The chapter firstly considers the marketing research process so as to identify where reporting and presentation of research results fit into it. It furthermore provides a definition of research reporting and presentation as well as a discussion on the importance thereof. Hereafter, specific suggestions are presented of how the actionability of research reports can be improved – indicating that data visualisation and storytelling are two such methods. The chapter concludes with a discussion on data visualisation and storytelling that covers definitions, history of, techniques, success pillars, advantages, disadvantages and barriers for marketing research firms to adopt these methods.

4.2 THE MARKETING RESEARCH PROCESS

Zikmund and Babin (2010:50) together with Hair *et al.* (2006:52) state that any formal marketing research process could be viewed as a series of steps. Basically, the marketing research process involves the research problem and objective(s), the research design, data collection, and the reporting of research results (Burns & Bush, 2006:50; Hair *et al.*, 2006:52; Struwig & Stead, 2001:22). Its function is to provide a systematic and planned approach to any given research project and ensure that all marketing research process aspects are consistent with each other (Aaker *et al.*, 2001:40). Marketing research firms must ensure that all the steps in the process are effectively completed to deliver correct information to clients, so as to facilitate actionable decision-making (Berndt & Petzer, 2011:25; Hair *et al.*, 2006:52).

Various authors note similar approaches to the marketing research process, with slight differences in the detail of the steps and the length of the process. In Table 4.1 these approaches are presented and compared with one another.



Table 4.1: Different approaches to the marketing research process

Berndt and Petzer (2011)	Define the research problem and research objectives	Purpose	Bradley (2010)	Zikmund and Babin (2010)	Burns and Bush (2006)	Hair et al. (2006)	Malhotra and Peterson (2006)	Kotler (2003)	Aaker et al. (2001)	McDaniel and Gates (1998)	Kinneer and Taylor (1996)	Establish the need for information	Specify the research objectives and information needs
	Select the research design											Population	
Berndt and Petzer (2011)	Plan the sample	Procedure	Publication	Plan the sample	Collect the data	Execute the research design	Doing fieldwork or collecting data	Collect the data	Collect the data	Collect the data	Design the sample	Design the sample	Design the sample
	Collect the data											Collect the data	
Berndt and Petzer (2011)	Present the research report	Number of steps: 6	Formulate the conclusions and present the research report	Prepare and present the final research report	Analyse the data	Communicate the research results	Prepare and analyse the data	Analyse the information	Prepare and analyse the data	Analyse the data	The research report	Present the research results	Present the research results
	Number of steps: 6												

It is evident from Table 4.1 that the marketing research process typically involves four basic steps (Bradley, 2010; Hair *et al.*, 2006) and with some authors describing eleven detailed steps (Burns & Bush, 2006). Even though the number and details of each step differ slightly, all elements of the marketing research process are consistently presented across literature. Table 4.1 illustrates that the basic steps of the marketing research process involve the following elements (Bradley, 2010; Hair *et al.*, 2006; Burns & Bush, 2006):

- **Why:** Defining the research problem and objective(s) (why the research is necessary and what the client wants to know).
- **How:** Choosing an appropriate research design (how the research should be conducted).
- **Who:** Collecting the data (who the answers will be attained from).
- **Results:** Reporting and presentation of the research results (answer the research the why and what questions of the research problem and objectives by analysing the data).

As this study deals with the reporting and presentation of research results, this chapter focuses on the last identified step of the marketing research process, namely the reporting of research results. The next section provides the definition of research reports and research presentations.

4.3 DEFINITION OF RESEARCH REPORT AND RESEARCH PRESENTATION

Marketing research firms typically provide information by compiling research reports noting the key research findings by presenting them in tables, graphs and words (refer to section 1.2) (Berndt & Petzer, 2011; Friedman, 2007; Hair *et al.*, 2006:629). This section defines what is meant by a research report and presentation, and also highlights the importance thereof. It continues with a discussion on problems associated with research reports and presentations whereafter it presents methods to overcome these problems so as to increase the strategic value and actionability thereof.

4.3.1 Definition of research report and presentation

In the last step of the marketing research process, marketing research firms compile a research report that interprets the information gathered from the data

analysis in order to draw conclusions, make recommendations and communicate (reporting) these research results to appropriate client decision-makers (Bradley, 2010:338; Burns & Bush, 2010:638-647; Cant *et al.*, 2008:55,234; Aaker *et al.*, 2004:449,620,632). Davison (2011:2) adds that research reports are the outputs marketing research firms give to clients as a result of a research study, while research reports comprise the overarching concept that refers to the methodical compilation of specific data and ideas based on a series of research steps in either written or oral format (De Vos, Strydom, Fouche & Delport, 2011:278; Zikmund & Babin, 2010:400; DePoy & Gilson, 2008:202).

A research presentation on the other hand specifically refers to the oral communication of research results based on the written equivalent thereof; a researcher therefore talks to a client audience about the research results (Berndt & Petzer, 2011:347; Neuman, 2006:491). Since the research presentation is based on the written account of the research report, the term **research report** will be used to simultaneously refer to the research report and presentation of research results for the duration of the document (it should be noted that it is beyond the purpose of this study to address the presentation style and 'talk' of the research report). Hence, for the purposes of this study, the research report is defined as the final deliverable of the research process that interprets the information gathered and that notes key research findings for client decision-making (Berndt & Petzer, 2011; Burns & Bush, 2006:598; Hair *et al.*, 2006:629).

Research reports usually follow a standard format and both written and oral formats could follow this structure (Bradley, 2010:346-348; Zikmund & Babin, 2010:402; Malhotra & Peterson, 2006:533; Hair *et al.*, 2006:629; Aaker *et al.*, 2004:628). A research report's standard format includes: title page, letter of transmittal, letter of authorisation, table of contents (including list of tables and graphs), executive summary, the body (which includes an introduction, methodology, research results, conclusions and recommendations), limitations to the study, list of references and appendices (Bradley, 2010:346-348; Burns & Bush, 2010:641; Zikmund & Babin, 2010:400-405; Cant *et al.*, 2008:240,241; Hair *et al.*, 2006:629; Malhotra & Peterson, 2006:533; Struwig & Stead, 2001:205-207). Svensson (2012:52-54) notes that the order of these items could vary and

that not all items may be needed in a specific research report. Nonetheless, out of all these items the body of research results, conclusions and recommendations are the most important parts of a research report because clients use them to guide business decisions and marketing research firms use them to prove that they have the ability to be strategic thought partners as opposed to data suppliers (Berndt & Petzer, 2011:34; Burns & Bush, 2010:646; Hair *et al.*, 2006:69; Andreasen, 1985:176,180).

4.3.2 The importance of research reports

The research report is the final deliverable that represents the entire research project and the marketing research firm (Burns & Bush, 2006:598; Struwig & Stead, 2001:204). Clients are usually involved in the first step of the research process (identification of the research problem and objectives) whereafter marketing research firms are responsible for collecting and analysing data. In most cases, clients are only again involved at the end of the process when the research report is delivered to them (Burns & Bush, 2010:611). This means that the research report embodies every step of the research process and signifies what the marketing research firm is capable of.

Burns and Bush (2010:637) together with Cant *et al.* (2008:237) add that in some cases the research report is the only part of the marketing research product that clients come in touch with. In addition, the time and effort expended on the marketing research process is wasted if it is not communicated effectively (Burns & Bush, 2010:637; Hair *et al.*, 2006:626). For these reasons, both marketing research firms and clients agree that reporting of research results is one of the most important aspects of the entire marketing research process (Burns & Bush, 2010:637; Zikmund & Babin, 2010:60; Kotler, 2003:19; Andreasen, 1985:176).

Other authors highlight additional reasons why a marketing research report is such an important aspect of the marketing research process. These reasons include (Bradley, 2010:33; Cant *et al.*, 2008:23; Malhotra & Birks, 2006:645; Malhotra & Peterson, 2006:531; Hair *et al.*, 2006:627; Struwig & Stead, 2001:204):

- **Tangible evidence:** Research reports serve as tangible evidence of a research project.
- **Guidance:** Research reports guide clients with decision-making.
- **Credibility:** Research reports establish credibility – they communicate the marketing research firm’s quality of work, accuracy, believability and professionalism.
- **Historical record:** Research reports serve as historical records of any marketing research conducted by a particular client.
- **Repeat business:** Research reports’ quality and usability influence whether clients will re-use a particular marketing research firm.

Another reason for marketing research firms to focus on research reports, as stated by the 2012 GRIT Report, is that those marketing research firms which deliver innovative and effective research reports are increasingly gaining mindshare and possibly market share in the industry (GreenBook, 2012:3). Marketing research firms will increasingly be under pressure to deliver innovation in their communication of research reports (GreenBook, 2012:3; Davison, 2011:2; Bradley, 2010:350). Considering these reasons, it becomes clear why the communication of research findings to clients is such a critical step to success in the marketing research process (Shaw, 2010:2).

4.3.3 The problem with research reports

It has been established in the previous section (section 4.3.2) that the success of research reports is of critical value and importance to the performance of marketing research firms (Burns & Bush, 2010:637; Shaw, 2010:12; Hair *et al.*, 2006:626,627). However, it is in these research reports that many clients fail to see the impact of the research on the business and consequently battle to make sense of the data to make sound decisions (refer to section 1.2) (Davison, 2011:2; Few, 2007:2). Hence a renewed focus on the subject of how to provide information in a strategic and insightful way is needed (Bain, 2011a; Digit, 2011; Doyle & Tharme, 2011; Huisman & Van Meeuwen, 2005:4). Research reports typically reflect the following problems:

- **Complex information:** Research reports often contain overly complicated information with no or little insights, lots of facts, technical details and sophisticated research methods (Zikmund & Babin, 2010:60; Hair *et al.*, 2006:634; Piercy, 2006:3).
- **Too statistical:** Clients often do not comprehend statistical terms, calculations or conclusions and it impedes understanding and actionability of the research results - it is also unlikely that the client will admit this to the marketing research firm (Hair *et al.*, 2006:634; Mahmoud, 2004:7,9-11).
- **Lengthy:** Lengthy and detailed research reports obstruct understanding of the research results and lower the impact the research has on clients' business (Bain, 2012b; Davison, 2011:3; Burns & Bush, 2010:637; Piercy, 2006:3; Mahmoud, 2004:9).
- **Lack business impact:** Research reports often lack business impact by detailing the current situation around the research problem, but fail to show any direction for future action (refer to sections 2.5.1.1, 2.5.2.1 and 3.4.4) (Davison, 2011:3; Willis & Webb, 2007:6; Mahmoud, 2004:8,10).
- **Ineffective communication:** Research reports often do not report the research results in an effective manner (Bain, 2012b; Mahmoud, 2004:10).

In summary, research reports are too long, technical and confusing (Mahmoud, 2004:11). These shortcomings decrease the actionability of research reports for client decision-making and the impact it has on their business (Davison, 2011:3; Zikmund & Babin, 2010:60; Willis & Webb, 2007:6; Hair *et al.*, 2006:634; Piercy, 2006:3; Mahmoud, 2004:9). For this reason, specific methods of how marketing research firms can possibly overcome these problems should be considered.

4.3.4 Methods to compile actionable research reports

Malhotra and Peterson (2006:535) profess that the mere reporting of research results is not sufficient should a marketing research firm want to become a strategic thought partner (refer to section 3.2.2). Bradley (2010:342) agrees and lists three levels of research reports with levels increasing in actionability and strategic relevance from level one to level three:

- **Level 1:** The first level is where research reports simply reproduce facts (typical of data suppliers).
- **Level 2:** The second level represents some level of interpretation of those facts (level 1).
- **Level 3:** The third level goes beyond the facts and interpretation (level 1 and 2); it incorporates additional knowledge to make future predictions (expected of strategic thought partnerships). It is also the level where data visualisation techniques and storytelling can be used, as discussed in the next section.

Research reports with strategic value should then deliver on level three, meaning that they reflect actionable research. It should be interpreted and consider data knowledge to draw conclusions and to make recommendations (also consider the information value chain, Figure 3.1). This section considers the methods that can be used to report research results on a level 3. These methods are divided into two categories that will be discussed in detail subsequently:

- **Researcher's thinking before compiling the research report:** This involves all the factors that the researcher should learn about and consider before writing the research report.
- **Execution of the research report:** Once the thinking is completed the researcher can physically compile the research report and deliver it in a written and / or oral format.

4.3.4.1 Researchers' thinking before compiling the research report

As mentioned earlier, the researcher should consider several methods before compiling the physical research report. Six methods that could help researchers to focus research reports for actionability are highlighted consequently:

- **Focus:** The focus should never be on the research report, it should rather be on the research problem and solving it; in other words marketing research firms should focus on where clients should go with their business, how to get there and what they can expect when arriving there (Bain, 2012b; Verrinder, 2011a; Dexter & Page, 2008:19; Huisman & van Meeuwen, 2005:4; Mahmoud, 2004:2; Hague & Jackson, 1996:180; Andreasen, 1985:176,180).

- **Understand client's business:** Marketing research firms need to understand the client's business first, before compiling a research report. When marketing research firms have a complete understanding of the client's business and are proactively engaged with it, marketing research firms can recommend innovative and right actions in the research report (refer to section 3.4.1) (Bain, 2012b; Deloitte, 2011:5; Dexter & Page, 2008:19; Willis & Webb, 2007:4; Piercy, 2006:3; Huisman & van Meeuwen, 2005:4).
- **Insightful:** Research reports should be insightful and not full of numbers or facts. Instead of focusing on technical aspects and numbers, research reports should stimulate clients' management learning and should support quick understanding of the research results and business answer (Dexter & Page, 2008:18; Willis & Webb, 2007:4; Chadwick, 2006:401-403; Piercy, 2006:3; McCall *et al.*, 2004:9; Hague & Jackson, 1996:180).
- **Holistic:** Research reports should consider the holistic context – clients want research reports that integrate data from different sources so as to bring experience to the research problem and put the findings into a holistic context (Dexter & Page, 2008:17-19; Willis & Webb, 2007:4; Chadwick, 2006:402; Mahmoud, 2004:8).
- **Share in discussion:** The research results should be shared in an open discussion (interactive dialogue) with clients before compiling conclusions and recommendations in the research report (Aaker *et al.*, 2004:632; Mahmoud, 2004:7).
- **Accountable:** Ideally, marketing research firms should take shared-responsibility and accountability upfront to ensure that research findings in the research report can be implemented i.e., see to it that action takes place after research results have been presented (Precourt, 2011b:3; Lewis, 2010:19; Shaw, 2010:1; Mahmoud, 2004:13; Daume, 1999:2,8; Schmalensee & Lesh, 1999:16). However, it should be noted that in reality this is difficult to implement.

4.3.4.2 Execution of the research report

Once the researcher has considered the seven methods before compiling the research report, the researcher can compile the research report to reflect

actionability and strategic value. Marketing research firms could consider the following seven factors:

- **Simplistic:** Research reports should be simplistic – this means that marketing research firms should steer away from complex analytical and technical research reports which impede understanding of the research on the client's business (Chadwick, 2006:402; Piercy, 2006:3); instead they should communicate in concise, easy, clear, memorable and engaging ways (Davison, 2011:4; Lowell, 2011:4; Precourt, 2010:3; Cant *et al.*, 2008:236; Willis & Webb, 2007:4; Levitt, 2006:3; Mahmoud, 2004:11,13; McCall *et al.*, 2004:9; Semon, 2003:11). Thun and Brandt (2007:12) express the marketing research firm's research report as the "bridge" that overcomes data and that facilitates action.
- **Linguistics:** Research reports should reflect the "language" clients use at the boardroom table and not be filled with research or statistical jargon (Eloff, 2012:6; Davison, 2011:3; Bradley, 2010:345).
- **Research report length:** Marketing research firms should consider the length of research reports – clients demand short and simple research reports that portray only those ideas that will take their business forward i.e. they demand concise actionable research results (Bain, 2012b; Bradley, 2010:346; Willis & Webb, 2007:4; Schmalensee & Lesh, 1999:16; Hague & Jackson, 1996:180).
- **Audience-focused:** The research report should be audience-focused and therefore tailored to the specific audience it is written for or presented to (Svensson, 2012:51; Davison, 2011:3,9; Deloitte, 2011:5; Lowell, 2011:5; Bradley, 2010:361; Aaker *et al.*, 2004:621; Schmalensee & Lesh, 1999:16).
- **Engaging:** The research report should make the data come alive (engaging) through simple and clear data visualisations; using intuitive and easily understood methods to report, concise, catchy titles, different multimedia – like pictures and videos, anecdotes, engaging metaphors, analogies, quotations and even jokes (Ghoshal, 2011:4; Willis & Webb, 2007:4; Mahmoud, 2004:11-13; McCall *et al.*, 2004:9).
- **Data visualisation:** The research report should effectively use data visualisations which include innovative use of tables, figures, charts, diagrams, graphs and graphic designs; through visual aids, research reports can be

communicated more effectively, interestingly and they offer a solution to present information that might be difficult to comprehend otherwise (Bain, 2011a; Ghoshal, 2011:3,4; Lowell, 2011:2,3,5; Hindmarch, 2011; Burns & Bush, 2010:648; Precourt, 2010:3; Rubinson, 2010:9; Aaker *et al.*, 2004:630-632; Hague & Jackson, 1996:180).

- **Storytelling:** The research report should tell a story and communicate with “theatre”, which means that the research report should be organised as a continuous story that is supported by visuals to ultimately enhance the explanation of research results (refer to section 3.4.7) (Davison, 2011:2,7-10,17; Goshal, 2011:2,4; Grimshaw, 2011:2; Lowell, 2011:3,5; Hindmarch, 2011; Bradley, 2010:350; Burns & Bush, 2010:646; Lewis, 2010:3,19; Lorenz, 2010; Rubinson, 2010:9; Zikmund & Babin, 2010:404).

As previously mentioned, many authors argue that the best methods to facilitate actionable research are by improving research reports through data visualisation techniques and storytelling (refer to section 3.4.7) (Davison, 2011:2; Digit, 2011; Grimshaw, 2011:2; Micu *et al.*, 2011:10; Shaw, 2010:1-12). Micu *et al.* (2011:10) continue to highlight the importance of these two methods and claim that they will both become research imperatives in the future. Research reports can then communicate for business impact and engagement (Davison, 2011:9; Lowell, 2011:5; Lewis, 2010:19; Shaw, 2010:2; Aaker *et al.*, 2004:623; Mahmoud, 2004:12). For these reasons data visualisation and storytelling were selected as the most significant methods to increase the actionability and strategic value of reports. Each will be discussed in detail in the subsequent sections.

4.4 DATA VISUALISATION

This section considers a detailed definition of data visualisation, whereafter it briefly examines the history thereof as introduction to the discussion of traditional and non-traditional data visualisation techniques. It also highlights the pillars of successful data visualisations whereafter the advantages and disadvantages of implementing data visualisation techniques are presented. In conclusion it examines the barriers that could impede the adoption of specific data visualisation techniques.

4.4.1 Data visualisation defined

Friendly and Denis (2009a) state that data visualisation is a narrower domain of information visualisation. Information visualisation explains almost any information in an organised or sorted form, which is generally applied to the visual representation of large-scale collections of non-numerical (qualitative) information (Friendly & Denis, 2009a; Eick, 1994:127,128). Data visualisation on the other hand, is concerned with the visual representation of quantitative data (Friendly & Denis, 2009a). Within data visualisation different terminologies are used interchangeably and include: data visualisation, data graphics, intuitive charts, information aesthetics and infographics (information graphics). Data graphics are a synonym for data visualisation. The main difference between infographics (and similar terminology) and data visualisation is that infographics form a subset of data visualisation, which are always static (i.e. not interactive / the graphic cannot move), whereas data visualisations are not necessarily static (Micu *et al.*, 2011:11; Williams, 2011; McCandless, 2009a).

Data visualisation is most elementarily defined as the visual representation of data or knowledge (Johnston, 2010; Friedman, 2007). Tufte defines data visualisation as a technique for reasoning about quantitative information (Tufte, 1983:9). For the purposes of this study, the term data visualisation will be used and is defined as the conversion of complex quantitative data into understandable and intuitive visual presentations that enable actionable research (EthicsPoint, 2012; Singer, 2011; Lapierre & Pierre, 2010:6; Adams, 2003:128,132; Tufte, 2003). It is evident from the definition that data visualisation is intended for quantitative data, data that is numerical in nature and that measures directly (Rolfe, 2006:306; Babbie & Mouton, 2001:270). This study focuses on data visualisation as opposed to information visualisation.

When investigating more detailed definitions of data visualisation, literature identifies five characteristics that could be present in a definition of data visualisation. The five characteristics include reduced complexity, easy understanding, aesthetic appeal, insight richness and visual representation. Table 4.2 provides an overview of the different definitions classified according to these five characteristics.

Table 4.2: Characteristics of data visualisation

Characteristic	Discussion	Authors
Reduced complexity	<ul style="list-style-type: none"> • Convey complex data in easy comprehensible ways. • Effective way to communicate complex information. • Making sense of data, i.e. give meaning. 	Deloitte (2011:2) Digit (2011) Lowell (2011) Singer (2011) Lapierre and Pierre (2010:6) The Economist (2010:3) Zikmund and Babin (2010:405) Pingmag (2007)
Easy understanding	<ul style="list-style-type: none"> • New revolution in making information more understandable. • Ability to communicate information clearly and effectively. • Creating the most understandable visual representation. 	EthicsPoint (2012) Bain (2011a) White (2011) TNS (2010) Lapierre and Pierre (2010:5) Pingmag (2007) Fry (2004:11,12,33)
Aesthetic appeal	<ul style="list-style-type: none"> • Convey ideas in aesthetic and functional form to illustrate complex data. • Graphic presentation of information (uses media, text, images and videos). 	Kaidi (2012) Segel and Heer (2010:2) Friedman (2007) Few (2007) Friendly (2005)
Insight richness	<ul style="list-style-type: none"> • Prompt intuitive comprehension, i.e. insight that makes readers want to learn more. • To provide insights and intuitive ways of perceiving complex data in order to facilitate insightful decisions. 	Kaidi (2012) Lengler and Eppler (2012) Singer (2011) Pingmag (2007) Friendly (2005) Fry (2004) Adams (2003:128,132)
Visual representation	<ul style="list-style-type: none"> • Visual representation of information, data or knowledge. • To show comparisons, ratios and relationships between data points by using alternative data representations. 	Hillburn (2010) Johnston (2010) Lapierre and Pierre (2010:6) Friedman (2008) Friedman (2007) Friendly (2007)

In essence, the characteristics of data visualisation involve facilitating easy understanding and rich insights by means of visual and aesthetic elements.

Doyle and Tharme (2011) continue to explain that the main goal of data visualisation is to make sense of data. It needs to convey complex data intuitively and aid easy comprehension (Pingmag, 2007). Friedman (2007) and Friendly (2005) state that data visualisation's goal is to communicate information clearly and effectively through graphical means.

It is important to note that the key element from Tufte's work (2003; 1997; 1983) is that data visualisation's goal is to facilitate meaning and understanding as opposed to making data pretty or entertaining. Therefore, it is important to note that data visualisation is not about making data look pretty or 'dressing up' research reports, but rather about prompting intuitive comprehension and delivering insight (Bain, 2012c; Digit, 2011; Singer, 2011; Few, 2007; Pingmag, 2007; Hair *et al.*, 2006:635; Fry, 2004:40,43). Ultimately, data visualisations should be a balance between functionality and aesthetic appeal to facilitate intuitive understanding of complex data (Airinei & Homocianu, 2009:164). Using graphics to visualise data is, however, not a recent invention (Deloitte, 2011:1; Allen, 2010; Friendly, 2005; Tufte, 1983).

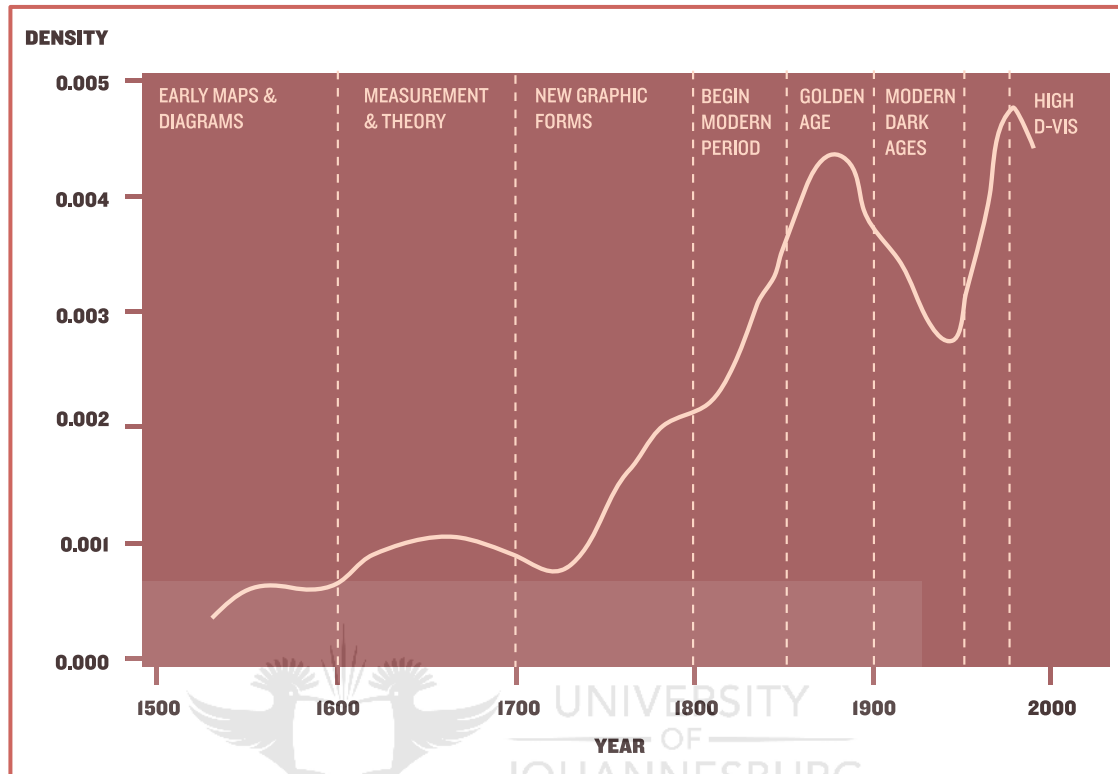
4.4.2 History of data visualisation

According to The Economist (2010) and Friendly (2006:1), it is common to think of data visualisation as modern developments, but the representation of quantitative data has deep roots that go back to society's earliest maps and scientific charts and is still a growing field (Singer, 2011). The following section delves into the history and future of data visualisation and also presents an overview of the current situation.

The roots of data visualisation reach back into a history of five centuries (Friendly 2005; Tufte, 1983). Friendly (2006) conducted an in-depth study to identify the most important developments across a wide range of disciplines and fields that have shaped data visualisation. This researcher's work is illustrated as a time and density distribution of data visualisation events in Figure 4.1. The time distribution of events considers milestones in the history of data visualisation from the first visualisation in the 16th century through to the 21st century, whilst density

distribution illustrates the number of data visualisation events occurring at a specific point in time.

Figure 4.1: Time and density distribution of data visualisation events



Source: Friendly and Denis (2009b) and Friendly (2006:3).

As illustrated in Figure 4.1, Friendly (2006) identified eight key time periods from the 16th to the 21st century. The key elements that contributed to each time period are briefly discussed.

4.4.2.1 Early Maps and Diagrams

The first period, “Early Maps and Diagrams”, is characterised by geometric tables of celestial bodies and their positions (Friendly, 2006:3; Tufte, 1983). The earliest graphical depiction of quantitative information is that of planetary movements and at the end of the 16th century, instruments for precise observation were well developed (Few, 2007; Friendly, 2006:4).

4.4.2.2 Measurement and Theory

The “Measurement and Theory” period came about to overcome the problems of physically measuring time, distance and space (Friendly, 2005:3). Van Langren, a

Flemish astronomer, is believed to have been the first person to visually present statistical data during this period (Tufte, 1997:15). At the end of the 17th century, graphical methods were well developed to give rise to the beginnings of visual thinking (Friendly, 2006:6).

4.4.2.3 New Graphic Forms

During the 18th century, graphical representation of aspects developed further to new domains, hence the period termed “New Graphic Forms” (Friendly, 2005:4). Economic and political information was now collected (in addition to geographical information) and other visual forms were invented to report data in an aesthetically appealing way (Friendly, 2006:7). Technological advancements in producing and distributing graphical work were also an important development (Friendly, 2005:4). Even though the father of data graphics, Playfair (1801) developed most of the visual tools used today such as line graphs, bar charts, pie charts and circle graphs during this period, yet the graphing of data remained rare for another 30 years (Allen, 2010; Friendly, 2006; Fry, 2004:36).

4.4.2.4 Begin Modern Period

In the first half of the 19th century, the “Begin Modern Period” was identified by exponential growth in statistical graphics and thematic mapping (Friendly, 2009:15). All modern forms of data display were already invented and included line graphs, bar and pie charts, histograms, time-series plots and scatterplots (Allen, 2010; Friendly, 2006:10; Playfair, 1801). In this era the use of graphs in official circles like economics, social realm and state planning were recognised, however, amongst statisticians there was still little interest in the use of graphs (Friendly, 2006:12,13).

4.4.2.5 The Golden Age

In the second half of this century, the “Golden Age”, growth in this field peaked and four key advancements occurred: 3D and 4D graphs; Minard’s development of circle diagrams and flow lines, correlation and regression charts, and reports and atlases with statistical graphic illustrations were produced, but due to high costs were shortly discontinued (Allen, 2010; Friendly, 2009:20; Friendly, 2005:5).

4.4.2.6 The Modern Dark Ages

The “Modern Dark Ages” followed, where few innovations were evident and the enthusiasm for data visualisation lessened due to the quantification and application of formal statistics (Friendly, 2009:27). The focus was on precision and “pictures are just pictures” (Friendly & Denis, 2001). A set of standards and rules for graphical presentations was adopted and practical aids were developed (Joint Committee on Standards for Graphic Presentation, 1914:790-797).

4.4.2.7 Re-birth

Due to the developments of machinery, modern statistical methods, computational power and display devices, a “re-birth” occurred in the late 1900s (Bradley, 2010:340; Friendly, 2005:7). According to both Friendly (2006:23) and Tukey (1962) new paradigms, languages and software packages that could express statistical ideas lead to great growth in new visualisation techniques. At the end of the 20th century the first cases of modern interactive systems in 2D and 3D appeared (Allen, 2010; Few, 2007:3).

4.4.2.8 High-D

The present period, “High-D”, is characterised by interactive, dynamic and multi-disciplinary visual techniques (Friendly, 2009:35). Friendly (2006:24) mentions that it is hard to provide a sufficient overview of this period due to its divergence across a wide range of disciplines. Allen (2010) however states that the biggest development, from 2000 – 2010, have been the use of the Internet as a new data visualisation medium. Furthermore, software is developed on a daily basis to help collate, manipulate and analyse data (Friendly, 2006:24,25). Current software examples available on the Internet include: Google maps, Google trends, Gapminder (animations of health statistics in comparison with GDP), BBC’s programme “The Joy of Stats”, Google and IBM’s programme “Many Eyes” (where people can upload their own data to display in a variety of visualised formats) and many more (Deloitte, 2011:2; Digit, 2011; Segel & Heer, 2010:1; Few, 2007:6; Pingmag, 2007).

Bain (2011a), Lowell (2011) and Shaw (2010:2) are of the opinion that all kinds of data visualisation have become popular in media and business, and that it is busy

catching on the marketing research world too. It is evident that data visualisation is now mainstream interest in many disciplines and since it is the core deliverable of marketing research firms, it places immense pressure on the industry's application thereof (Digit, 2011). However visual representation of data is not new to the world of marketing research, but increased interest and importance are placed on this development (Bain, 2011a; Doyle & Tharme, 2011). This development is further signified by partnerships that marketing research firms have closed with graphical design experts such as:

- **TNS:** TNS teamed up with the visualisation expert David McCandless (Bain, 2011b).
- **Hall & Partners:** Hall & Partners teamed up with the design expert Max Gadney (Davison, 2011:10).
- **Ipsos:** Ipsos is in a data visualisation partnership with The Design Laboratory (Bain, 2012d).
- **Draftfcb South Africa:** Draftfcb South Africa (a marketing communications group) launched a visualisation service called Visual Analytics (Hindmarch, 2011).
- **2012 GRIT Report:** The 2012 GRIT Report transformed their research report style to reflect innovative and non-traditional visual design (GreenBook, 2012:3).

Nonetheless, for the purposes of this study, data visualisation is divided into two categories namely **traditional** data visualisation techniques and **non-traditional** data visualisation techniques, which differ in the following ways (Shaw, 2010:2; Few, 2007; Friedman, 2007; Adams, 2003:128):

- **Traditional data visualisation techniques:** These data visualisation techniques are commonly used, easily generated and easily accessible techniques (through available software like PowerPoint and Excel). They considered to be conventional ways to illustrate data and are used to “get the job done” and not because they inspire. Some examples include bar charts, pie charts and line charts (refer to section 4.4.3 and Table 4.3 for a detailed discussion).

- **Non-traditional data visualisation techniques:** These data visualisation techniques are less commonly used, difficult to create and more difficult to access (these visualisations cannot be simply generated through software such as PowerPoint and Excel). They are also believed to be a more profound, creative and captivating way of visualising data. Some examples include infographics, bubble charts and interactive dashboards (refer to section 4.4.4 and Table 4.4 for a detailed discussion).

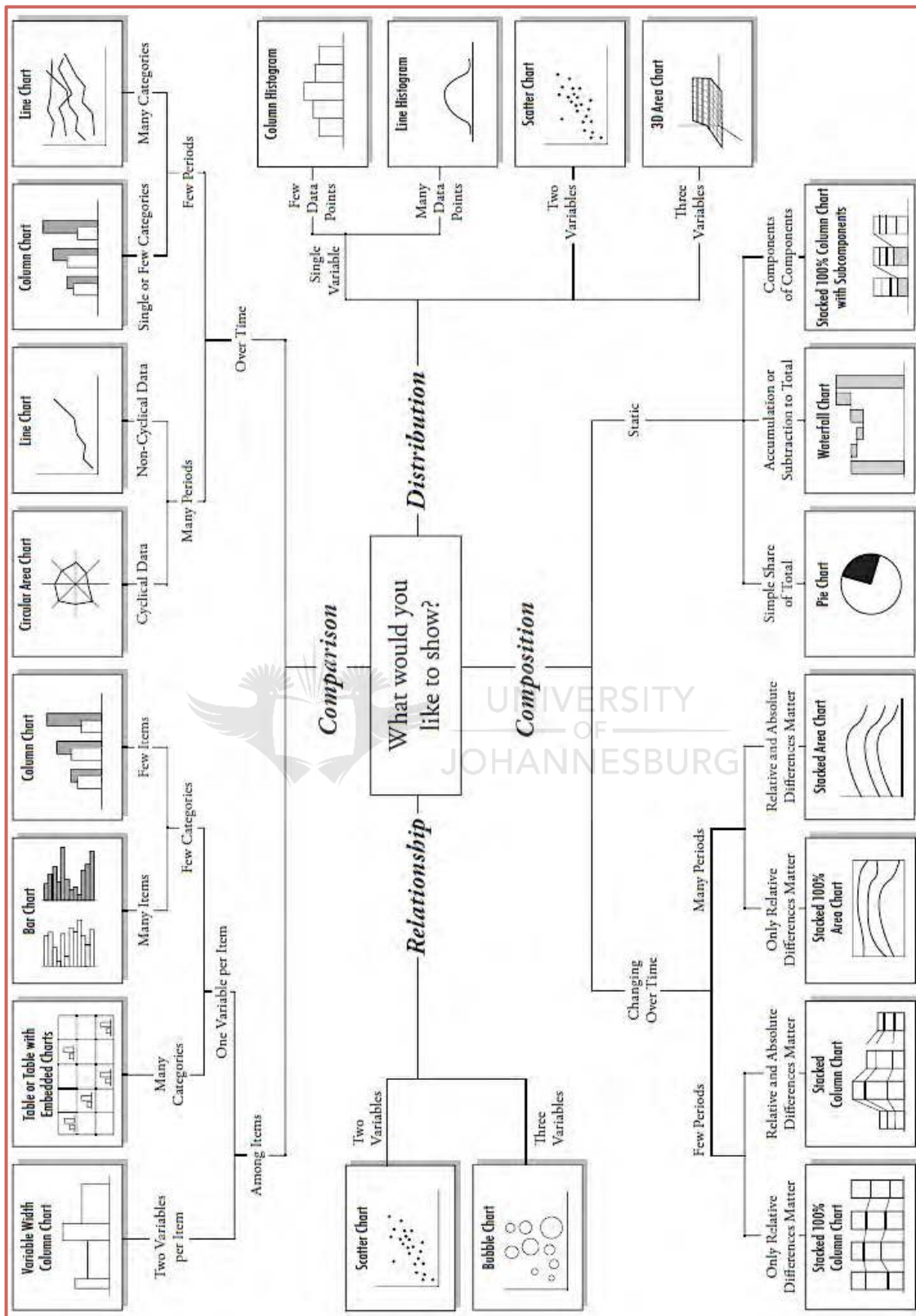
It should be noted that limited correlation exists between the categories and the history of data visualisation; some data visualisation techniques that were developed years ago, are not commonly used and are also not easy to generate by means of software. Nonetheless, traditional data visualisation techniques are presented first.

4.4.3 Traditional data visualisation techniques

The traditional data visualisation techniques commonly used in research reports include tables, bar charts, column charts, line charts, pie charts, scatter charts and area charts (Berndt & Petzer, 2011; Friendly, 2011; Friedman, 2007; Hair *et al.*, 2006:629, Fry, 2004:105-108). Literature suggests many classifications of traditional data visualisation techniques. In general they are classified according to one of four categories: intended purpose, circumstance for use, type of comparison to be made, or form (Jerome, 1924:50,51). A model developed by Abela (2009), based on the first category namely intended purpose, is considered the most appropriate for presenting the next section.

This model outlines traditional data visualisation techniques based on what the data is intended to show. Figure 4.2 illustrates four categories of traditional data visualisation techniques, which are dependent on whether the data is intended to show comparison, distribution, composition or relationships.

Figure 4.2: The type and choice of traditional data visualisation techniques



Source: Abela (2009).

Table 4.3 further explains the illustration by Abela (2009) in more detail by describing each technique and by indicating examples of how it is used in the marketing research industry.

Table 4.3: Techniques for traditional data visualisation

Category	Technique	Description	Examples of industry application
Comparison – among items	Variable width column chart	Data in the form of vertical bars separated from one another but the bars are not of equal width.	To visualise differences between projected and actual sales / brand or product preference by demographic variables.
	Table	Presents numerical data in columns and rows so as to compare exact values.	
	Bar chart	Data in the form of horizontal bars separated from one another.	
	Column chart	Data in the form of vertical bars separated from one another.	
Comparison – over time	Circular area chart	A simple line or bar chart, the ends of which have been “bent” to form a circle.	To visualise brand usage over time / sales over time.
	Line chart (single / multiple lines)	Connects a series of data points with a continuous line / lines.	
	Column chart	See description above (comparison – among items: column chart).	
Distribution	Column histogram	Data in the form of vertical bars with no spaces in between bars.	To visualise sales figures by geographical area (e.g. S.A.’s nine provinces) / brand or product preference by demographic variables (e.g. across different income groups).
	Line histogram	A normal line is drawn over the frequency distribution.	
	Scatter chart	Compares two sets of numbers at once (“disconnected” line chart).	
	Area chart (3D)	A line chart that shades the area below it – 3D area charts visualise three variables.	

Table 4.3: Techniques for traditional data visualisation (continued)

Category	Technique	Description	Examples of industry application
Composition - static	Pie chart	A circle-shaped chart which is divided into segments where each segment presents a portion of the total.	To visualise share of sales versus competitors / consumer preference of brands or products / demographic profile variables (e.g. race or income) / regional percentages of total expenses.
	Waterfall chart	Variables are shown as separate bars in a step form where the value scale runs down and up.	
	Stacked column chart	Each column is divided into a number of parts to compare the parts against each other and the total.	
Composition – changing over time	Stacked column chart	See description above (composition – static: stacked column chart).	To visualise share of sales across departments in a specified time period.
	Stacked area chart	Subdivides a line into its component parts (either individually or as a total).	
Relationship	Scatter chart	See description above (distribution: scatter chart).	See description above (distribution: scatter chart).
	Bubble chart	Compares three sets of numbers at once.	To visualise the number of products, rand value of product sales and the related percentage size of market share.

Source: Berndt and Petzer (2011:277-279,347), Burns and Bush (2010:651-656), Johnson (2010), Zikmund and Babin (2010:405-410), Abela (2009), Few (2006:151,152), George-Palilonis (2006:131-135), Hair *et al.* (2006:507-509), Fry (2004:105-108), Meyer (1997:206), Truran (1975:8,13,20), Lockwood (1969:28,34) and Schmid (1954:76-107).

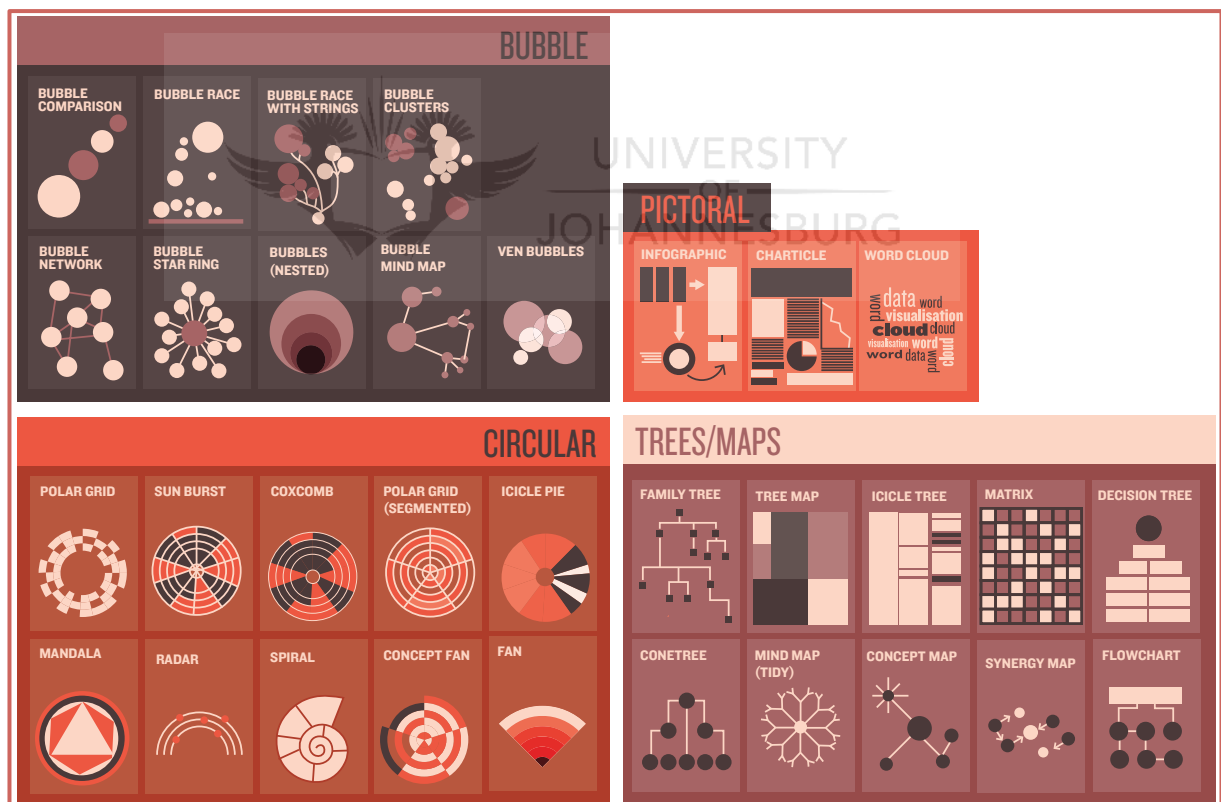
Few (2007) however states that traditional data visualisation techniques cannot match the actionable research that is inspired by non-traditional data visualisation techniques. Friedman (2007) adds that a simple pie chart is not enough to

facilitate understanding or actionable research; hence the increased interest in the use of non-traditional data visualisation techniques in the marketing research industry is discussed next.

4.4.4 Non-traditional data visualisation techniques

As defined previously, non-traditional data visualisations are considered to be more difficult to create, less readily available to create via software, and more creative compared to its traditional counterparts (bar charts, line charts, pie charts and variations thereof) (Shaw, 2010:2; Few, 2007; Friedman, 2007; Adams, 2003:128). There are many types of non-traditional data visualisations to choose from. McCandless (2009b:128) presents some options for non-traditional data visualisation techniques as illustrated in Figure 4.3.

Figure 4.3: The types of non-traditional data visualisation techniques



Source: Adapted from McCandless (2009b:128).

The visuals presented in Figure 4.3 showcase variations and more creative applications of the basic traditional data visualisation techniques (refer to Figure 4.2). These non-traditional data visualisations are classified into four main categories: **bubble** (comparison, race, race with strings, clusters, network, star ring, nested, mind map, Ven); **pictorial** (infographic, charticle, word cloud); **circular** (polar grid, sun burst, coxcomb, segmented polar grid, icicle pie, mandala, radar, spiral, concept fan, fan); **trees / maps** (family tree, treemap, icicle, matrix, decision tree, conetree, mind map, concept map, synergy map, flowchart) (McCandless, 2009b:128). It is beyond the scope of this study to define and explain each of these visuals in detail. However, the broad categories of non-traditional visualisation techniques are discussed in Table 4.4 by describing each technique and by providing examples of how each is used in the marketing research industry.

It should be noted that the visuals illustrated in Figure 4.3 are all static. The use of non-static or interactive (visualisations that exhibit some form of movement) non-traditional visualisation techniques is on the increase and includes examples like interactive timelines and interactive dashboards (Digit, 2011; Few, 2007:5,6; Friedman, 2007).

Table 4.4: Techniques for non-traditional data visualisation

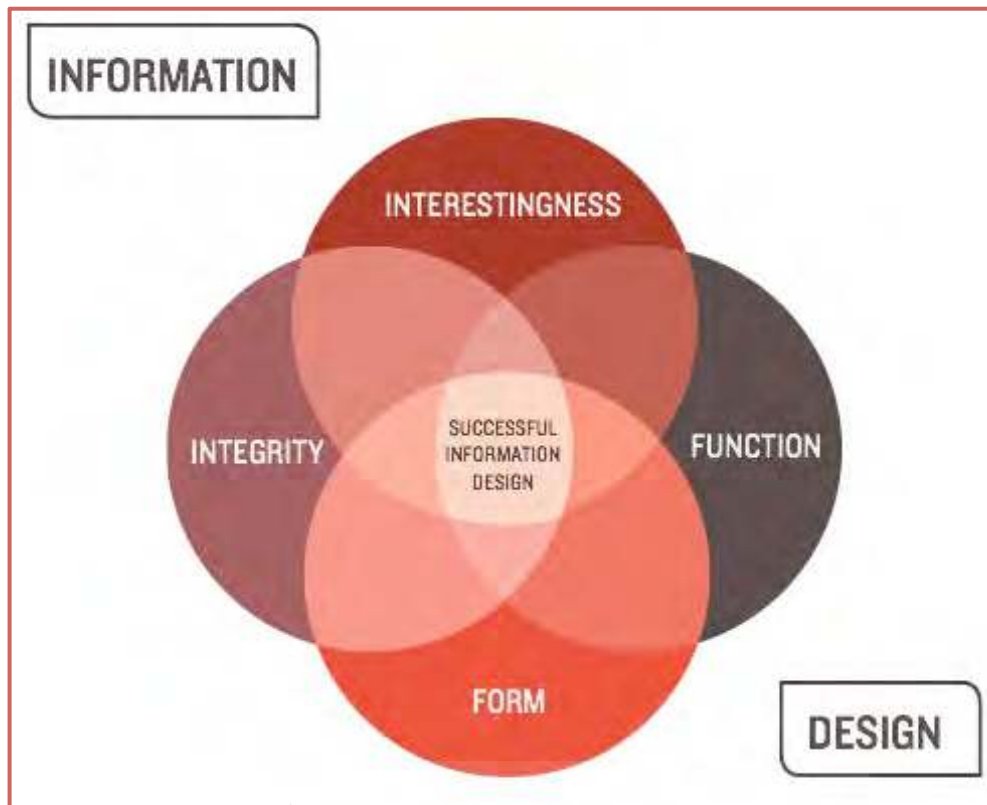
Category	Description	Examples of industry application
Bubble	Variations and creative applications of traditional bubble charts that compare three sets of numbers at once.	Segment breakdown (size) in a given population.
Pictorial	Text and / or graphs are supported and enhanced by the use of pictures, symbols or icons which usually represent data volume.	Segment profile / activities e.g. stick figures for number of respondents; beer cans for number of beers consumed in a month.
Tree / map	Hierarchically ordered data connected by lines of branches / boxes; hierarchical groupings can be segmented by size or shape.	Revenue (size) by product categories; most successful products in a category.
Circular	Variations and creative application of traditional pie charts that illustrate portions of a total.	Frequency / importance of activities (e.g. usage).

Source: TNS Consumer (2011), McCandless (2009b:128), Few (2007:6), Friedman (2007), Fry (2004:107,108), George-Palilonis (2006:179) and Cooper and Schindler (2001:642,769).

4.4.5 Pillars of successful data visualisation

Irrespective of using traditional or non-traditional data visualisations, McCandless (2009a) is of the opinion that successful data visualisation rests on four pillars namely, interestingness, integrity, form and function. As illustrated in Figure 4.4, a good data visual is produced by a combination of all four of these pillars. Table 4.5 provides definitions for each of these pillars.

Figure 4.4: Pillars of successful data visualisation



Source: Adapted from McCandless (2009a).

Table 4.5: Pillars of successful data visualisation defined

Element	Pillar	Definition
Information	Interestingness	The data visualisation is relevant and meaningful to the client – do people care about what’s being said?
	Integrity	The consistency and accuracy of the data / information – is it a true reflection of the data / information?
Design	Form	The aesthetic appearance of the data visualisations – is it nice to hear about and look at?
	Function	The usefulness of the data visualisations – is it easy to understand?

Source: Deloitte (2011:3), White (2011), McCandless (2009a) and Fry (2004).

The information pillars are therefore concerned with relevance and accuracy of the data visualisation, while the design pillars involve the appearance and level of comprehension the data visualisation portrays. It should be noted that many

different factors affect the design pillars of a data visualisation and include: size and weight of objects, shape, texture, colour use / intensity, and spatial placement of objects (Cleveland as cited in Friendly, 2011; Allan, 2010; Fry, 2004:35,111-113). It is beyond the scope of this study to examine the role and variation of each of these variables.

When marketing research firms balance these four pillars, a good data visual is possible (McCandless, 2009a). In addition to the four pillars, marketing research firms have two options to increase the actionability of data visualisation techniques:

- **Simplify traditional data visualisation techniques:** Avoid cluttering traditional data visualisations with unnecessary information by simplifying chosen data visualisations as indicated in Figure 4.4 (Few, 2011:2,3,5; Few, 2007:5).
- **Develop non-traditional data visualisation techniques:** Even though current efforts are focused on traditional research reporting, marketing research firms should develop and increase usage of non-traditional data visualisation techniques (Deloitte, 2011:5; Shaw, 2010:2). Dunn (quoted in Bain, 2011a) is of the opinion that non-traditional data visualisation techniques have a higher potential than traditional approaches to get the message across in an interesting manner that will stick with clients, and is a way to look more creative and cutting-edge compared to competition.

The advantages and disadvantages of data visualisation techniques are presented next.

4.4.6 Advantages and disadvantages of data visualisation techniques

Friendly (2007) is of the opinion that good visualisations (traditional or non-traditional) benefit clients by communicating information clearly, precisely and effectively, while poor visualisations obscure data, make it harder to understand and compare. The advantages of integrating these data visualisation techniques into current research reporting structures are discussed and a thematic summary in the form of a word cloud (refer to Figure 4.3) is shown in Figure 4.5 and detailed thereafter.

Figure 4.5: Summary of data visualisation advantages



Figure 4.5 indicates the most important data visualisation advantages by means of text size (larger text indicates greater advantages). Each of these advantages is discussed in more detail subsequently:

- **Engaging and interactive:** Good data visualisation techniques are an entertainment vehicle to stimulate interaction between clients and marketing research firms and encourage continuous client feedback. In addition they could encourage audiences to spend time with the data themselves (Davison, 2011:12-16; Digit 2011; Few, 2011:10; Lowell, 2011:5; Singer, 2011; Shaw, 2010:2; Few, 2007, Silverman, 2006:xvx).
- **Intuitive understanding:** This means that the reader / viewer of the data visualisation can easily identify patterns, trends and insights and the actionable implications thereof are clear; some authors describe it as prompt visceral comprehension (Kaidi, 2012; Digit, 2011; Lowell, 2011:3,4; Lapierre & Pierre, 2010:4; Few, 2007; Adams, 2003:131).
- **Brain stimulation:** Data visualisations focus the attention of the reader / viewer on both sensorial and rational sides of the brain simultaneously, which naturally leads to better recall (Deloitte, 2011; Digit, 2011; Few, 2011:10; Lapierre & Pierre, 2010:5; Few, 2007; Pingmag, 2007; Blue, 2006; Silverman, 2006:163).
- **Simplified:** Data visualisations make it easier for researchers to present research results and easier for audiences to read and make sense of. It therefore offers the opportunity to report in a clear and effective fashion (Kaidi, 2012; Digit, 2011; Lapierre & Pierre, 2010:5).

- **Increased impact:** Data visualisations offer moments of insight that increases impact to the client audience when presenting research results (Davison, 2011:2,12-16; Lapierre & Pierre, 2010:6).
- **Facilitate understanding:** Effective data visualisations aid comprehension that leads to an understanding of what needs to be implemented; it helps audiences to “see” things that could not previously have been understood in abstract data (Silverman, 2006:164; Fry, 2004:33,34,39).
- **Aesthetic appeal:** A data visualisation technique that looks good and desirable helps clients to read visual representations of data easier (Bain, 2012c; Bain, 2011a; Friedman, 2007; Blue, 2006).

There are also some disadvantages in using data visualisation techniques that are similarly illustrated in Figure 4.6 (larger text indicates greater disadvantages) and are detailed next.

Figure 4.6: Summary of data visualisation disadvantages



Each of these advantages is discussed in more detail subsequently:

- **Mislead or confuse readers:** Data visualisations could cause confusion or mislead readers. The reader is unsure of what the information means, how to read the numbers, and how they should be interpreted (Davison, 2011:5; Singer, 2011; Few, 2007).
- **Complex and full of “chartjunk”:** Microsoft software like Excel and PowerPoint churn out traditional data visualisations fast and effectively. These user-friendly software packages allow researchers to make data visualisations more complex, make lazy thinkers, are presenter- and not audience-orientated and tempt researchers to produce “chartjunk” (Friendly, 2011; Davison,

2010:5; Tufte, 2003:4,16,17,23). Few (2011:1) and Tufte (2003:16) continue to explain that chartjunk includes non-data, non-informative and unnecessary data in a visualisation such as encoded legends and meaningless colour. Few (2011:10) adds that it could be anything that does not support a visualisation's message in a meaningful way or distracts from the message. Traditional data visualisation techniques tend to lend themselves towards a focus on data that is usually poorly displayed which distracts from the message it should portray (Friendly, 2011; Gemignani & Hilburn, 2010:6).

- **Lack insight:** A higher focus on aesthetic appeal could lead to a lack of insights and actionability (Bain, 2012c; Bain, 2011a).
- **Bias:** Researchers could cut data to their own advantage to support a personal agenda; it is easy for them to manipulate data visualisations to achieve what they want to show and convey (Doyle & Tharme, 2011).
- **Specialised skills:** Researchers sometimes simply do not have the skills to execute data visualisations (especially non-traditional data visualisation techniques) and then the skills of a graphical designer or computer specialist are needed to execute the data visualisation (Bain, 2011a; Doyle & Tharme, 2011; Fry, 2004:11,110).
- **Not the best learning method:** There is always the risk that some people will struggle or not be able to learn from specific data visualisation techniques (Johnston, 2010).

4.4.7 Barriers to marketing research firms in adopting non-traditional data visualisation techniques

It is troubling that marketing research firms are sticking to more traditional ways of visualising data and are not currently catching up and implementing these non-traditional techniques fast enough internationally or locally (Bain, 2011a; Doyle & Tharme, 2011). Marketing research firms are starting to take notice of non-traditional data visualisation (Doyle & Tharme, 2011), but many barriers impede the implementation of non-traditional data visualisation in marketing research firms and include:

- **Simplicity offered by software:** As established, traditional data visualisations are generated with minimal thought – more thinking is needed to effectively

communicate data through non-traditional data visualisation techniques. Through the click of a button, computer software chart-packages like Microsoft Excel and Microsoft PowerPoint create data visualisation (charts) from any data set in little time (Christiansen, 2011; Davison, 2011:5,6).

- **Choice limited by software:** Tufte (2003:23) mentions that the choice of a visualisation technique is currently limited by presentation technology, instead of being guided by the character of the data and what needs to be explained. Few (2007:9) adds that the focus should shift from “machine thinking” to “human thinking”. Changing to new methods requires investments in time, money and possibly additional resources (Christiansen, 2011; Tufte, 2003).
- **Lack of skills:** Generally, marketing researchers lack graphic design skills (Bain, 2011a; Davison, 2011:10,11; Doyle & Tharme, 2011; Fry, 2004:110) and marketing research firms do not currently employ enough people who are design literate; instead staff are merely data literate (Bain, 2011a).
- **Require multilevel skills:** Researchers are now expected to have skills in computers, statistics, visual design and storytelling (Micu *et al.*, 2011:11; Shaw, 2010:12; The Economist, 2010:1; Fry 2004:11).
- **Increased cost:** As a result of skill shortage, marketing research firms possibly need to outsource data visualisation to specialists or employ design and data literate researchers, which could lead to increased costs (Bain, 2011a; Davison, 2011:12; Doyle & Tharme, 2011; Grimshaw, 2011:2; Fry, 2004:110,121).
- **Poor implementation:** If non-traditional data visualisation is not implemented well, clients will be unsatisfied and marketing research firms will be hesitant to keep on trying and implementing these techniques (Micu *et al.*, 2011:11).
- **Require investment:** Marketing research firms are often not willing to spend money to develop new systems that accommodate non-traditional techniques (Micu *et al.*, 2011:11).
- **Inflexible resources:** Marketing research firms tend to resist the adoption of new data visualisation techniques as they are apprehensive to change what they already know and do well, for example, using traditional data visualisation techniques (Micu *et al.*, 2011:11).

- **Resistant clients:** Clients demand change, but often resist it. Clients prefer research results to reflect traditional and familiar data visualisation techniques (as opposed to unfamiliar non-traditional data visualisation techniques); in addition it is difficult to educate them on new research reporting techniques (Davison, 2011:10; Micu *et al.*, 2011:11).

Data visualisation is the medium or starting point to find, tell and evaluate stories in both written and oral formats (Grimshaw, 2011:2; Lowell, 2011:3; Segel & Heer, 2010:2). Subsequently, the next section details storytelling.

4.5 STORYTELLING

This section provides a definition of storytelling, whereafter it briefly examines the history of storytelling, the elements of storytelling as well as the techniques available to compile a story. The section furthermore highlights the pillars of successful storytelling, and presents the advantages and disadvantages associated with using storytelling, and finally also examines the barriers marketing research firms face when using storytelling to report research results.

4.5.1 Storytelling defined

Storytelling has long been recognised as useful in business and is used in many different business disciplines, including marketing research. It is increasingly being used to help organisations in acting consciously and purposefully when sharing information (Tobin & Snyman, 2008:133; Silverman, 2006:xvii, xviii, xxii). Storytelling is changing the way that marketing research firms report research results (Segel & Heer, 2010:1; Silverman, 2006:110). Even though marketing research is dependent on scientific and statistical methods, research is unable to drive change in client behaviour without stories that give meaning to data visualisations (Silverman, 2006:169).

The word story's literal translation is given as an account of incidences or events, and has its roots in French and Latin (Tobin & Snyman, 2008:133). Equally, from a marketing research perspective, storytelling is defined as giving account of something in a specific order that creates connection between data / facts (Segel & Heer, 2010:1). Similarly, Lowell (2011:5) defines storytelling as linking one data

visualisation with the next. Storytelling presents a way to convey data visualisations in an actionable format and gives meaning to data (Grimshaw, 2011:2; Silverman, 2006:162). For the purposes of this study, **storytelling** is defined as focusing the marketing research firm's effort in reporting research results coherently and in an order that is easy for the client to follow.

As mentioned earlier, Bradley (2010:350), Burns and Bush (2010:646) together with Zikmund and Babin (2010:404) state that the research results should be organised as a continuous story with summary tables, figures, graphs and appropriate visuals that support and enhance the explanation of research results (refer to section 4.3.4.2). When this has been achieved, the research report answers the questions posed in the first step and helps clients to understand how the data is translated into actionable research (Cant *et al.*, 2008:234).

4.5.2 History of storytelling

Storytelling is the oldest form of communication (Roney, 1989:520). Tobin and Snyman (2008:133) state that since the beginning of human existence, storytelling has existed and Czarnecki (2009:5) adds that the concept of storytelling is older than human history. Information, knowledge and wisdom were passed down orally through storytelling before the development of written language (Tobin & Snyman, 2008:131,133; Czarnecki, 2009:5). Abrahamson (1995:440) adds that storytelling was not only used in the past to pass down information, but was also used to preserve information. The earliest mention of storytelling dates back to 4000 B.C. and the Egyptian tales (Sawyer, 1942). The invention of printing press in 1450 had a major impact on storytelling – stories could be shared with more people as availability thereof increased (Gershon & Page, 2001:31; Abrahamson, 1995:440). From the earliest days, storytelling has been recognised as critical to the process of learning and understanding and conceptualising a universal experience (Carter-Black, 2007:32; Abrahamson, 1995:441).

Czarnecki (2009:5) comments on the role that technology has played in the history of storytelling. In the past, technology was used as a tool to spread stories to a wider audience; presently, it is used as a tool that is an integrated part of the

storytelling process and of the story itself. In addition, static data visualisation techniques have long been used to support storytelling – usually in the form of charts embedded in a larger body of text; the text conveys the story, and the data visualisation typically provides supporting evidence or related details (Segel & Heer, 2010:1). Segel and Heer (2010:1) continue to explain that specific non-traditional data visualisations attempt to combine storytelling with interactive graphics. To further uncover storytelling, the elements of storytelling are subsequently presented and discussed.

4.5.3 Storytelling elements

Several elements are needed to compile a story. These elements firstly include the basic elements of any story – a clear beginning, middle and end are needed together with a compelling plot and characters (Ghoshal, 2011:4; Lowell, 2011:3,4; Segel & Heer, 2010:1; Silverman, 2004:165). Ghoshal (2011:4) provides the following framework for storytelling in marketing research:

- **Mission:** There should always be a mission such as increasing the share or growth of a brand or client organisation (usually linked to the research problem as identified in step one of the research process – refer to section 4.2).
- **Protagonists:** This is the main character who often needs to implement the change and take action (usually the client).
- **Antagonists:** This is the character who opposes the protagonist and is often a competitor of client organisations.
- **Dilemma:** Details how the mission should be reached, for example, how to grow share despite obstacles like increased competition or changed consumer behaviour.
- **Setting:** Gives context of where the story is taking place such as at a specific market, country, consumer segment or category.

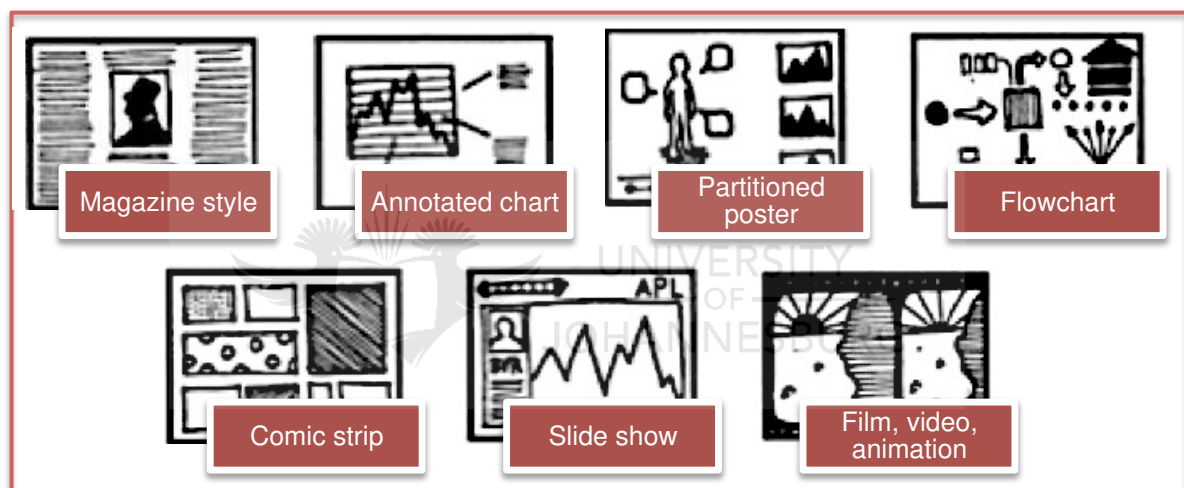
Additionally, Segel and Heer (2010:2) together with Meyer (1997:137,138) describe the basic elements of storytelling as the well known who, what, where, when, why and how. Davison (2011:7,9) on the other hand, suggests that there is no standardised approach to storytelling – there are only departure points like

data, data mining and data visualisations. Specific techniques of storytelling are discussed next.

4.5.4 Storytelling techniques

Tobin and Snyman (2008:133) state that storytelling can be done in any format (written and / or oral) and using a variety of media (theatre, storyboards, comic books, song and dance). It is Segel and Heer (2010:1,7) who suggest seven different techniques, namely: magazine style, annotated chart, partitioned poster, flow chart, comic strip, slide show, and film / video / animation. These are illustrated in Figure 4.7 and described in Table 4.6.

Figure 4.7: Storytelling techniques



Source: Adapted from Segel and Heer (2010:7).

Table 4.6: Storytelling techniques

Category	Description	Examples of industry application
Magazine style	An image is included in between text.	An example could be to use a metaphor of David and Goliath to portray research results. The client's brand would be associated with David who has to defeat a competitor, Goliath by changing the rules of the game (images and text boxes could be used together with the data visualisation techniques to illustrate this metaphor and story).
Annotated chart	Detailed text boxes accompanying data visualisation techniques to point to and explain specific visual elements within the larger part of it.	

Table 4.6: Storytelling techniques (continued)

Category	Description	Examples of industry application
Partitioned poster	Multiple visuals appear on the poster in no particular order.	Client retail environments can be showcased to compare urban and rural competitor retailers / a sample breakdown could be illustrated by including age, gender, income.
Flowchart	Shows how one visual leads to the next.	The research results of individual brand equity variables could be illustrated to show how they lead to a singular brand equity score / an overall brand rating, then reasons for brand rating, followed by brand liking scores, then reasons why consumers like the brand can be shown.
Comic strip	Has multiple visuals on it with a particular order.	This can be used to evaluate concepts. The respondent's evaluation of concept A is first shown, followed by concept B, C and D so as to visualise the overall performance of all concepts.
Slide show	Uses one visual per page and then move on to the next.	Slide one could be a summary of key indicators and the rest of the slides then unpack each indicator (for example slide two awareness, slide three usage, slide four drivers of choice).
Film, video, animation	A display or story that makes use of different media formats to serve an explanatory role in either real-life or an animated format.	Customer segments can be reported by coupling data visualisation techniques with a video showing real images and lifestyles of people from each segment.

Source: TNS (2012), Davison (2011:13,14), Ghoshal (2011:2,4), Research International (2010), Segel and Heer (2010:7), George-Palilonis (2006:175-182) and Silverman (2006:163).

It is important to note the following two observations:

- **Use:** These storytelling techniques are not mutually exclusive. This means one technique can be used in combination with another (Segel & Heer, 2010:7).
- **Choice:** The choice of storytelling technique strongly relies on the type of data, the complexity of the data, the medium and the client audience (Segel & Heer, 2010:8).

4.5.5 Pillars of successful storytelling

In this section the pillars of successful storytelling are presented. In marketing research, suitable storytelling should be based on the pillars of simplicity, engagement, customised, contextual, reliability and single-mindedness as presented in Table 4.7.

Table 4.7: Pillars of successful storytelling

Pillar	Definition
Simplify	Stories should help clients absorb and understand complex data in a simple way.
Engage	Stories should be engaging and interactive.
Customised	Stories should be customised to the specific client audience.
Contextual	Stories should create a context against which data can be interpreted.
Reliable	Stories should be supported by reliable data and data visualisations.
Single-minded	Stories should be single-minded without any extra data details, as this often blurs the story. Marketing research firms should stick with the story in the research report and rather supply clients with an appendix including all charts in a databook.

Source: Eloff (2012:12), Davison (2011:3,9,10), Ghoshal (2011:3,4), Lowell (2011:4,5), White (2011), Segel and Heer (2010:1), Silverman (2006:141,163,166) and Tufte (2003:12).

Next the advantages, disadvantages and barriers for marketing research firms to adopt storytelling are explored.

4.5.6 Advantages and disadvantages of storytelling

Storytelling yields the same advantages as using data visualisations namely: engaging and interactive, intuitive, stimulates brain and aids recall, simplified, increases impact and facilitates understanding (refer to section 4.4.6). The only benefit that does not overlap with data visualisation is the benefit of aesthetic appeal. Nonetheless, storytelling in particular is recognised for being engaging, interactive and intuitive which aids better recall (Kaidi, 2012; Davison, 2011:12-16; Deloitte, 2011; Digit 2011; Few, 2011:10; Lowell, 2011:3-5; Singer, 2011; Lapierre & Pierre, 2010:4,5; Shaw, 2010:2; Few, 2007; Pingmag, 2007; Blue, 2006; Silverman, 2006:xvx,163; Adams, 2003:131).

Stories in particular engage with people's emotions, are entertaining and therefore easy to remember (Ghoshal, 2011:3). Storytelling enables an emotional connect between clients and the research results because it follows a whole-brain approach (Deloitte, 2011:1; Silverman, 2006:xxv). Whilst data speaks to the analytical left-brain, stories (and data visualisation techniques) speak to the creative right-brain (Deloitte, 2011:1; Singer, 2011:1; The Economist, 2010:2; Silverman, 2006:xxvii,157). TNS (2010) and Hamburger and Lawry (2008:15) add that storytelling has the ability to resonate with people, while facts / data do not. Silverman (2006:167) adds a unique advantage of storytelling in that it offers the ability to overcome the barrier between research science and the language of business (refer to section 4.3.4.2).

The only noted disadvantages of stories are that they are time intensive, researchers are still required to know all the "numbers", and that storytelling requires specialised skills (Davison, 2011:9,16; Silverman, 2004:165).

4.5.7 Barriers to marketing research firms in adopting storytelling

The barriers that prevent marketing research firms from adopting storytelling into research results are explained next:

- **Lack of skills:** It is difficult for researchers to implement, as it goes beyond the traditional analysis role of a researcher (Davison, 2011:7,8; Thun & Brandt, 2007:14; Silverman, 2006:164).

- **Specific skills:** Require specific skill and experience – specialised skills are needed to make complex data appear simple in a story format (Silverman, 2006:165).
- **Perception:** The role and function of stories have a poor perception; many marketing research firms and clients think that a story is “too light” compared to formal data tables and charts, consequently thinking that it waters down research results (Ghoshal, 2011:4; Silverman, 2006:164).
- **Scientific methods:** Advanced scientific and statistical methods make engaging and inspiring storytelling difficult. A story fades when you have to tell it with correlation coefficients, a p value, R^2 , error terms and statistics (Lowell, 2011:3,4). Ghoshal (2011:3) uses an appropriate analogy to illustrate this point; stories could be compared to a smartphone’s interface – users do not need to know about the complex technologies that makes it work, they are only interested in the outcome of using it.

4.6 CONCLUSION

This chapter commences by providing an overview of the marketing research process from different literature. This chapter specifically focuses on marketing research firms’ application of the last step, namely the reporting of research results to clients. It establishes that research reports are a critical step of the marketing research process because they could be used as a method to communicate research results with action (hence a strategic approach). Two methods that could be used to facilitate actionable research reports, namely data visualisation and storytelling are presented.

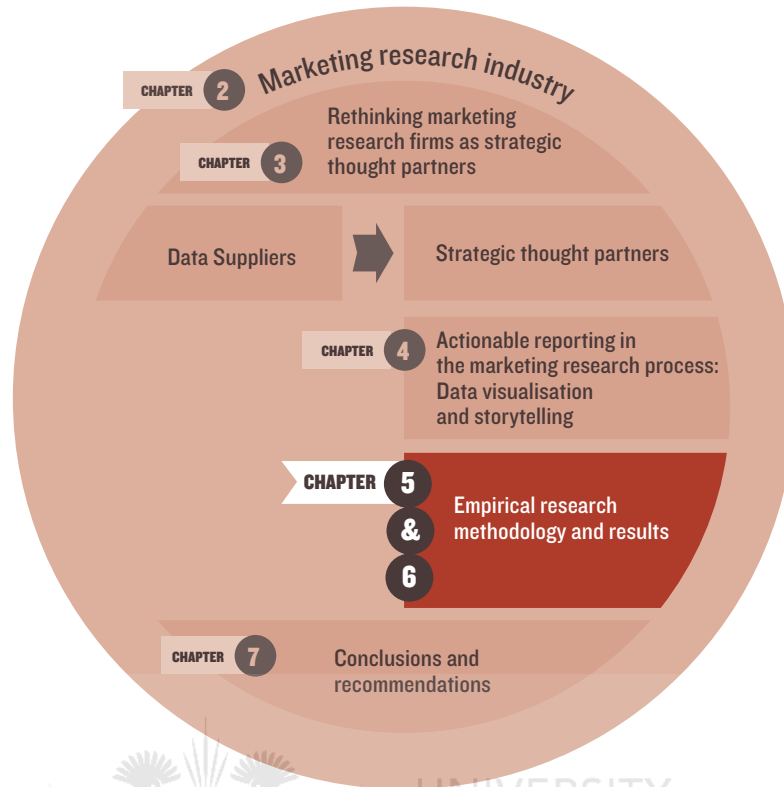
For both data visualisation and storytelling, definitions are presented together with a brief overview of the history of each. Data visualisation specifically studies traditional and non-traditional data visualisation techniques. The key finding is that the strategic application of data visualisation techniques could be achieved by either simplifying traditional data visualisation techniques or by developing non-traditional data visualisation technique capabilities. In addition, the discussion on storytelling presents the techniques and various elements of storytelling. For both methods the researcher presents the pillars of success, their advantages, disadvantages and barriers to the adoption thereof.

Chapter 5 explains the chosen methodology of the empirical section of the study where the use of data visualisation and storytelling in quantitative research reports by marketing research firms was studied, together with establishing clients' perceptions of quantitative research reports.



CHAPTER 5

RESEARCH METHODOLOGY: EMPIRICAL STUDY



5.1 INTRODUCTION

The purpose of this chapter is to explain the research methodology followed to address the research problem and achieve the objectives formulated for the study. The chapter commences with an outline of the research objectives and propositions so as to provide context for the chosen methodologies. The empirical study was divided into two parts – the main study that focused on addressing the key research objectives from the marketing research firm’s perspective, and then a small-scale complementary study that evaluated clients’ perception of marketing research firms’ quantitative research reports. The chapter provides justification for the choice of research designs, data collection and analysis methods used for both parts of the empirical study. Furthermore it also presents measures that ensure trustworthiness for the main study and reliability in the small-scale complementary study.

5.2 RESEARCH OBJECTIVES

Literature suggests that research objectives guide the choice of all research methodology elements including the research design, sample methodology, data collection and analysis during a marketing research project (Berndt & Petzer, 2011:53; Poggenpoel, Myburg & van der Linde, 2001:412). Both primary and secondary objectives should be set for all research projects (Berndt & Petzer, 2011:29). According to Berndt and Petzer (2011:29), the primary research objective is the main outcome that the research would like to achieve, whereas the secondary research objectives outline the details of the primary research objective. In essence, research objectives state what researchers must do to provide the necessary information to solve the research problem (Burns & Bush, 2006:29). The primary research objective and secondary research objectives of the study are subsequently presented (refer to section 1.5).

5.2.1 Primary research objective

To uncover the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports.

5.2.2 Secondary research objectives

- **A:** To provide a literature overview of data visualisation and storytelling, and the use thereof by marketing research firms in quantitative research reports.
- **B:** To determine the current approaches marketing research firms follow in quantitative research reporting.
- **C:** To investigate the use of data visualisation by marketing research firms in quantitative research reports.
- **D:** To investigate the use of storytelling by marketing research firms in quantitative research reports.
- **E:** To determine the perceptions of clients regarding quantitative research reports prepared by marketing research firms.

5.3 PROPOSITION RESEARCH

Theories can only be created by developing sets of propositions that establish relationships between aspects in a systematic manner (Henning, 2004:14).

Zikmund and Babin (2010:55) and Morse and Field (1996:113) define a proposition as a statement that needs to be upheld or a statement that is assumed for the purpose of an argument. Propositions should be indicative of potential data relationships (Morse & Field, 1996:114). Zikmund and Babin (2010:55) also refer to propositions as hypotheses, but propositions are more commonly used to describe the possible outcomes of qualitative research as in the case of this study.

The purpose of propositions is to prepare the researcher for the nature of behaviour and to help one understand a topic that was not previously understood (Bogdan & Taylor, 1975:80). The following propositions are theorised for each research objective as specified in section 5.2 and tabulated in Table 5.1.

Table 5.1: Research objectives and propositions

Research objectives	Research propositions
Primary research objective	
To uncover the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports.	Proposition A: Data visualisation and storytelling are not strategically used by marketing research firms in quantitative research reports.
Secondary research objectives	
A: To provide a literature overview of data visualisation and storytelling, and the use thereof by marketing research firms in quantitative research reports.	A proposition has not been formulated for the literature overview.
B: To determine the current approaches marketing research firms follow in quantitative research reporting.	Proposition B: Marketing research firms have a traditional approach to quantitative research reporting.
C: To investigate the use of data visualisation by marketing research firms in quantitative research reports.	Proposition C: Marketing research firms do not use non-traditional data visualisation techniques in quantitative research reports.
D: To investigate the use of storytelling by marketing research firms in quantitative research reports.	Proposition D: Marketing research firms do not use storytelling in quantitative research reports.
E: To determine the perceptions of clients regarding quantitative research reports prepared by marketing research firms.	Proposition E: Clients have a negative perception of quantitative research reports prepared by marketing research firms.

Research designs are discussed next in context of the research objectives.

5.4 RESEARCH DESIGN

The research design is the plan and structure to obtain answers to the research objectives and is a blueprint for the collection, measurement and analysis of data (Burns & Bush, 2010:117; Zikmund & Babin, 2010:56). The research design serves as a framework that specifies three elements: the sources of data, type of information that should be collected, and the choice of data collection method (Zikmund & Babin, 2010:56,57; Kinnear & Taylor, 1996:129). Relevant literature of these three elements is presented first before the application thereof in this study is presented in Table 5.2.

5.4.1 Sources of data

Data can be obtained from two sources, either primary or secondary. Secondary data is information that already exists (like organisations' sales figures), or data that was collected for a purpose other than the identified research problem, whereas primary data is purposely gathered to solve a specific research problem (Berndt & Petzer, 2011:31; Malhotra & Birks, 2006:41). Secondary data is usually the starting point of any research design – reviewing past records and previous studies reveals a lot about decision-making patterns and could help refining the research problem, choosing an appropriate research design / method (Berndt & Petzer, 2011:44; Cooper & Schindler, 2001:140). In contrast, primary data is information needed for a specific research objective that has never been collected before (GreenBook, 2011:15; Burns & Bush, 2010:174; Aaker *et al.*, 2004:759). In primary data collection different types of information can be considered.

5.4.2 Type of information

Traditionally, the type of information that needs to be collected is classified into two broad categories, namely exploratory and conclusive (Zikmund & Babin, 2013:100; Malhotra & Peterson, 2006:72). Conclusive research designs are further divided into descriptive and causal designs (Burns & Bush, 2010:117; Malhotra & Peterson, 2006:72). Exploratory research designs comprise research conducted to explore and gain insights into a research problem, while conclusive research is conducted to evaluate and select the best course of action regarding

a research problem (Burns & Bush, 2010:117; Malhotra & Peterson, 2006:72). Exploratory designs lend themselves to qualitative research, while conclusive research is mainly quantitative in nature (Zikmund & Babin, 2013:100).

Qualitative research is defined as an explorative method to gain preliminary insights into decision problems, opportunities, underlying motivations and ideas of participants (Malhotra, 2010:144; Hair *et al.*, 2006:173; Aaker *et al.*, 2004:75). In contrast, a quantitative research design involves using standardised statistical methods to quantify the research problem (Berndt & Petzer, 2011:47; Hair *et al.*, 2006:171; Aaker *et al.*, 2004:75; Cant *et al.*, 2003:29). The aim of qualitative research designs is to understand and then offer interpretation of a specific research problem, while quantitative research designs are concerned with the direct measuring thereof (Rolfe, 2006:306; Babbie & Mouton, 2001:270; Poggenpoel *et al.*, 2001:409).

5.4.3 Data collection method

The data collection method involves the choice of how responses are collected from the selected sample, in other words, deciding how the necessary information will be gathered (Burns & Bush, 2006:234; Malhotra & Birks, 2006:15). This decision depends on whether a qualitative or quantitative research design is chosen. Qualitative data could be gathered by means of focus groups, in-depth interview methods, observation techniques, projective techniques, experience surveys or case study research methods (Zikmund & Babin, 2010:102-111; Cant *et al.*, 2003:31). Zikmund and Babin (2010:155-178), together with Burns and Bush (2006:234-244) identified four categories of quantitative data collection, namely: person-administered methods, computer-administered methods, self-administered methods and hybrid methods, and these are briefly discussed subsequently.

Person-administered data collection methods include interviews conducted in-home, at malls, in offices or over the telephone (Zikmund & Babin, 2010:155-178; Burns & Bush, 2006:243,244). Computer-administered surveys make use of technology to complete surveys and include computer-assisted telephonic interviews, full-computerised interviews and online and Internet-based surveys

(Zikmund & Babin, 2010:155-178; Burns & Bush, 2006:243,244). Self-administered surveys could be conducted via drop-off, per mail or fax (Zikmund & Babin, 2010:155-178; Burns & Bush, 2006:243,244). Hybrid methods make use of a combination of any of these methods to collect data (Berndt & Petzer, 2011:204). It is beyond the scope of this research study to discuss each of these methods in detail.

Against this discussion presented above, the research design choices of this study are outlined. Both secondary and primary (empirical) data was collected to answer the research objectives (for the remainder of the study the primary data collection phase is referred to as the empirical study). Secondary data was gathered by referring to textbooks, journals, Internet scholarly journals and industry related publications (refer to section 1.7). For the empirical study, an exploratory qualitative research design fitted the objectives that addressed the marketing research firms' perspective of quantitative reporting (secondary research objectives B, C, D), while the client's expectations of quantitative reporting fitted a quantitative research design (research objective E) (refer to section 5.2). Hence, the empirical study was undertaken in two phases, which included a main study (qualitative phase) and a small-scale complementary study (quantitative phase). The studies were conducted sequentially; the main study was followed by the small-scale complementary study (Berndt & Petzer, 2011:50). These research design decisions of each element (the choice of data source, type of information and data collection method) are tabulated in Table 5.2.

Table 5.2: Research objectives and fitting research design elements

Research objective	Fitting research design elements
Primary research objective	
To uncover the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports.	<p>Secondary research: Refer to literature presented in Chapters 3 and 4.</p> <p>Empirical research (main study): Exploratory qualitative research design; data collection through in-depth interviews.</p> <p>Empirical research (small-scale complementary study): Descriptive quantitative research design; data collection through computer-administered, Internet-based survey.</p>
Main study (qualitative phase)	
Secondary research objectives	
A: To provide a literature overview of data visualisation and storytelling, and the use thereof by marketing research firms in quantitative research reports.	Secondary research: refer to literature presented in Chapters 3 and 4.
B: To determine the current approaches marketing research firms follow in quantitative research reporting.	<p>Secondary research: refer to literature presented in Chapters 2, 3 and 4.</p> <p>Empirical research: exploratory qualitative research design; data collection through in-depth interviews.</p>
C: To investigate the use of data visualisation by marketing research firms in quantitative research reports.	
D: To investigate the use of storytelling by marketing research firms in quantitative research reports.	
Small-scale complementary study (quantitative phase)	
E: To determine the perceptions of clients regarding quantitative research reports prepared by marketing research firms.	<p>Secondary research: Refer to literature presented in Chapters 2, 3 and 4.</p> <p>Empirical research: Descriptive quantitative research design; data collection through computer-administered, Internet-based survey.</p>

Next a detailed explanation of the main study (qualitative phase) is presented.

5.5 MAIN STUDY: QUALITATIVE RESEARCH DESIGN

This section considers the reasons why a qualitative research design was chosen for the main study, and it details how and from whom data was collected and the analysis method used. The section concludes with a detailed explanation of how the researcher applied certain criteria to ensure rigour throughout the research process.

5.5.1 Motivation for choosing a qualitative research design

Zikmund and Babin (2013:48,98) together with Burns and Bush (2010:119) suggest that qualitative research should be used in the following instances: for research that looks deep into complexities and processes; for research on little known phenomena or innovations; for research that wants to explore the where and why of practices; and for research still needing to identify relevant variables.

Zikmund and Babin (2013:99) as well as Hair *et al.* (2006:172) state that qualitative research is fitting when preliminary insights on and an understanding of ideas are needed as opposed to validation of facts and predictions. Qualitative research is therefore used when researchers lack a clear idea of the problems they will meet during the study, when important variables may be unknown and it is also used to gain much-needed background information in order to build theories (Burns & Bush, 2010:145; Hair *et al.*, 2006:173; Cooper & Schindler, 2001:139).

To further motivate the appropriateness of a qualitative research design, it is important to identify the advantages and disadvantages of using this type of research design.

Advantages of using a qualitative research design:

- **Natural:** It allows the researcher to view participants' behaviour in natural surroundings without the artificiality that encloses quantitative research from time to time (Creswell, 2007:37-39; Dillon, Madden & Firtle, 1993:130).
- **Depth:** It allows the researcher to intensify the depth of understanding of the issue investigated i.e. gathering rich data (Hair *et al.*, 2006:174; McDaniel & Gates, 2002:122).

- **Flexible:** It is flexible and allows the researcher to practise new ideas of concern (Kumar, 2005:12; Du Plooy, 2001:33).

Disadvantages of using a qualitative research design:

- **Sample size:** Sample sizes are commonly too small to allow the researcher to generalise the data beyond the sample selected for the study (Hair *et al.*, 2006:174; McDaniel & Gates, 2002:124).
- **Data reliability:** Data reliability can become difficult as single observers are describing unique events – the researcher is in close contact with the participants, which may result in a loss of objectivity (Creswell, 2007:37-39; Hair *et al.*, 2006:174; Du Plooy, 2001:32).

The researcher attempted to overcome most of the disadvantages of qualitative research through careful planning, proper sampling (refer to section 5.5.2.1) and a focus on objectivity to ensure trustworthiness throughout the research process (refer to section 5.5.4).

A qualitative research design therefore seemed a useful approach for the researcher who wished to make sense of (understand) the use of data visualisation and storytelling in quantitative research reports (a topic with limited exploration in the South African industry). The researcher aimed to use the qualitative data as a “catalyst for conceptualisation”, an in-depth understanding was required as opposed to validation of facts. It was anticipated that by exploring South African marketing research firms’ views on data visualisation and storytelling in quantitative reporting, insight would be gained into these concepts and knowledge would be developed about marketing research firms’ urgency to strategically use these tools in quantitative reporting. In summary, the researcher used qualitative research as this was an initial study to describe whether and how data visualisation and storytelling are used in quantitative reporting by South African marketing research firms.

5.5.2 Data collection

The collection of the primary qualitative data details regarding from **whom** the data was collected and the specific **method** used to gather the data are explained next (refer to Table 5.2).

5.5.2.1 Population and sample design

The target population of a research study can be defined as the total set of identifiable elements of interest that the researcher is interested in when researching, and is usually apparent from the research problem and objectives (Hair *et al.*, 2006:209; Cooper & Schindler, 2001:167). The sample is a subset of the population (Berndt & Petzer, 2011:33; Burns & Bush, 2010:364). Hereafter, the sampling units and elements need to be identified. The sampling elements are defined as those people from the defined target population who could provide the needed information, while the sampling units are those target population elements who are available for selection during the sampling process (Malhotra, 2009:371,372; Hair *et al.*, 2006:310).

In order to select the sampling elements and units, different sampling methods are available. According to Burns and Bush (2010:364), the sample method indicates all the steps necessary to draw a sample. Literature distinguishes between probability and non-probability sampling methods (Zikmund & Babin, 2013:322; Burns & Bush, 2010:342). In probability sampling, each subject of the population has a **known chance** to be selected (Zikmund & Babin, 2013:322; Malhotra & Peterson, 2006:328). Probability sampling methods include: simple random sampling, systematic random sampling, cluster sampling, and stratified random sampling (Zikmund & Babin, 2013:325-329; Berndt & Petzer, 2011:174; Burns & Bush, 2006:333-342). On the other hand, in non-probability sampling the chance of selecting every subject is **unknown** (Zikmund & Babin, 2013:322; Burns & Bush, 2006:332; Hair *et al.*, 2006:65). Non-probability sampling methods include: convenience sampling, judgement sampling, referral (snowball) sampling and quota sampling (Zikmund & Babin, 2013:323,324; Burns & Bush, 2006:345,346; Hair *et al.*, 2006:340-342). Subsequently, the sampling plan of this study is shown in Table 5.3 and detailed next.

Table 5.3: Main study sampling plan

Design elements	Application to empirical study
Extent	Republic of South Africa.
Target population	South African marketing research firms that deliver quantitative research reports to clients.
Sampling frame	A list of registered marketing research firms which offer quantitative research compiled by the researcher (42 in total) from the South African Marketing Research Association (SAMRA) Classifieds 2011.
Sampling unit	Marketing research firms in South Africa which deliver quantitative research reports to clients.
Sampling method	Non-probability purposive sampling.
Sampling element	Client service director / manager who is involved with, or has an influence on, quantitative reporting processes within the identified marketing research firm.
Sample size	26 participants (spread across 15 marketing research firms).
Time frame (fieldwork)	June 2012 (pilot study) July 2012 (main study).

Source: Adapted from Zikmund and Babin (2013:315) and Hair *et al.* (2006:311).

The target population was all South African marketing research firms which offer quantitative research to clients. The researcher defined the sampling frame by compiling a list of South Africa's registered marketing research firms which offer quantitative research services as issued by SAMRA. The SAMRA classifieds / yearbook is an annual publication that lists and details all registered marketing research firm members – with no distinction between small, medium and large firms (SAMRA, 2011). Each qualifying marketing research firm that delivers quantitative research reports to clients, was identified as a sampling unit.

The sample units were then selected to include the seven biggest revenue contributors and then a few (eight) smaller revenue contributors (refer to section 2.3.2.2, Figure 2.2). The researcher aimed to have a mix of small, medium and large marketing research firms (in terms of revenue contribution) so as to achieve some level of industry representation. The researcher also aimed to select two sampling elements for each of the seven biggest revenue contributing marketing research firms so as to reduce possible bias or subjectivity (of a particular marketing research firm).

The choice of sampling elements was guided by the chosen sampling method. According to Zikmund and Babin (2013:323), non-probability purposive (also known as judgemental sampling) samples are chosen either by researcher opinion or judgement. It implies that certain selection criteria are specified to identify sample elements that meet those specifications. The selection criteria are based on the researcher's judgement of what will form a representative sample; the choice is therefore purposive, and not random (McDaniel & Gates, 2006:314). The researcher planned on interviewing 20 sampling elements.

This means each sample element is handpicked (deliberately chosen) as it is expected that they will provide meaning to and perspective on the research objective (Malhotra & Peterson, 2006:331). According to Bradley (2010:167) and Churchill and Iacobucci (2010:286), this sampling method is useful in exploratory qualitative research designs when the researcher wants ideas and insights on a particular subject matter where the chosen participant can offer perspective on the research objectives. The sampling units and elements were selected according to the following five criteria:

- **Listing:** The marketing research firm should be listed in the SAMRA classifieds.
- **Revenue contribution:** The seven marketing research firms that contribute close to two-thirds (64%) of the industry revenue should be included, namely: Nielsen, Ipsos, TNS, Millward Brown, Ask Afrika, KLA and Bateleur (refer to section 2.3.2.2, Figure 2.2).
- **Deliverables:** The marketing research firm must provide clients with quantitative research reports.
- **Position:** The sample element must be involved with, or have an influence on, quantitative reporting processes (so as to assess the use of data visualisation and storytelling in quantitative reporting) – these include individuals in positions like client service directors or any other manager working in the client service department. It was important that the sample elements could articulate their thoughts and experiences to enhance the researcher's understanding of the concepts. To have selected sampling elements with little insight into the concepts would have been illogical at this stage (Morse & Field, 1985).

- **Agreement:** The chosen sampling element should have agreed to participate in the research study.

As illustrated in Table 5.3, a total of 15 sampling units (marketing research firms across South Africa) and 26 sampling elements (participants) were achieved, more than what the researcher aimed for. The sampling elements filled director or management positions at the marketing research firms where they worked (including Managing Directors, Associate Directors, Client Service Directors, Account Directors and Account Managers). Nonetheless, before the main study was undertaken in July 2012, the researcher conducted a pilot study with two participants in June 2012 (as specified in Table 5.3; refer to section 5.5.4.3).

5.5.2.2 Data collection method: in-depth interviews

As mentioned in section 5.4.3, various data collection instruments exist for qualitative research designs such as focus group interviews, in-depth interviews, observation, case analysis and projective techniques (Burns & Bush, 2010:147; Zikmund & Babin, 2010:102). For this study, the researcher believed that the best suitable method to address the research problem and answer the research objectives of this study would be in-depth interviews.

In-depth interviews can be defined as a formalised process where an interviewer asks a subject a set of semi-structured questions in a face-to-face setting about a specific topic (Berndt & Petzer, 2011:91; Hair *et al.*, 2006:176). Kvale (1996:2) defines an interview as the “inter view” or “inter change” of views between two persons conversing about a topic of mutual interest. Carson, Gilmore, Perry and Gronhaug (2001:64) argue that this method allows the researcher to understand why particular decisions are made within an organisation; in-depth interviews allow the researcher to probe and understand these decisions. De Vos, Strydom, Fouche and Delport (2002:297) add that it facilitates the understanding of the closed worlds of organisations – and therefore can be seen as a meaning-making process.

It aims to collect detailed, textured and personal information from one or more individuals so as to understand their situation as expressed in their own words

(De Vos *et al.*, 2002:299). In-depth interviews give participants the opportunity to describe their own experience about the topic under investigation (Shah & Corley, 2006:1828). Various authors have acknowledged other strengths and weaknesses of in-depth interviews.

The strengths of in-depth interviews include:

- **Response rates:** Higher response rates are possible since the participant feels motivated to share his / her viewpoints because of the personal contact and attention (Struwig & Stead, 2001:87; Guba & Lincoln, 1981:165).
- **Question complete rate:** Higher question complete rates are possible since participants feel responsible to respond to the interviewee when met face-to-face. In addition, participants are more likely to share sensitive information compared to other data collection instruments (Zikmund & Babin, 2007:140; Van Vuuren, Maree & De Beer, 1998:406).
- **More information:** By using open-ended questions participants can expand on their own experiences leading to a wealth of information (De Vos *et al.*, 2011:360).
- **Flexible:** More questions can be used because the researcher can probe, reword and / or adjust the line of questioning as well as the individual questions as the interview progresses to suit the specific interview (Zikmund & Babin, 2007:140; Hair *et al.*, 2006:178).
- **Data richness:** The topics to be discussed are outlined in advance, which increases data comprehensiveness; and the data collection is systematic which allows for comparison. Non-verbal communication cues can also be observed and noted (Burns & Bush, 2010:223; Patton, 1990:288; Guba & Lincoln, 1981:165).

The weaknesses of in-depth interviews include:

- **Costly:** They are costly and time consuming to conduct, transcribe and analyse (McDaniel & Gates, 2002:148; De Vos, 1998:300).
- **Interviewer skills:** The quality of the data gathered is largely dependent on the interviewer's skills. In addition, the appearance, tone of voice and question

wording of the interviewer may affect the participant (Malhotra & Peterson, 2006:162; Marshall & Rossman, 1998:135).

- **Dubious honesty:** The researcher must assume that the information given by the interviewee is accurate – data is especially dependant on the openness and honesty of participants (De Vos *et al.*, 2011:360; Marshall & Rossman, 1998:135).
- **Interviewer errors:** These may include faulty recording procedures (e.g. not switching the tape recorded on) and fatigue that may hamper the data quality (Zikmund & Babin, 2007:140; Hair *et al.*, 2006:178).
- **Generalisation:** Since only small samples can be handled, the results cannot be generalised and the researcher is unable to distinguish between small differences (Hair *et al.*, 2006:178; Guba & Lincoln, 1981:187).

The in-depth interviews had limited financial implications (apart from travel and printing costs) and fatigue was prevented by ensuring that each interview was not too long and scheduled far enough apart from each other (a minimum of an hour between in-depth interviews were granted). Furthermore, the researcher had apt skills to conduct interviews due to training and experience in the field. It is acknowledged that the in-depth interview process is time consuming and less generalisable to the total population.

Nonetheless, to conduct each in-depth interview, the researcher first had to design a collection instrument to collect the raw data (Berndt & Petzer, 2011:33; Cooper & Schindler 2001:334). In qualitative research the following data collection instruments are usually used to gather data: discussion guides, interview guides and observations (Bradley, 2010:187; Zikmund & Babin, 2010:102-111). Researchers have a number of response types to choose from when designing the collection instrument (questions for data collection). These are mainly classified as open-ended (unstructured) questions and structured or fixed questions (Bernt & Petzer, 2011:187; Zikmund & Babin, 2010:273). Open-ended questions are answered in the respondent's own words and don't have specified response categories while structured questions do (Bradley, 2010:196,197; Zikmund & Babin, 2010:273). However, for in-depth interviews an

interview guide with semi-structured questions is best suited (Berndt & Petzer, 2011:91,183; De Vos *et al.*, 2011:352).

Semi-structured questions are a guide to the interviewer to ensure all topics explored will be covered, while allowing the interviewee to openly talk about the subject matter (De Vos *et al.*, 2011:352-353; Appleton, 1995:994). According to Berndt and Petzer (2011:187), these types of questions are suitable when topics with limited information are explored, or when the researcher wants to identify reasons why a particular opinion is held. There are, however, disadvantages of semi-structured questioning, specifically that it could be time-consuming and data could be more difficult to capture and analyse (Berndt & Petzer, 2011:187).

The interview guide was standardised to increase the consistency of the data collected and included the following sections (the specific questions of the interview guide are depicted in Appendix A):

- **Section A:** Introduction to the study (1 minute) – the participant was thanked for his / her time and prepared for what could be expected in the interview. The researcher specifically reviewed the discussion flow.
- **Section B:** The importance of, and general perceptions of quantitative reporting in the marketing research industry (5 minutes) – in section B the researcher briefly explored the challenges experienced in the marketing research industry so as to determine if quantitative reporting is an important consideration or not. It further investigated general perceptions of the current state of quantitative reporting from the marketing research firm's viewpoint and specific descriptors thereof were probed.
- **Section C:** The marketing research firm's quantitative reporting philosophy and client's feedback thereof (5 minutes) – section C explored participating marketing research firms' views on how quantitative research reports are compiled and clients' opinion thereof were discussed.
- **Section D:** Data visualisation as used in the marketing research firm (10 minutes) – section D investigated the specific techniques applied when compiling quantitative research reports and probed both traditional and non-traditional data visualisation techniques of representing data within research reports. It specifically explored barriers to adopt non-traditional data

visualisation techniques, as well as whether participants view it as an important development in quantitative reporting.

- **Section E:** Storytelling awareness and the use thereof in the marketing research firm (6 minutes) – Section E investigated whether marketing research firms were aware of the concept of storytelling in quantitative research reports and wanted to determine how this was applied within the marketing research firm.
- **Section F:** Thank and close – the participant was thanked for his / her time and was asked if there were any concluding remarks that they would like to add to the conversation.

Based on the flow of the interview guide, a 20-30 minute in-depth interview was conducted with each participant (in some instances the interview lasted up to 45 minutes due to participants' need to share additional information). The researcher conducted all interviews personally and guarded against subjective interpretation whilst interviewing through "recycling" the information (refer to section 5.5.4). This means the interviewer checked for accuracy by reflecting her understanding against participants' responses to give participants the opportunity to correct the meaning of certain answers (Stiles, 1993:605). The interviewer also limited her own contribution to the interview and focused on objectively asking the research questions (De Vos *et al.*, 2002:300). The following section provides an overview of the steps that were followed in conducting the in-depth interviews.

5.5.2.3 Steps followed in conducting the in-depth interviews

The researcher used the following steps, as suggested by Guba and Lincoln (1981:172-182), to set up the in-depth interviews:

- **Identification:** The researcher used existing industry contacts and the SAMRA Classifieds of 2011 to identify sample units and elements (participants) and obtain their contact details (refer to section 5.5.2.1).
- **Invitation:** Each participant received a formal letter inviting him or her per email to participate in the study. The letter detailed the research objectives of the study, the rights of participants including their right to confidentiality (anonymity), the sample methodology followed in the study, and the

requirements set for prospective participants to participate in the study (see Appendix E).

- **Appointment:** Once participants agreed to take part in the study, the researcher booked a date and time that best suited the participant. All interviews were conducted at participants' convenience and the majority took place at each participant's office space, face-to-face. Because of time and geographical constraints, four of the 26 interviews were conducted telephonically. A brief memorandum highlighting key aspects of the interview guide, was sent to the participant a week before the interview in preparation for the interview (see Appendix F).

Once the interview was set up, it was then executed at the specified date and time. The following section provides an overview of the process that was followed during data analysis.

5.5.3 Data analysis – using the Morse and Field approach

Qualitative research creates rich amounts of data, which need to be systematically analysed in a logic fashion (De Vos *et al.*, 2011:397). De Vos, Strydom, Fouche and Delpont (2005:333) argue that data analysis creates order, structure and gives meaning to masses of collected data. On a practical level, Bogdan and Biklen (1998:106) state that data analysis involves the techniques a researcher can use to make sense out of and learn from many pages of recorded statements and behaviour from transcripts and field notes. Wilson (1998:3) adds that the researcher is concerned with the "process", and how and why things happen the way they do and then distilling the meaning of the observation.

Various approaches for qualitative analysis have been documented and include: Guba and Lincoln's constant comparative approach, Huberman and Mile's approach, Marshall and Rossman's approach, Tesch's approach, and Morse and Field's approach (De Vos *et al.*, 2002:338-343). These analysis approaches are briefly explained in Table 5.4.

Table 5.4: Qualitative data analysis approaches

Analysis approach	Description
Guba and Lincoln's constant comparative approach	Consists of a continuous developing process involving four steps so as to derive theory and not purely for data processing.
Huberman and Mile's approach	Consists of three linked data analysis steps, namely data reduction, data display and drawing conclusions in order to verify them.
Marshall and Rossman's approach	Consists of four steps and suggests that the researcher should be empowered to discover any new / surprising dimensions by generating categories and testing them.
Tesch's approach	Consists of eight steps where the researcher focuses on carefully reading through all transcripts to identify a list of topics which are then clustered into categories whereafter all data is assembled into categories.
Morse and Field's approach	Consists of a process of four steps where data is fitted together to make the "invisible" obvious and linking their consequences.

Source: Adapted from De Vos *et al.* (2002:338-343).

De Vos *et al.* (2002:344) observe that all these methods require the researcher to logically account for data analysis steps taken, and that the final conclusions are based on collected data. The Morse and Field (1996) approach was chosen for this research study because it was proven to be a successful method of analysis in academic work of management and marketing disciplines (Botha, 2009; Niemann, 2005).

The essence of the Morse and Field approach is that theory cannot emerge from data without the researcher immersing and familiarising him / herself with the data or without active intellectual work (Morse & Field, 1996:103). Morse and Field (1996:103) further add that the researcher should engage in solid and creative data analysis, which requires intelligent questioning, a persistent search for answers, active observation and truthful recall. This approach has four steps where the researcher seeks to achieve comprehension (step 1) and when saturation is reached, data patterns are categorised according to thematic meanings (step 2) to form a theory (step 3) which is then placed in context of

established knowledge (step 4). These steps happen almost sequentially (Morse & Field, 1996:103) and each of these steps is discussed in greater detail in the following sections. The sections also report on how the researcher applied each step of the Morse and Field approach during data analysis of the empirical study.

5.5.3.1 Step 1: Comprehend

As soon as data collection begins, preparation for data analysis begins through the transcribing, checking, correcting and coding of interviews and field notes (De Vos, 1998:341). The researcher achieves comprehension when sufficient data is available to write a complete and detailed account of all information collected (Morse & Field, 1996:104). A central process to achieve comprehension is coding, which enables data sorting and uncovering underlying meanings in the text (Morse & Field, 1996:104). De Vos (1998:335) reasons that coding requires the researcher to identify persistent words and phrases within the data. To achieve this, Morse and Field (1996:104) state that line-by-line analysis of an interview transcript best facilitates this process. When comprehension is reached, the researcher should be in a position to identify patterns of experience relevant to the topic and should consequently be able to make predictions about the probable outcome (Burden & Roodt, 2007:15; De Vos, 1998:341). Saturation is reached and comprehension completed when the researcher is familiar with the data and when no new patterns emerge in the research results (De Vos, 1998:341; Morse & Field, 1995:127).

Comprehension of the theory and concepts were reached through the literature review in Chapters 2 to 4. In terms of the empirical study, comprehension was reached post-interviews and after the researcher had gone through all the transcripts numerous times. Line-by-line analysis of each transcript was done and responses were coded in the right margin of every page. When the researcher was familiar with all the data and established that no new patterns emerged, comprehension was reached.

5.5.3.2 Step 2: Synthesise

De Vos (1998:341) together with Morse and Field (1996:105) describe this step of the process as “sifting”, and this occurs when the researcher is familiar with the

research setting. In other words, the researcher has the confidence to describe and give examples of the topic without referring to notes (Morse & Field, 1996:105). Patterns are categorised and transformed into a story that makes coherent sense (Morse & Richards, 2002:131; Corbin & Strauss, 1990:63). Morse and Field (1996:105) suggest there are two main ways to achieve this:

- **Interparticipant analysis:** This takes place where the researcher compares transcripts across participants to look for similarities and differences.
- **Category analysis:** This occurs when the data is then sorted by commonalities from all participants.

Identified interpretation categories from the category analysis then act as baskets into which texts are placed which are consistent, but distinct from one another (Marshall & Rossman, 1998:154). In essence, synthesising should help the researcher to interpret, link, see relationships, estimate and to verify findings (Morse & Field, 1996:105).

During the synthesising step of the empirical study, three interpretation categories and subcategories were identified based on the in-depth interviews. These are illustrated in Table 5.5.

Table 5.5: Interpretation categories and subcategories

	Interpretation subcategory (a)	Interpretation subcategory (b)
Interpretation category 1: The use of quantitative reporting	Marketing research firms' quantitative reporting philosophy	Clients' expectations of quantitative research reports
Interpretation category 2: The use of data visualisation in quantitative research reports	The use of traditional data visualisation techniques	The use of non-traditional data visualisation techniques
Interpretation category 3: The use of storytelling in quantitative research reports	The use and understanding of storytelling in quantitative research reports	The perceived importance of storytelling in quantitative research reports

Participants' answers to the semi-structured questions of the interview guide were grouped into these interpretation categories and subcategories. Specifically, the researcher transferred participants' responses to these interpretation categories into an Excel spreadsheet where colour codes were used for coding as identified in the comprehension step (refer to Appendix G). In other words, each response was placed into these interpretation categories to reflect similarities and differences between participants.

5.5.3.3 Step 3: Theorise

In step 3, the data should be sorted, implying that alternative explanations should be selected to compare the data until the best explanation that describes the data, is found (Morse & Field, 1996:105). The researcher should remain open to different explanations, codes and interpretation categories until maturity is reached through comprehending and synthesising (De Vos, 1998:341). During this process, a theory emerges from the data when achieved results are compared and linked to original propositions (Niemann, 2005:200; Morse & Field, 1995:125). The "solution" or best theory is the one that provides the best comprehensive, coherent, simple and useful explanation for linking diverse and unrelated facts together (Morse & Field, 1996:106). During this process, the researcher used the literature review (Chapters 2 to 4) and the gathered information to theorise about the use of data visualisation and storytelling in quantitative research reports.

5.5.3.4 Step 4: Recontextualise

De Vos (1998:342) states that at this stage the theory is developed to be applicable to other settings and other populations. The published work of other researchers and literature plays an integral part so as to provide the context in which the researcher links the research results (of the interpretation categories) to the literature (Morse & Field, 1996:106). Ultimately, the categories and research results are combined in such a way that it becomes obvious how they are supported by theoretical models (De Vos, 1998:271). Therefore in this step, the results are placed in context of the established knowledge to identify where it supports the literature or where it could claim unique contributions (De Vos, 1998:342). In this step, the researcher built on the theories identified in step 3

(refer to section 5.5.3.3) so as to conclude whether data visualisation and / or storytelling is used strategically in quantitative research reports (presented in Chapter 7).

5.5.4 Trustworthiness in qualitative research designs to ensure rigour

Stiles (1993:623) postulates that like all research, qualitative research design is too biased. Qualitative research design is sometimes associated with biases of being subjective, non-representative and non-systematic in design (Cooper & Schindler, 2001:139; Appleton, 1995:995). Hair *et al.* (2006:173) agree with this viewpoint and mention that it often lacks true reliability, and typically involves subjective content and interpretation. However, Rolfe (2006:304) and Wilson (1998:8) have observed that many scholars have endeavoured and pursued defining good, valid and trustworthy qualitative research designs. While some scholars argue that the qualitative research designs should follow the same validity criteria as quantitative research designs, others argue that qualitative research designs should have a separate list of criteria to ensure validity (De Vos *et al.*, 2011:419; Rolfe, 2006:309; Johnson, 1997:282).

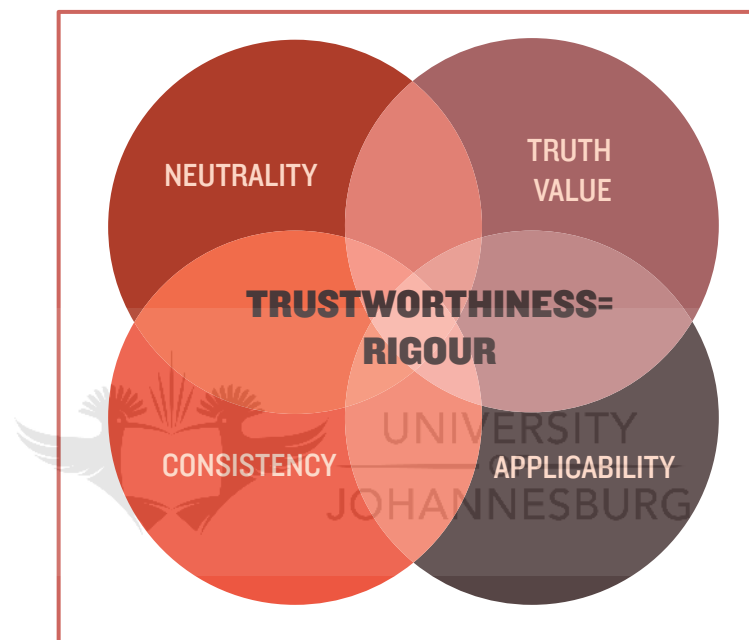
Nonetheless, the aim of qualitative research designs is still to deliver accurate results with limited error so as to avoid misleading those who read it (Roberts *et al.*, 2006:41; Lincoln & Guba, 1985:290,291). This process depends on two aspects: reliability and validity, and both concern trustworthiness (Roberts *et al.*, 2006:41; Rolfe, 2006:305; De Vos, 1998:83; Stiles, 1993:601). Reliability refers to the trustworthiness of data observations while validity concerns the trustworthiness of interpretations or conclusions (Stiles, 1993:601; De Vos, 1998:85; Lincoln & Guba, 1985:292).

To achieve the above, Guba's (1981:75-91) model of trustworthiness was applied in this study and this involved checking the following four criteria:

- **Truth value:** Ensures that the study measured what it was intended to measure (Appleton, 1995:995; Guba & Lincoln, 1981:103). De Vos (1998:349) explains it as the confidence the researcher has with the truth of the research results based on the research design.

- **Applicability:** Ensures that the findings are fitting / representative of the subjects (Appleton, 1995:996; Guba & Lincoln, 1981:103,104). De Vos (1998:349) explains it as the degree to which the findings can be applied to other contexts with other participants.
- **Consistency:** Ensures that the results can be repeated in terms of clarity and accuracy (De Vos, 1998:350; Appleton, 1995:996; Guba & Lincoln, 1981:104).
- **Neutrality:** Ensures that the research process and results are free from bias.

Figure 5.1: Criteria applied to ensure trustworthiness and rigour



Source: De Vos (1998:350), Appleton (1995:996), Guba and Lincoln (1981:104).

According to Morse, Barrett, Mayan, Olson and Spiers (2002:13), all these measures together provide scientific proof that ensures trustworthiness. Figure 5.1 illustrates how all these different criteria were used together to ensure that the researcher achieved trustworthiness throughout the qualitative research process. Consequently, the following sections focus on the specific steps the researcher took to address each of these four criteria of trustworthiness in the qualitative phase of the study.

5.5.4.1 Truth value

Truth value can be accomplished by member checking, prolonged engagement and by selecting a purposeful sample (Rolfe, 2006:305,307; Appleton, 1995:995,996; Lincoln & Guba, 1985:302,314).

- **Member checking:** Is defined as sharing participants' viewpoints with other members of the sample so as to clear up misunderstandings and to ensure findings are consistent with their experience (Roberts *et al.*, 2006:43,44; Rolfe, 2006:305; Johnson, 1997:283,285; Appleton, 1995:996; Guba & Lincoln, 1981:186). At the end of the data analysis the researcher discussed the research results with two of the participants so as to check the truth value of the analysis.
- **Prolonged engagement:** Is defined as the investment of sufficient time in the subject matter to achieve certain purposes (Streubert & Carpenter, 1995:25; Stiles, 1993:604; Lincoln & Guba, 1985:302). The researcher was involved with the topic under study since 2008 and involved with the academic literature for one and a half years.
- **Purposeful sample:** Is achieved when the sampling was purposeful i.e., only experts with knowledge and experience about the research topic (quantitative research reports) were included in the study (refer to section 5.5.2.1).

5.5.4.2 Applicability

Applicability can be accomplished by scientific analysis, peer checking, member checking, recording of field notes, and low inference descriptors (Rolfe, 2006:305,307; Johnson, 1997:283; Appleton, 1995:995,996; Lincoln & Guba, 1985:302,314).

- **Scientific analysis:** Scientific analysis is achieved when the researcher intensively engages with the data (Roberts *et al.*, 2006:43, 44). The Morse and Field analysis was applied (refer to section 5.5.3). The researcher repeatedly referred back to the in-depth interview data when coding and developing themes for each interpretation category during the data analysis, specifically checking for reasons why the data should not be trusted.
- **Peer checking:** Is defined as the use of an independent experienced qualitative researcher to ensure that the researcher has analysed the data

correctly and check whether he / she arrives at the same conclusions (Rolfe, 2006:305,307; Johnson, 1997:287; Appleton, 1995:995,996). At the end of the data analysis, the researcher submitted all transcripts and the findings (for each identified interpretation category) to Elisha Pearce, an experienced qualitative researcher, to compare analysis and to determine if she believed the same findings were true (refer to Appendix H). In this way the dependability of the research findings was increased.

- **Member checking:** As with truth value, participants' viewpoints were shared with other members of the sample (refer to section 5.5.4.1).
- **Field notes:** Comprise the written account of what the researcher heard and observed and felt during each in-depth interview (Burden & Roodt, 2007:15; Appleton, 1995:994; Bogdan & Taylor, 1975:60,66). The researcher descriptively and comprehensively summarised each in-depth interview and included a reflective synopsis of what was experienced, felt and learnt in each interview directly after each interview had been conducted (refer to Appendix C). In this way, the researcher reflected on the influence of her personal background and perceptions on each in-depth interview.
- **Low inference descriptors:** Refer to the use of descriptions very close to participants' direct account to demonstrate that findings are grounded in the data, such as the use of verbatim words (Roberts *et al.*, 2006:44; Johnson, 1997:283,285). Where possible, the researcher included verbatim responses as evidence to support or not support propositions, and also avoided only picking the best examples to support analysis (often referred to as avoiding bias by only "cherry picking" the best verbatims) (Roberts *et al.*, 2006:44).

5.5.4.3 Consistency

Consistency can be accomplished by extended fieldwork, leaving a decision trial, standard interview guide, conducting pilot interviews, recording of interviews, transcription of interviews, and scientific analysis (Lincoln & Guba, 1985:302,314).

- **Extended fieldwork:** This requires the researcher to spend a sufficient amount of time in studying participants to ensure confidence that data patterns are stable (Johnson, 1997:283,286). The researcher spent a month-and-a-half in the field conducting 26 in-depth interviews which was considered a sufficient timeframe for the required and realised sample.

- **Decision trial:** The decision trial that is also known as an audit trial, requires the researcher to detail and record each decision taken in the research process. In this way, the researcher helps the reader to track and verify all decisions made so as to increase the trustworthiness (Roberts *et al.*, 2006:43,45; Rolfe, 2006:305; Appleton, 1995:997; Streubert & Carpenter, 1995:265). The researcher clearly described each step of the research process in this chapter, explaining and justifying what was done and why it was done (refer to Table 5.6 and Table 5.8).
- **Interview guide:** The interview guide was standardised to increase consistency of the data collected (refer to section 5.5.2.2).
- **Pilot interviews:** This implies that the interview guide is tested before actual interviewing commences. In this way potential problems and weaknesses are identified and can be eliminated before fieldwork commences (Malhotra & Birks, 2006:345; Cooper & Schindler, 2001:81; Appleton, 1995:996). All aspects of the interview guide (question content, wording, sequence and question difficulty) were tested amongst two sampling elements to ensure trustworthiness and accuracy (refer to section 5.5.2.1) (Malhotra & Birks, 2006:345).
- **Recording of interviews:** This refers to the audio recording of interviews to provide verbatim accounts of conversations and an extensive account of the interaction between the researcher and participants (Roberts *et al.*, 2006:43; Appleton, 1995:996; Streubert & Carpenter, 1995:101). The researcher used a dictaphone to record all in-depth interviews.
- **Transcription of interviews:** It implies that the audio interviews are converted to typed text format (Roberts *et al.*, 2006:43; Morse & Field, 1996:107). The researcher used an independent professional firm (WORDZZ2INK) that specialises in transcripts to transcribe each in-depth interview.
- **Scientific analysis:** As with applicability, the researcher intensively engaged with the data through applying the Morse and Field analysis (refer to section 5.5.4.2).

5.5.4.4 Neutrality

Neutrality can be accomplished by leaving a decision trial, reflexivity and negative case sampling (Roberts *et al.*, 2006:44; Johnson, 1997:283,284; Lincoln & Guba, 1985:302,314).

- **Decision trial:** As with consistency, each decision was recorded and detailed (refer to section 5.5.4.3, Table 5.6 and Table 5.8).
- **Reflexivity:** The researcher engaged in self-reflection about his / her biases so as to monitor and control their biases (Roberts *et al.*, 2006:44; Johnson, 1997:283,284; Appleton, 1995:997). The researcher tried to overcome any interview bias by maintaining a neutral stance and not presenting her own perceptions during data collection.
- **Negative case sampling:** This process involves looking at and examining examples that disconfirm the researcher's expectations and provisional explanations (Johnson, 1997:283,284). The researcher avoided defending proposed results by searching and examining specific examples that disapproved her propositions. The researcher also avoided simply finding the data that supported the developing theory.

Table 5.6 summarises the key decisions made for the main study across the research process.

Table 5.6: Main study decision trial

Research process element	Decision trial
Research design	Primary, exploratory qualitative research
Data collection	Purposive sampling In-depth interviewing
Data analysis	Morse and Field approach
Data rigour	Guba's model of trustworthiness

The rationale for using a quantitative research design for the small-scale complementary study is discussed next, followed by a brief discussion of the data collection and analysis methods used.

5.6 SMALL-SCALE COMPLEMENTARY STUDY: QUANTITATIVE RESEARCH DESIGN

This section briefly considers the reasons why a quantitative research design was chosen for the small-scale complementary study. It details how and from whom data was collected and explains the analysis method used (refer to Table 5.2). It concludes with a brief explanation of how rigour was ensured.

5.6.1 Motivation for choosing a quantitative research design

Quantitative research uses scientific methods and procedures to collect data and create data structures to describe the characteristics of a sample and to uncover the answers to the questions **who, what, when, where** and **how** (Malhotra & Peterson, 2006:73; Cant *et al.*, 2003:33; Cooper & Schindler, 2001:12). Zikmund and Babin (2013:99) and Punch (2001:51) suggest that quantitative research should be used in the following instances: when the research question implies sizing of a need (i.e. a quantitative answer is needed / quantifying opinions and attitudes), and when the researcher is concerned with making standardised comparisons and quantifying the relationships between variables.

To further motivate the appropriateness of a quantitative research design, it is important to identify the advantages and disadvantages of using this type of research methodology. The advantages of quantitative research design include (Zikmund & Babin, 2013:99; Burns & Bush, 2010: 209; Hair *et al.*, 2006:174; Du Plooy, 2001:32):

- **Generalisations:** Bigger sample sizes are achievable that can allow population generalisations.
- **Statistical analysis:** Results can be condensed by statistics and statistical comparisons.
- **Data precision:** It is easier to achieve data reliability and objectivity and therefore allows for precision.

Some disadvantages include (De Vos *et al.*, 2011:66; Hair *et al.*, 2006:174; Amaratunga, Baldry, Sarshar & Newton, 2002:20; Du Plooy, 2001:33):

- **Depth:** Limited depth can be achieved.

- **Effectiveness:** They are not effective in process / action understanding.
- **Theories:** They are not helpful in developing theories.
- **Flexibility:** The questioning is less flexible.

Nonetheless, the basic aim was to statistically describe how marketing research firms' clients perceive quantitative research reports delivered to them (i.e. to quantify client perceptions). Hence a quantitative research design was chosen for the small-scale complementary study.

5.6.2 Data collection

The collection of the primary quantitative data details regarding from **whom** the data was collected and the specific **method** used to gather the data are explained next (refer to Table 5.2).

5.6.2.1 Population and sample design

The sampling plan with population and sample elements of the small-scale complementary study is shown in Table 5.7. Similar to the main study, the target population, sampling frame, sampling unit, sampling method, size, extent and timeframe outlined in the Table will be briefly discussed next.

Table 5.7: Small-scale complementary study sampling plan

Design elements	Application to empirical study
Extent	Republic of South Africa.
Target population	Marketing research firms' clients (who receive quantitative research reports).
Sampling frame	A list of clients who receive quantitative research reports, known to the researcher based on previous work experience and contacts.
Sampling unit	South African firms that commission quantitative research projects.
Sampling method	Non-probability referral (snowball) sampling.
Sampling element	Individuals within the identified firm who receive quantitative research reports from marketing research firms (typically insight / research managers).
Sample size	31 Respondents.
Time frame (fieldwork)	August 2012.

Source: Adapted from Zikmund and Babin (2013:315) and Hair *et al.* (2006:311).

The target population included all clients who receive quantitative research reports from marketing research firms. The sampling frame was created by compiling a list of clients known to the researcher based on previous work, experience and contacts. A sampling unit was defined as South African firms that commission quantitative research projects and the sampling element as the individual in the firm who receives quantitative research reports from marketing research firms (typically insight / research managers). As shown in Table 5.7, the sampling frame, units and elements were chosen by means of a non-probability referral sampling method, commonly known as a snowball sample (Zikmund & Babin, 2010:313; Hair *et al.*, 2006:342).

Burns and Bush (2010:383) describe this type of sampling as using identified respondents to give names of others like themselves who could potentially qualify to participate in the study. It requires the researcher to start with a list of possible respondents, who have specific attributes and is smaller than the desired total sample (Berndt & Petzer, 2011:174; Burns & Bush, 2010:383).

The marketing research firms interviewed in the main study were requested to invite their clients to participate in the small-scale complementary study. In addition, the researcher's client contacts based on previous work and experience were also used as a starting point. After respondents had completed the Internet-based survey, they were asked to supply names or forward the survey to other potential qualifying respondents. Respondents only qualified when they met the criteria comprising to be receiving quantitative research reports from marketing research firms at least once a month. The 31 respondents who qualified, included representatives from South African firms like Discovery, eBucks, Edcon group, Famous Brands, Foodcorp, GSK, Incolabs, KFC, L'Oreal, McDonald's, Momentum, MTN, South African Breweries, Tiger Brands and Toyota (all based in South Africa). The Internet-based survey was conducted during the month of August, 2012.

5.6.2.2 Data collection method: computer-administered, Internet-based survey

For primary data collection of the small-scale complementary study, various data collection instruments exist (refer to section 5.4.3). The best suitable method to address the research problem and answer the research objective of this study was a computer-administered, Internet-based survey – respondents could complete it at their own convenience, remain anonymous, and therefore encourage more honest results, and data could be gathered quickly and captured instantly.

Berndt and Petzer (2011:143) and Hair *et al.* (2006:245) describe it as placing a structured questionnaire on a Website for prospective respondents to read and complete by themselves i.e., the questionnaire is hosted on a common Internet platform. Various computer-administered, Internet-based survey platforms exist, such as CreateSurvey, KwikSurveys, Survey Garden and Make Survey (Bradley, 2007:288). The researcher selected SurveyMonkey for this study due to familiarity with the tool and proven workability and credibility.

The advantages of using computer-administered, Internet-based surveys include (Berndt & Petzer, 2011:144; Bradley, 2010:288,452; Hair *et al.*, 2006:247):

- **Cost effectiveness:** Most Internet-based services are free of charge or affordable – which makes it more cost effective compared to interviewer and self-administered data collection instruments.
- **Short lead times:** Internet-based surveys' data collection and encoding is speedier compared to manual methods.
- **Real-time data capturing:** Internet-based surveys eliminates the need to manually encode data from paper survey forms.
- **Convenience:** Respondents can complete the survey at their own convenience and suitable time. In addition, it is easy and convenient for the researcher to administer the survey as everything is hosted on the researcher's computer.
- **Response type:** Both open and closed-end questions can be hosted.

- **Easy access:** Easier access to respondents who may not be easily available through traditional collection methods is possible, and respondents remain anonymous.

The disadvantages of computer-administered, Internet-based surveys include (Berndt & Petzer, 2011:14; Malhotra, 2009:224):

- **Low response rates:** Typically low response rates are evident.
- **Dubious honesty:** It is easier for respondents to give fake / untrue answers.

Nonetheless, each identified sampling element received an email with an invitation and link to participate in the study. The questionnaire for this survey reflected a number of different response types and included three open-ended questions and a number of structured questions. The structured questions included one determinant-choice question, one frequency-determination question, and two different five-point scale-response questions that are described next:

- **Determinant-choice question:** This question format has fixed answers and requires of respondents to choose one response from a specified list of responses (Zikmund & Babin, 2010:273). Specifically, respondents were asked to classify the South African firm they work for into certain industries.
- **Frequency-determination question:** This question format also has fixed responses but the answers are about general frequency of occurrences (Zikmund & Babin, 2010:273). In this instance, responses were ordered in terms of how frequently the respondent received quantitative research reports.
- **Scale-response question:** This question format is where a continuum is used to measure attributes of a construct; respondents are asked to select a point on the scale that best expresses their feelings about a specific attribute (Burns & Bush, 2010:301; Hair *et al.*, 2006:394,395). Both scales for the questionnaire were anchored five-point scales; this means that the scale is anchored by primary descriptors at its two extreme points with cardinal numbers that make up the range of raw scale descriptors in-between (Hair *et al.*, 2006:367; Aaker *et al.*, 2004:292). The first scale's points (rating attributes of quantitative research reports) were anchored as 1 "extremely poor" and 5 "excellent". The second scale (measuring the need for improvement of

quantitative research reports) was anchored as 1 “to a great extent” and 5 “not at all”.

Each respondent completed this 5-minute Internet-based survey on SurveyMonkey. The questionnaire exhibits the following structure:

- **Section A:** Introduction – respondents were informed about the objective of the study and the length of the survey. They were also assured of their anonymity and confidentiality when the results were interpreted.
- **Section B:** Screening questions (qualifying criteria) – respondents were asked how frequently they received quantitative research reports from marketing research firms so that respondents who did not fit the criteria (less often than once a month), could be disqualified.
- **Section C:** Type of business the client firm conducts – in section C respondents were asked to classify the firm they work for in one of nine key industry categories which, amongst others, included automotive, cosmetics and personal care, financial, fast moving consumer goods industries and others.
- **Section D:** Evaluation of quantitative research reports received – in section D respondents were asked to identify any challenges they experienced in using quantitative research reports and were asked to rate a battery of predefined criteria (attributes) relating to quantitative research reports (namely: strategic usability, actionability, business relevance, satisfying information needs, ease of understanding, layout and flow of research results and visual appeal).
- **Section E:** Thank and close – the respondent was thanked for his / her time and was given the opportunity to add any additional comments relating to the topic.

5.6.3 Data analysis

The most common methods of quantitative data analysis include: frequencies, percentages, means, ranges, confidence intervals, mean differences, cross-tabulations, correlation and regression (Burns & Bush, 2006:425; Aaker *et al.*, 2004:438-442; Cant *et al.*, 2003:55). To achieve the objectives, limited analysis was applied to this data by using Microsoft Excel – only frequencies and

percentages were used to explain the data, since the main purpose of this phase of the research was to quantify the need for strategic reports and to measure the client's overall evaluation of quantitative reporting (refer to section 6.3).

5.6.4 Reliability and validity in quantitative research designs

Similar to qualitative research designs, the researcher needs to achieve rigour by ensuring reliable and valid research results. Reliability in quantitative research designs means that if the study is repeated, it will yield the same results (in other words, accuracy), while validity refers to measuring what the researcher believes should be measured (Bradley, 2010:60; Malhotra, 2009:315,316). According to Zikmund and Babin (2010:25), three basic measures of quantitative validity exist – criterion validity, construct validity and face or content validity. Given the research objectives, the researcher used face validity in this research study. Face validity measures whether a scale's content logically appears to reflect what it is supposed to measure (Zikmund & Babin, 2010:25; Hair *et al.*, 2006:355).

In this research study, the researcher checked with other professionals whether the response scales made sense for each question asked. According to De Vos *et al.* (2005:161), if face validity is not ensured, respondents might resist to participate and this in turn, may negatively affect the results. Furthermore, researchers have developed specific reliability measures, some of which include: Cronbach's alpha coefficient, test-retest, internal consistency and split-half test (Roberts *et al.*, 2006:42). Due to sample frame, size and scope constraints none of the prelisted reliability measures could be used. However, the researcher used the following measures to increase the reliability of this phase of the empirical study:

- **Pre-testing:** A pre-testing study of the questionnaire was undertaken amongst two industry professionals and one client so as to ensure that that all questions and statements were both relevant and easily understood.
- **Anonymity:** The questionnaire ensured the anonymity of the respondents.
- **Consistency:** The internet-based platform made it possible that the questionnaire could be presented in the exact same manner to each respondents.
- **Question format:** The questionnaires contained a closed-question format.

In summary Table 5.8 illustrates the key decisions made for the small-scale complementary study across the research process.

Table 5.8: Small-scale complementary study decision trial

Research process element	Decision trial
Research design	Primary, descriptive quantitative research
Data collection	Referral (snowball) sampling Computer-administered, Internet-based survey
Data analysis	Described by means of frequencies and percentages
Data rigour	Face validity and reliability (pre-test, anonymity, consistency and closed-question format)

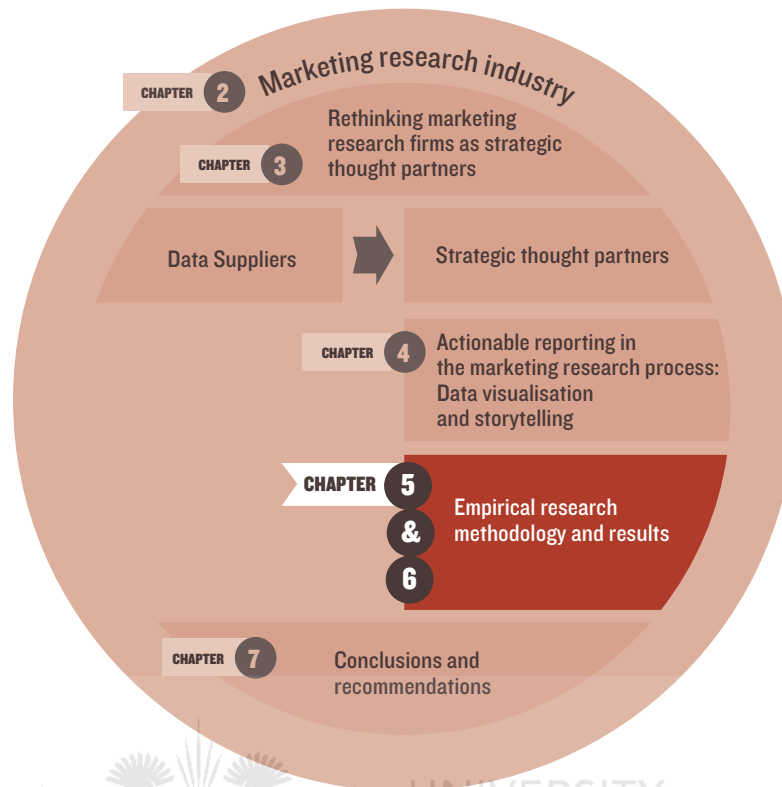
5.7 CONCLUSION

The choice of research methodology elements depends on the research objectives and is therefore outlined in the first section of this chapter. This chapter provides an explanation of the choice of research methodologies for both the main and small-scale complementary empirical studies conducted. A qualitative research design fits the main study and a quantitative research design fits the small-scale complementary study. It further examines data collection and analysis methods for each phase of the study. For the main study, it also outlines how the researcher ensured trustworthy research results and for the small-scale complementary study, the researcher highlights the steps taken to ensure valid and reliable research results.

Chapter 6 presents the results of both the main and small-scale complementary empirical studies. The interpretation categories identified in this chapter (Chapter 5) are used to report the research results of the main study whereafter the research results of the small-scale complementary study are examined.

CHAPTER 6

EMPIRICAL RESEARCH RESULTS



6.1 INTRODUCTION

The purpose of this chapter is to report the empirical research results of both the main study (qualitative phase) and the small-scale complementary study (quantitative phase). The chapter focuses on the results of the main study and opens with a review of the in-depth interview questions, propositions and interpretation categories identified in step two of the Morse and Field approach (refer to section 5.5.3). It then provides a detailed account of research results (themes) identified in each of these interpretation categories. These include the use of quantitative reporting, of data visualisation in quantitative reporting, and of storytelling in quantitative reporting. The chapter concludes with the results of the small-scale complementary study.

6.2 MAIN STUDY: RESEARCH RESULTS

The results of the main study are discussed after the aims of the interview questions, and their relation to literature, proposition and the interpretation categories is presented.

6.2.1 Aims of interview questions and relation to literature, propositions and interpretation categories

As background to the empirical research results, the links between the in-depth interview questions, the aim of each in-depth interview question, the research objectives (refer to section 1.5 and section 5.2), the supporting literature (from Chapters 2, 3 and 4), interpretation categories (as determined through the Morse and Field approach in section 5.5.3.2) and the research propositions (refer to section 1.6, 5.3, Table 5.1) are presented in Table 6.1.

Table 6.1: The aims of in-depth interview questions and their relation to research objectives, literature, propositions and interpretation categories

In-depth interview question: 1. From your point of view, what are the biggest challenges you face in the marketing research industry?			
Aim	To establish whether quantitative reporting, data visualisation and / or storytelling are perceived to be important industry challenges to deal with.		
Research objective	Secondary research objective B		
Literature	Chapters 2 and 3		
Interpretation category	1, 2 and 3	Proposition(s)	A and B
In-depth interview question: 2. What are the first three words that come to mind when you think about quantitative reporting in the marketing research industry?			
Aim	To determine whether quantitative reporting is positively or negatively perceived.		
Research objective	Secondary research objective B		
Literature	Chapters 2, 3 and 4		
Interpretation category	1(a and b)	Proposition(s)	B
In-depth interview question: 3. In a few words, explain _____'s (insert marketing research firm's name) quantitative reporting philosophy.			
Aim	To understand the approaches (thinking) followed when compiling quantitative research reports.		
Research objective	Secondary research objective B		
Literature	Chapter 3 and 4		
Interpretation category	1(a)	Proposition(s)	A and B

Table 6.1: The aims of in-depth interview questions and their relation to research objectives, literature, propositions and interpretation categories (continued)

In-depth interview question: 4. What do clients expect from the quantitative research reports that you deliver to them?			
Aim	To establish marketing research firms' perception of client expectations.		
Research objective	Secondary research objective E		
Literature	Chapter 3 and 4		
Interpretation category	1(b)	Proposition(s)	E
In-depth interview question: 5. Tell me about the data visuals _____ (insert marketing research firm's name) uses to report quantitative research results to clients.			
Aim	To determine the specific data visualisation techniques that are used in quantitative research reports by the marketing research firm.		
Research objective	Secondary research objective C		
Literature	Chapter 4		
Interpretation category	2(a and b)	Proposition(s)	C
In-depth interview question: 5a. What, if anything, makes it easy to implement these data visualisation techniques? 5b. What, if anything, makes it difficult to implement these data visualisation techniques?			
Aim	To establish reasons why certain data visualisation techniques are used or not used.		
Research objective	Secondary research objective C		
Literature	Chapter 4		
Interpretation category	2(a and b)	Proposition(s)	C
In-depth interview question: 5c. What do your clients say about these data visualisation techniques? Probe likes and dislikes.			
Aim	To establish client feedback on data visualisation techniques used in quantitative research reports.		
Research objective	Secondary research objective C and E		
Literature	Chapter 4		
Interpretation category	1(b)	Proposition(s)	C and E
In-depth interview question: 6. Show both lists of data visualisation techniques and ask participant to tick the ones that are used at _____ (insert marketing research firm's name). Probe usage frequency.			
Aim	To determine the specific data visualisation techniques used in quantitative research reports by the marketing research firm.		
Research objective	Secondary research objective C		
Literature	Chapter 4		
Interpretation category	2(a and b)	Proposition(s)	C

Table 6.1: The aims of in-depth interview questions and their relation to research objectives, literature, propositions and interpretation categories (continued)

In-depth interview question: 7. Do you consider the use of non-traditional data visualisation techniques as an important aspect of quantitative reporting? Motivate.			
Aim	To establish whether advancement in visual representation of data is considered important or not.		
Research objective	Secondary research objective B and C		
Literature:	Chapter 4		
Interpretation category	2(b)	Proposition(s)	A, B and C
In-depth interview question: 8a. Have you heard of the concept 'storytelling' in the marketing research industry before? If so, how would you describe storytelling? (If the participant is unfamiliar with the concept – define storytelling and discuss further).			
Aim	To determine awareness and understanding of storytelling.		
Research objective	Secondary research objective D		
Literature	Chapter 4		
Interpretation category	3(a)	Proposition(s)	D
In-depth interview question: 8b(i). What, if anything, makes it easy to implement storytelling? 8b(ii). What, if anything, makes it difficult to implement storytelling?			
Aim	To establish reasons why storytelling is used (implemented) or not used.		
Research objective	Secondary research objective D		
Literature	Chapter 4		
Interpretation category	3(a)	Proposition(s)	D
In-depth interview question: 8b(iii). What do your clients say about storytelling? Probe likes and dislikes.			
Aim	To establish client feedback on the use of storytelling in quantitative research reports.		
Research objective	Secondary research objective E		
Literature	Chapter 4		
Interpretation category	1(b)	Proposition(s)	D and E
In-depth interview question: 9. Do you consider storytelling as an important aspect of quantitative reporting? Motivate.			
Aim	To establish whether the use of storytelling in quantitative research reports is considered important or not.		
Research objective	Secondary research objective D		
Literature	Chapter 4		
Interpretation category	3(b)	Proposition(s)	A and D

The remainder of this section is structured according to the interpretation categories and subcategories as identified through applying the Morse and Field approach (refer to section 5.5.3, Appendix B, C and G). The interpretation category framework for the empirical research results is presented in Table 6.2 as a forerunner to the research results (refer to Table 5.5).

Table 6.2: Interpretation category framework for empirical research results

	Interpretation subcategory (a)	Interpretation subcategory (b)
Interpretation category 1: The use of quantitative reporting	Marketing research firms' quantitative reporting philosophy	Clients' expectations of quantitative research reports
Interpretation category 2: The use of data visualisation in quantitative research reports	The use of traditional data visualisation techniques	The use of non-traditional data visualisation techniques
Interpretation category 3: The use of storytelling in quantitative research reports	The use and understanding of storytelling in quantitative research reports	The perceived importance of storytelling in quantitative research reports

For each interpretation category the subcategories that were identified are discussed. Within the interpretation subcategory the research results are presented whereafter the major themes are identified and a figure is used to visually portray the research results in relation to a particular theme. Once all interpretation subcategories are presented, the findings with respect to each interpretation category are summarised.

6.2.2 Interpretation category 1: The use of quantitative reporting

This section details participants' overall use of quantitative research reports and presents the research results for each of the two interpretation subcategories.

6.2.2.1 Interpretation subcategory 1(a): Marketing research firms' quantitative reporting philosophy

Interpretation subcategory 1(a) considers participants' view of how the marketing research firm they work for approaches the quantitative research reports that they deliver to clients.

It is evident from the analysis that participants agreed that the main premise of quantitative research reports is to ensure that clients can action research results in a way that impacts their business; or was alternatively stated by participants as finding the “so what?” of the research results (refer to Figure 6.1). This means that marketing research firms focus quantitative research reports on the business implication of the research or the indication of specific action steps for the client. To a lesser extent, participants also indicated that the quantitative reporting of marketing research firms they work for, is focused on storytelling or data integration from different sources or quality.

Therefore, the major theme evident from the empirical study for this subcategory is:

- **Theme 1:** Quantitative research reports are aimed to be actionable for clients (refer to Figure 6.1).

Even though the results of the main study are qualitative in nature, Figure 6.1 provides an in-depth visual presentation of the theme that provides more insights and direct quotations from participants in support of the discussed theme (this is also applied to similar figures that follow).

Figure 6.1: Interpretation subcategory 1(a) research results – Theme 1



6.2.2.2 Interpretation subcategory 1(b): Clients' expectations of quantitative research reports

Interpretation subcategory 1(b) considers what participants think clients want from quantitative research reports. However, it seems that before participants could consider clients' expectations, participants expressed their concern of quantitative reporting's reputation in the marketing research industry.

From the analysis, participants with a negative sentiment towards quantitative research reports associated it with being boring, long and complex (refer to Figure 6.2). Other participants disagreed and indicated a positive evaluation of quantitative research reports and associated it with being insightful, simple and short (refer to Figure 6.2). In addition, participants stated that clients have a poor perception of the quantitative research reports that they receive, which negatively impacts the marketing research industry's credibility.

Nonetheless, participants agreed that client expectations differ extensively from client to client (refer to Figure 6.3). Drivers of these differences across clients include: the client’s industry, the client’s research literacy and the type of study (for example a once-off ad hoc study versus a tracking study over time, or a brand health tracker versus a communication pack test). From the analysis, participants agreed that clients expect actionable research results and indicated that this means that they have to provide action plans or steps to guide the clients’ business decisions (refer to Figure 6.1).

Hence, there are two major themes evident from the empirical study for this subcategory and they are detailed in the subsequent Figures:

- **Theme 1:** Poor reputation of quantitative research reports (refer to Figure 6.2).
- **Theme 2:** Clients have diverse reporting needs but most demand actionability (refer to Figure 6.3).

Figure 6.2: Interpretation subcategory 1(b) research results – Theme 1



Figure 6.3: Interpretation subcategory 1(b) research results – Theme 2



6.2.3 Interpretation subcategory 2: The use of data visualisation in quantitative research reports

This section details participants’ overall use of data visualisation techniques in quantitative research reports for each of the two interpretation subcategories.

6.2.3.1 Interpretation subcategory 2(a): The use of traditional data visualisation techniques

Interpretation subcategory 2(a) considers the specific traditional data visualisation techniques participants use in quantitative research reports up to the specific point in time.

Participants agreed that the marketing research firm they work for uses some form of traditional data visualisation technique in quantitative research reports (refer to Figure 6.4). The main reasons participants offered for the extensive use of traditional data visualisation techniques include:

- **Software:** This involves the accessibility and ease of creating data visualisations with the aid of software like PowerPoint and Excel.
- **Familiarity:** Clients are familiar with the data visualisation techniques and the marketing research firm seldom needs to explain to the client how to read the data represented in the data visual.

Participants were asked to indicate the specific traditional data visualisation techniques they (the marketing research firm where they work) use in quantitative research reports out of a list of fourteen traditional data visualisation techniques (refer to Appendix I). These fourteen traditional data visualisation techniques were selected from the theory classification discussed in Chapter 4 (refer to section 4.4.3, Figure 4.2 and Table 4.3).

From the analysis, it is evident that the majority of the traditional data visualisation techniques are used regularly. Those data visualisation techniques used by participants on a regular basis include: bar charts, column histograms, pie charts, tables, column charts, stacked charts and line charts (refer to Figure 6.5). Those data visualisation techniques that are used occasionally or not at all, include: 3D area charts, waterfall charts and stacked area charts (refer to Figure 6.5). The latter data visualisation techniques are used less often because participants argued that they experience difficulty in the creation and explanation thereof. Participants were almost in full agreement that those data visualisation techniques that are used more often, are easier for the marketing research firm to create and to explain.

In addition, and as indicated in Figure 6.4, the analysis reveals that particular traditional data visualisation techniques are used more often than other. From the in-depth interviews, differences in the use of traditional data visualisation techniques were noted – selected participants indicated that specific data visualisation techniques are more suitable for tracking research (for example line charts), whereas other techniques are more fitting for customised research (for example bubble charts).

It should be noted that participants also stated that traditional data visualisation techniques are typically complemented with pictures, videos and / or icons in

quantitative research reports (refer to Figure 6.5). Participants specified that these multi-media visual cues are used to support or enhance the message of the traditional data visualisation.

Thus the major theme evident from the empirical study for this subcategory is:

- **Theme 1:** Traditional data visualisation techniques are extensively used (refer to Figure 6.4 and Figure 6.5).

Figure 6.4: Interpretation subcategory 2(a) research results – Theme 1.1

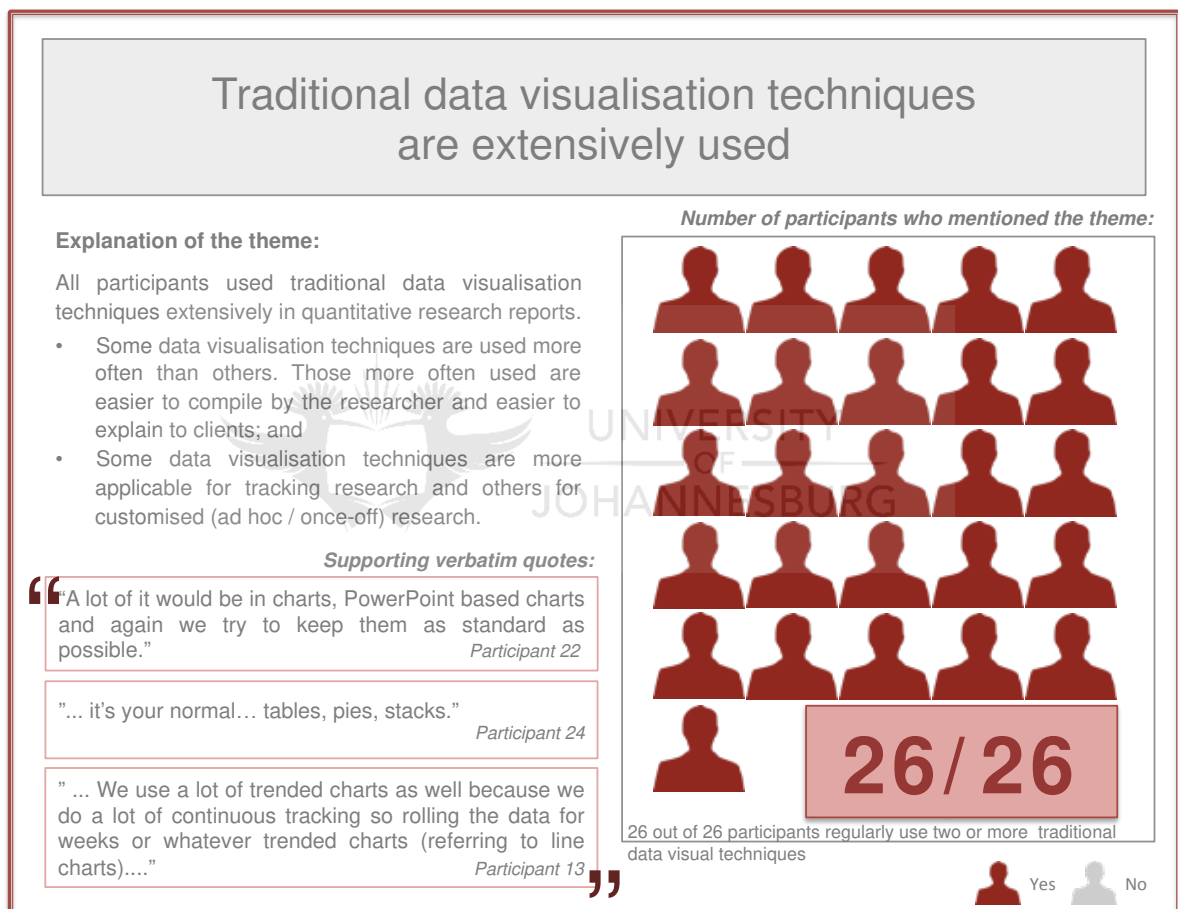
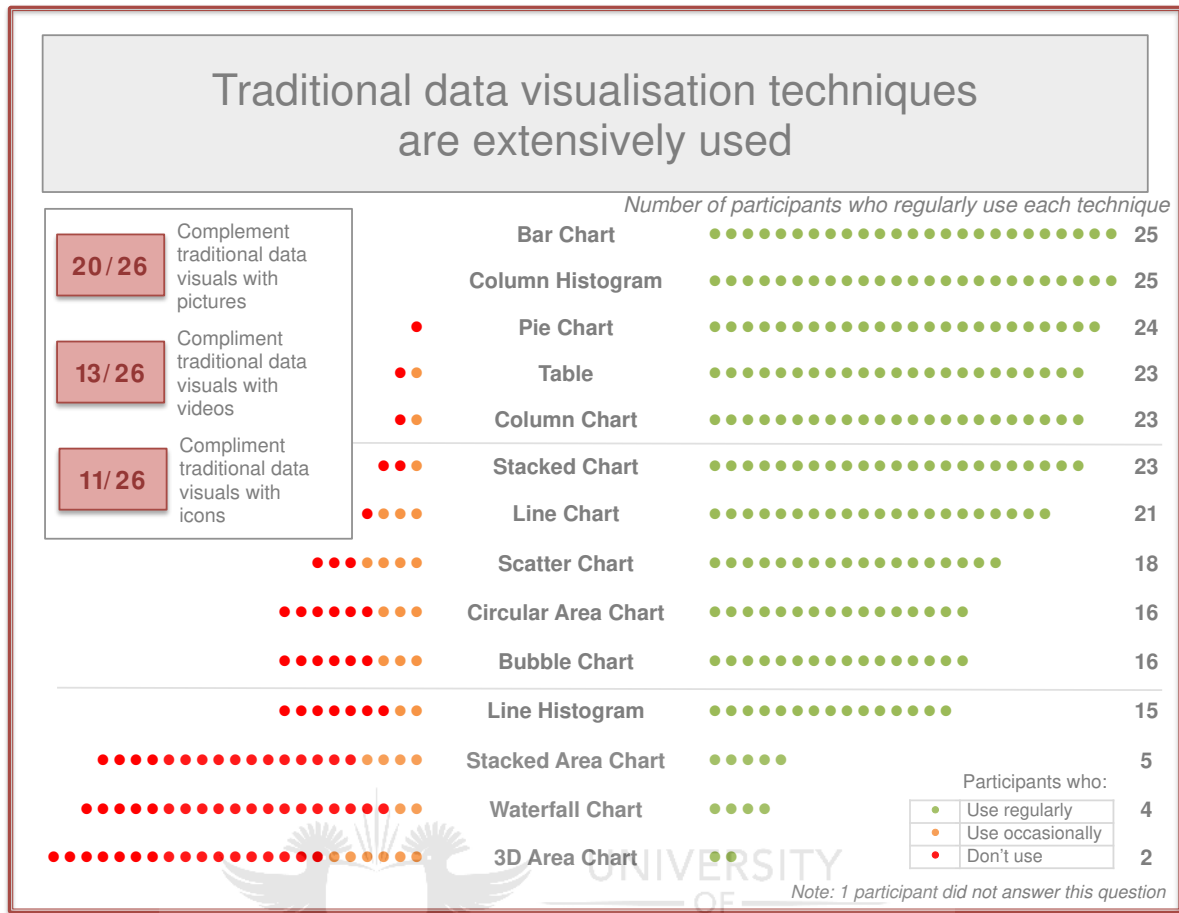


Figure 6.5: Interpretation subcategory 2(a) research results – Theme 1.2



6.2.3.2 Interpretation subcategory 2(b): The use of non-traditional data visualisation techniques

Interpretation subcategory 2(b) considers the non-traditional data visualisation techniques that participants use in quantitative research reports up to the specific point in time.

From the analysis, less than half of the participants indicated **regular** use of two or more non-traditional data visualisation techniques, while most participants indicated **occasional** use of non-traditional data visualisation techniques or use thereof for marketing purposes (refer to Figure 6.6) (note that due to time constraints one participant did not answer this question). Overall, participants reinforced that limited use of non-traditional data visualisation techniques in quantitative research reports exists.

The two biggest barriers to adoption are the time these non-traditional data visualisation techniques take to create, and the complexity thereof (refer to Figure 6.6). The first mentioned barrier includes several aspects of time: time to think what the data visualisation should look like, the time it takes to create it, and the time it takes to explain it to clients. Participants also indicated that these data visualisation techniques are more complex compared to traditional data visualisation techniques, as they are more difficult to create and to interpret. Because of its complexity, participants felt that these techniques require marketing research firms to educate clients on how to read and interpret them – which adds to both the time and complexity barriers.

In addition, participants also mentioned a few other barriers that impede these data visualisation techniques' inclusion into quantitative research reports. In descending order these barriers include: they require the researcher to be more knowledgeable, require client education, non-conducive client industries for example the financial sector, clients find confidence in the actual numbers, and non-traditional data visualisations could negatively impact on the marketing research firm's credibility if executed incorrectly.

Participants were asked to indicate which non-traditional data visualisation techniques they (the marketing research firm where they work) used selecting from a list of seven techniques (refer to Appendix J). These non-traditional data visualisation techniques were compiled and condensed to a shorter list for the sake of the discussion from the theory classification discussed in Chapter 4 (refer to section 4.4.4, Figure 4.3 and Table 4.4).

Figure 6.7 illustrates a different situation than what was found with respect to the use of traditional data visualisation techniques. From the analysis, participants indicated that the most common regularly used non-traditional data visualisation technique is interactive dashboards. Even though participants also indicated the use of infographics, most were in agreement that it is used as marketing or sales material as opposed to visualising data in quantitative research reports. Three supporting direct quotations in this regard are provided next:

- **Participant 3:** “...in marketing material but not in research results presentations.”
- **Participant 5:** “...when we used these they were used more when we were selling a specific product.”
- **Participant 21:** “...these kinds of graphics and things like that could almost be viewed as a form of marketing; it’s very flashy, pretty to look at, attractive.”

Participants were also asked to add any non-traditional data visualisation techniques to the list they used that were not included on the formalised list. Almost half of the participants (11 out of 26 participants) mentioned additional non-traditional data visualisation techniques used in quantitative reporting, which include: word clouds, heat maps and Prezi.

Nonetheless, when the creation of these non-traditional data visualisation techniques are considered, the results show that those participants with some use (regular and occasional) of these data visualisation techniques do so with the help of a specialised skilled individual or organisation (skilled in graphic design). A limited number of participants indicated that the marketing research firm for which they work has in-house graphical skills, while other participants indicated that they outsource it to a graphics organisation. Those participants who regularly / occasionally include non-traditional data visualisation techniques in quantitative research reports indicated that clients’ feedback is mostly positive and three participants mentioned that repeat business followed because of it.

From the analysis, participants were generally in agreement that the use of non-traditional data visualisation techniques is less important than advancements like interactive / real-time quantitative reporting (refer to Figure 6.8). Little importance is placed on the development of data visualisation techniques in quantitative reporting. In addition, when participants were asked to name the biggest industry challenges, only one respondent mentioned data visualisation as a challenge – instead, most challenges related to skill shortages (in terms of manpower, intellectual and resources) and restricted client budgets.

As indicated in Figure 6.8, participants also felt that traditional data visualisation techniques will always remain part of quantitative research reports – participants suggested that traditional and non-traditional data visualisation techniques should be used together with / complementary to each other. In particular, these participants indicated that traditional data visualisations will be used in the majority of the research reports, and non-traditional data visualisation techniques mainly used to highlight (draw attention to) certain research results in the quantitative research report.

Therefore, the two major themes evident from the empirical study for this subcategory is:

- **Theme 1:** The use of non-traditional data visualisation techniques is limited (refer to Figure 6.6 and Figure 6.7).
- **Theme 2:** The use of non-traditional data visualisation techniques is less important compared to other advancements (refer to Figure 6.8).

Figure 6.6: Interpretation subcategory 2(b) research results – Theme 1.1

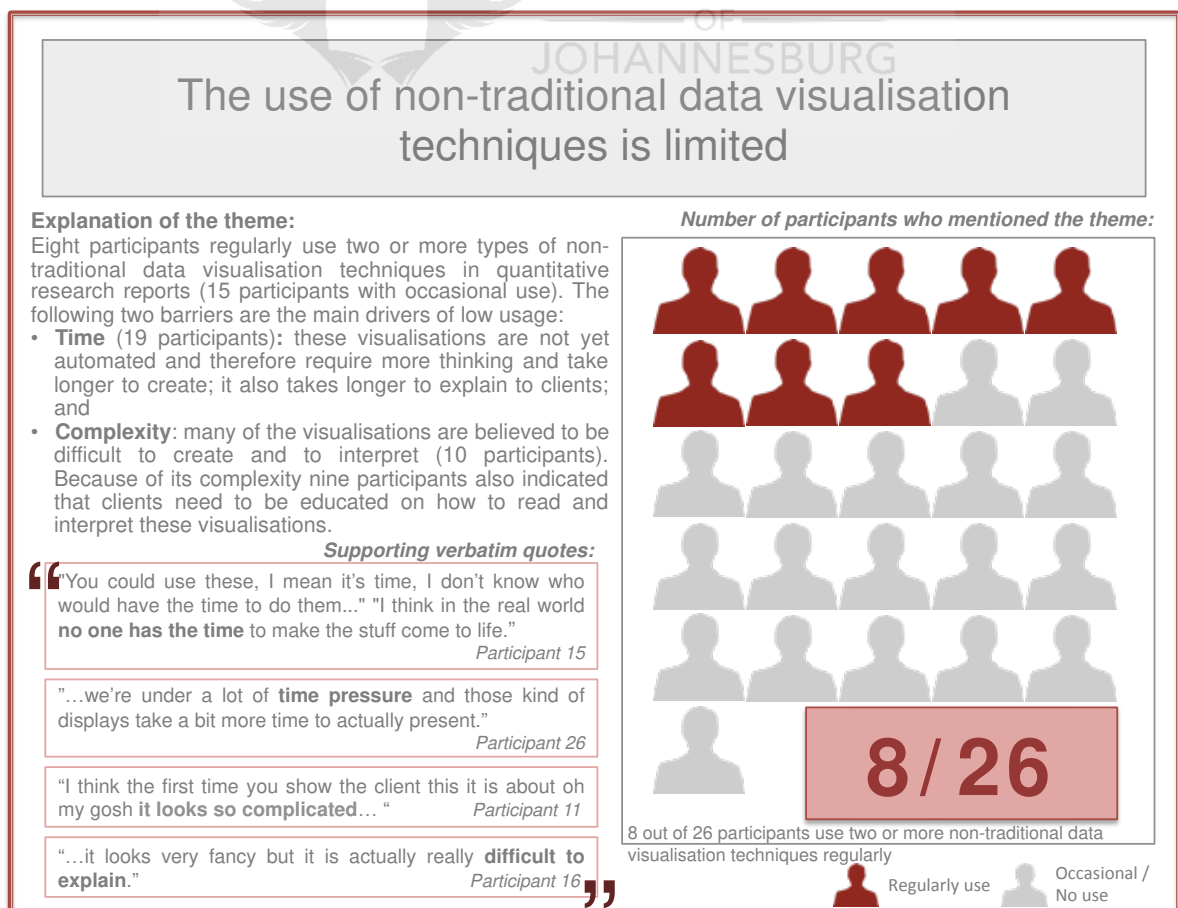
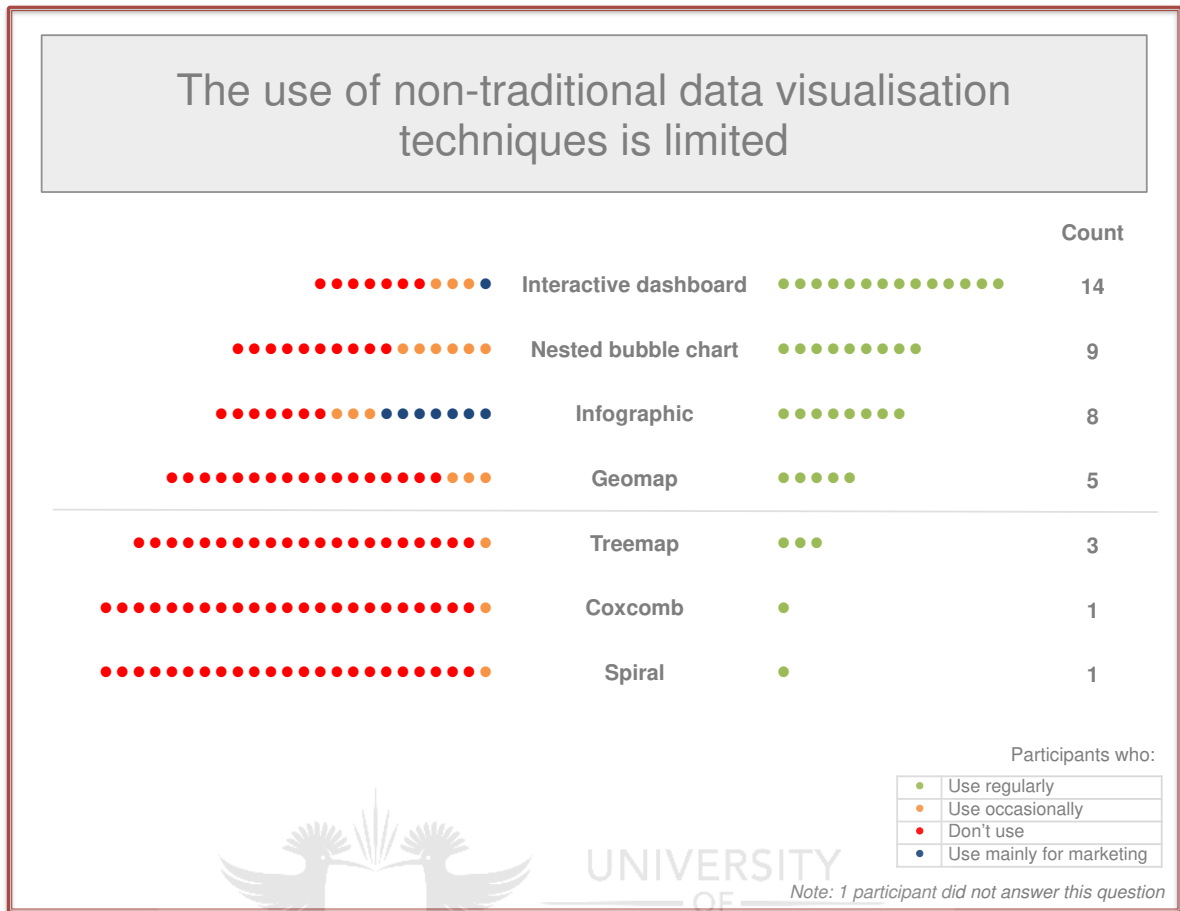
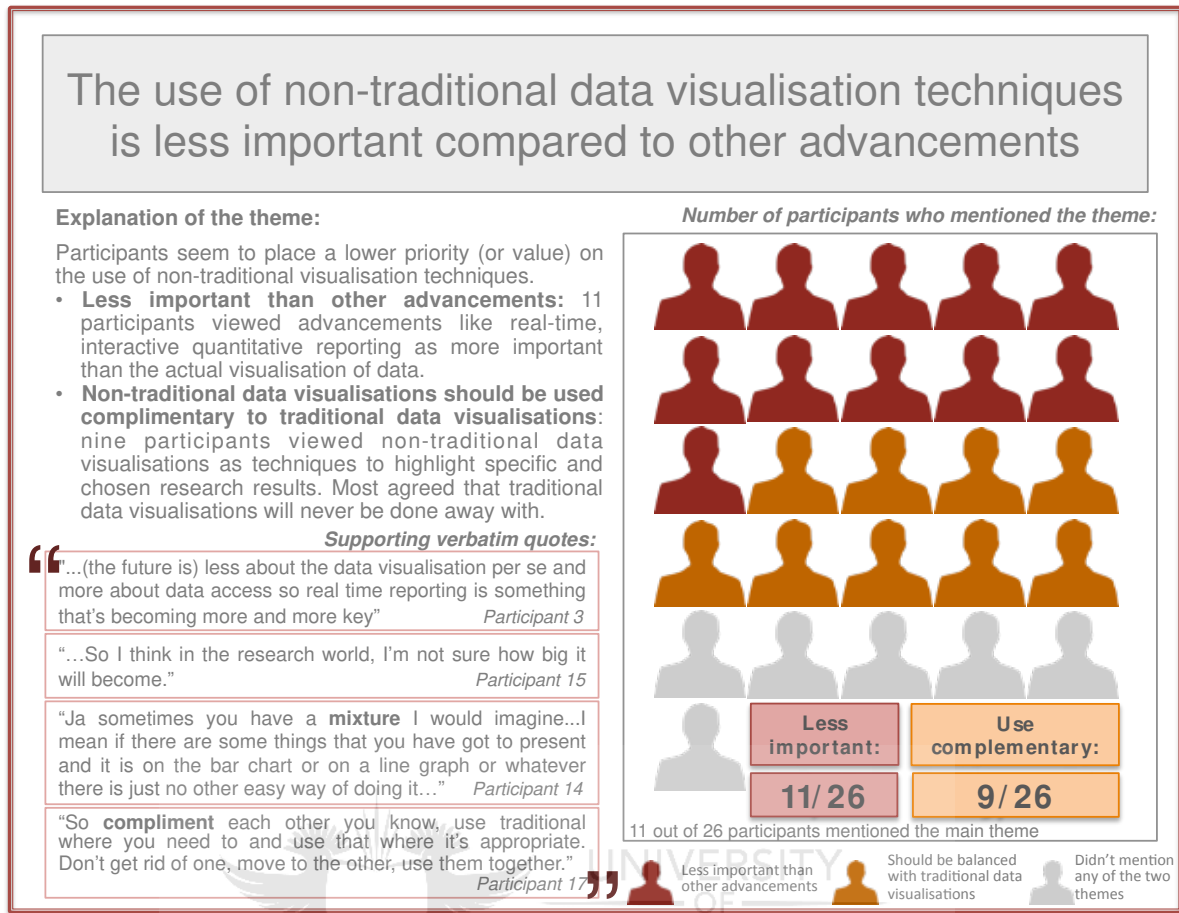


Figure 6.7: Interpretation subcategory 2(b) research results – Theme 1.2



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Figure 6.8: Interpretation subcategory 2(b) research results – Theme 2



6.2.4 Interpretation category 3: The use and understanding of storytelling in quantitative research reports

This section details participants’ overall use of storytelling in quantitative research reports and presents the research results for each of the two interpretation subcategories.

6.2.4.1 Interpretation subcategory 3(a): The use of storytelling in quantitative research reports

Interpretation subcategory 3(a) considers participants’ use and understanding of storytelling as applied in quantitative research reports.

The majority of participants indicated that the marketing research firms where they work use storytelling in quantitative reports in some way or another. The participant who does not use storytelling is well aware of the concept of storytelling, but suggests that a storytelling approach is not fitting for the types of

clients and projects that the marketing research firm where he / she is employed work on. The participant indicated that these clients are predominantly in operations (as opposed to marketing, branding or on the executive board) and all projects are highly tactical / operational in nature.

As indicated in Figure 6.9, most participants agree that storytelling is defined as a way of reporting research results in a specific order – the meaning participants attached to a “specific order” is outlined next:

- **Order:** It means that research results do not necessarily need to be reported in the same order as in which questions appear on the questionnaire; in other words, question 2 does not need to follow question 1, question 3 does not need to follow question 2. Telling a story means that the marketing research firm can report questions from the questionnaire in a different sequence.
- **Logical:** It means that research results are reported in a logical manner with a beginning, middle and end.

In addition, participants also felt that storytelling means that the research results are structured around answering the client’s business question – participants indicated that this means that data is chosen and reported in such a way that it answers the business question throughout the quantitative research report. Participant mentions with lower responses included: stories are conclusions driven and stories ensure that there is a golden thread throughout the research results.

Participants were furthermore asked to indicate any difficulties experienced in applying storytelling to quantitative research reports. When participants were asked to name the barriers when including storytelling in quantitative research reports, various responses were given. Amongst these three of the four barriers with the highest mention, concern the **employee** responsible for compiling the quantitative research report (marketing researcher) (refer to Figure 6.10). Storytelling requires the **employee** to have relevant:

- **Skills:** The marketing researcher should be skilled and experienced.
- **Client relations:** The marketing researcher should have good client relationships and knowledge of the client’s business.

- **Confidence:** The marketing researcher should have self-confidence in the story of the research results.

The last barrier is that the storytelling process is time intensive. Participants felt that storytelling still requires the individual to work through large amounts of data / information to distil the appropriate story that answers the client’s business question.

Hence, the two major themes evident from the empirical study for this subcategory are:

- **Theme 1:** Storytelling is used to deliver actionable research results in a logical format (refer to Figure 6.9).
- **Theme 2:** A variety of barriers limit the use of storytelling (refer to Figure 6.10).

Figure 6.9: Interpretation subcategory 3(a) research results – Theme 1

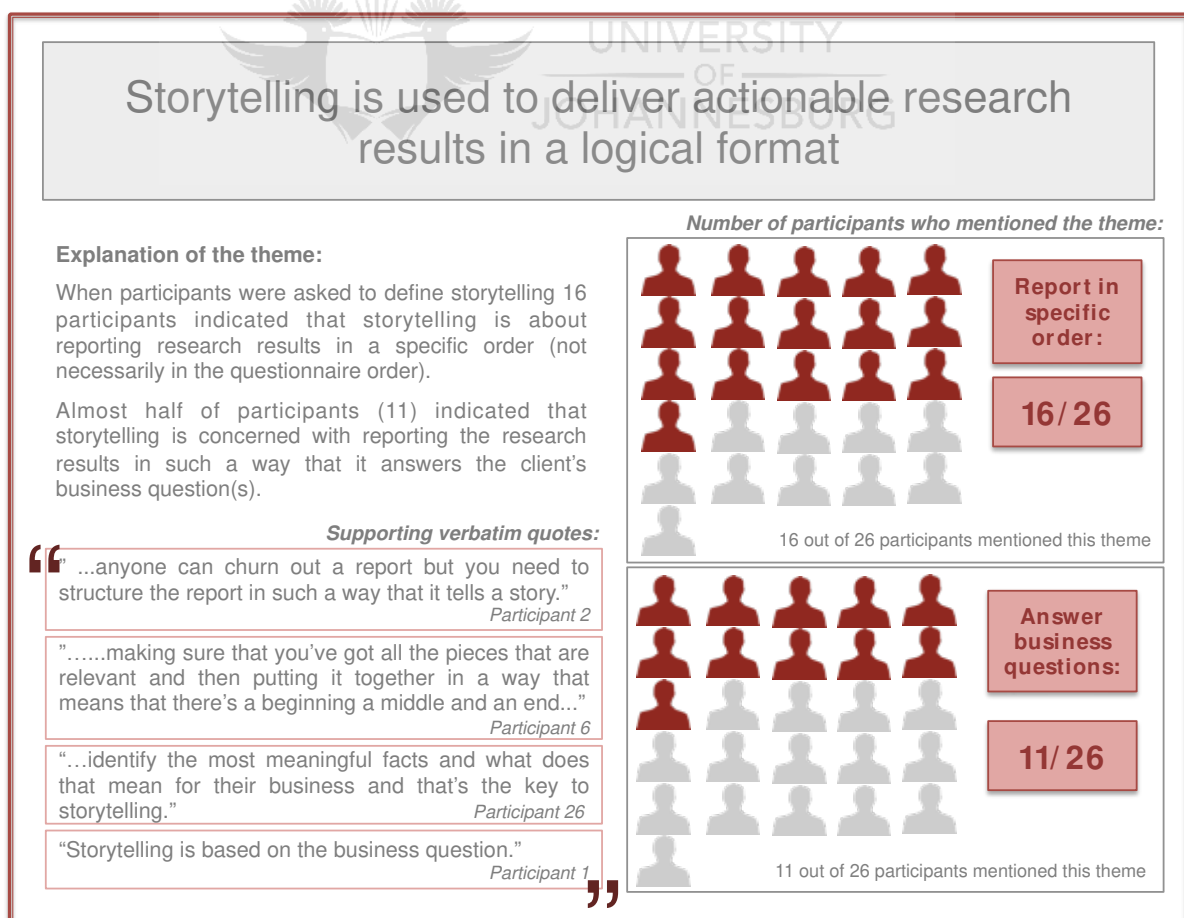
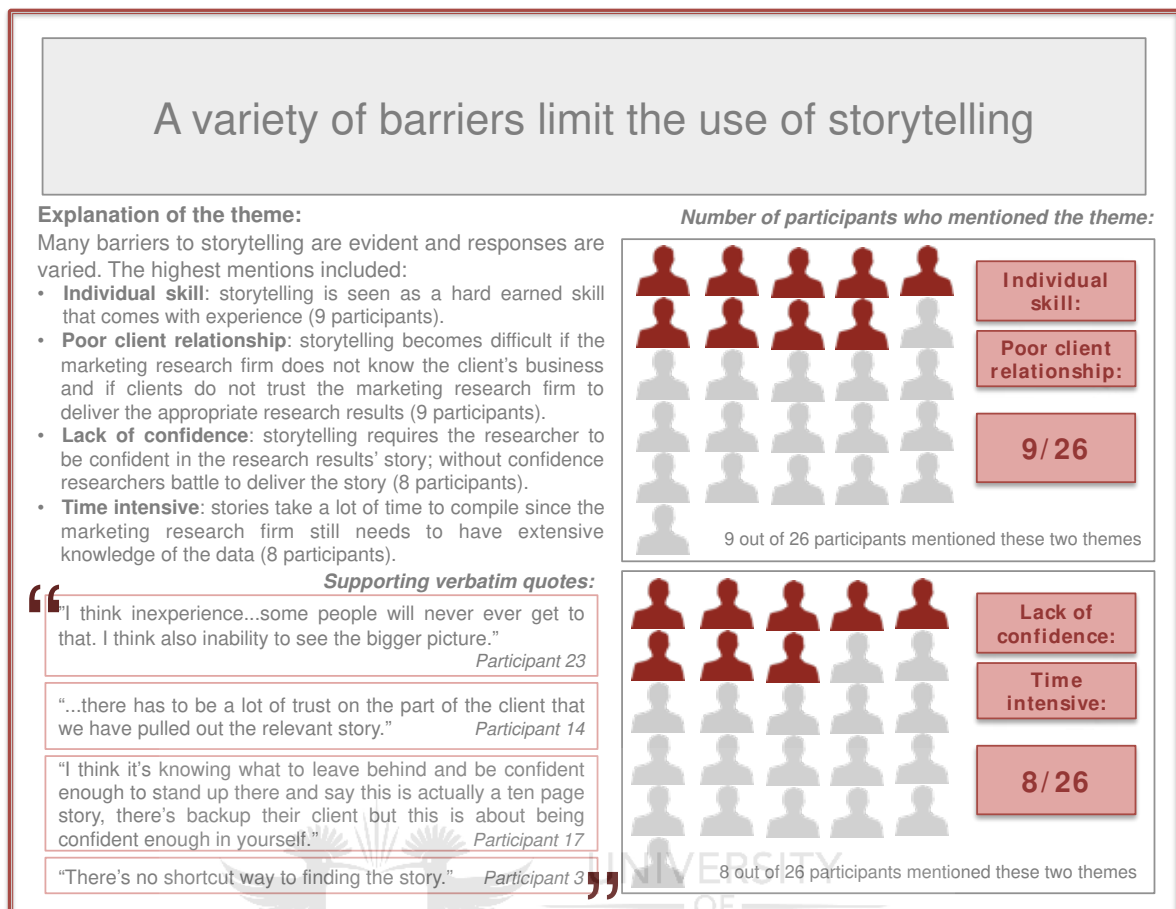


Figure 6.10: Interpretation subcategory 3(a) research results – Theme 2



6.2.4.2 Interpretation subcategory 3(b): The perceived importance of storytelling in quantitative research reports

Interpretation subcategory 3(b) considered how important participants' perceive storytelling to be in quantitative research reports.

As indicated in Figure 6.11, almost all participants mentioned the importance of storytelling **before** the researcher asked the question relating to storytelling (refer to the interview guide, Appendix A). All participants were familiar with the concept of storytelling once the researcher prompted them and indicated that storytelling is widely used and an important focus of quantitative research reports. Participants were in agreement that storytelling is of **critical** importance mainly because:

- It forces the marketing research firm to think of the “so what” (refer to the findings of category 1(a)).

- It helps the marketing research firm in distilling what the most important information for the client is.

Participants furthermore indicated that clients' feedback is predominantly positive and four participants also mentioned that repeat business followed because of it.

Nonetheless, Figure 6.11 also illustrates that six participants indicated that the marketing research firm they work for uses a particular formula or model to assist with storytelling in quantitative research reports (these participants represent three of the big revenue contributing marketing research firms, refer to section 2.3.2.2, Figure 2.2). It should however also be noted that participants added that quantitative research reports are hardly ever **only** reported using a storytelling approach.

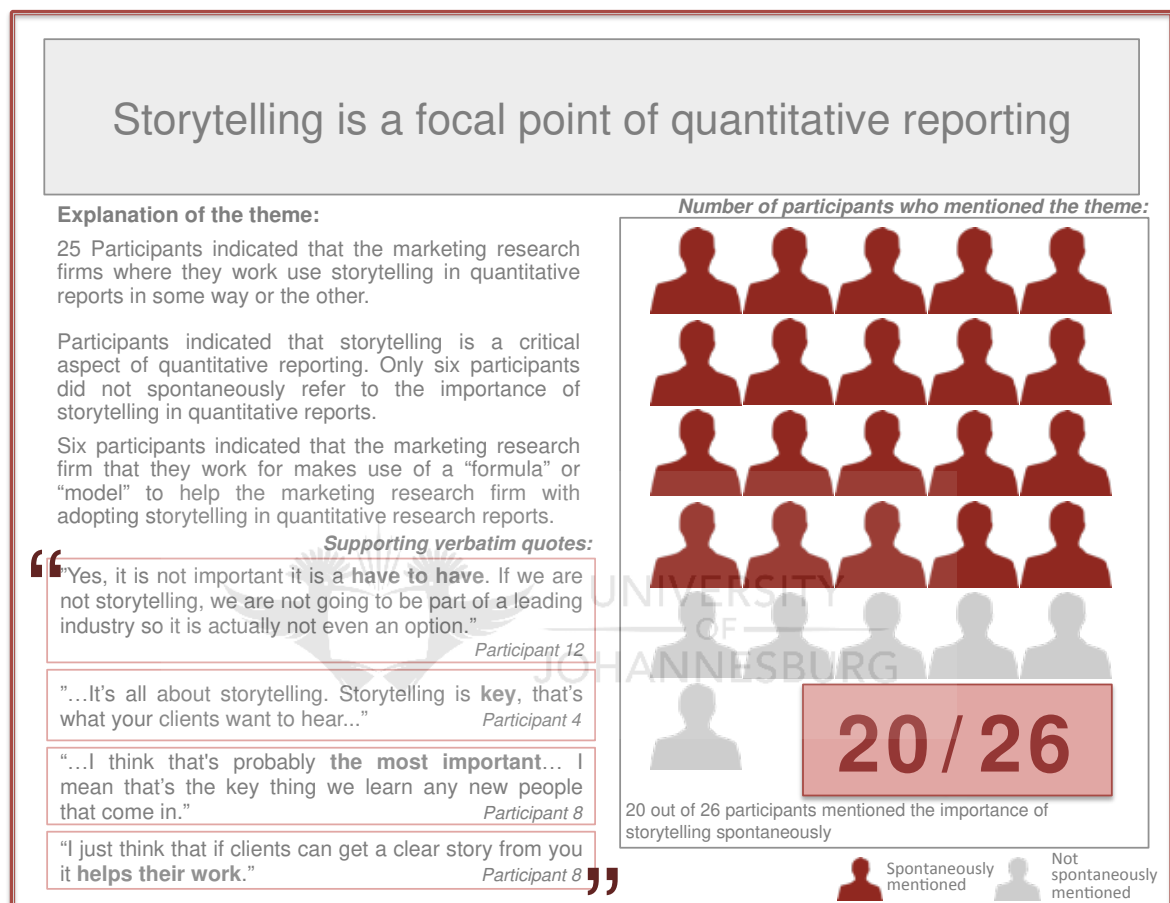
Participants indicated that quantitative research results reported as stories are usually shorter and more focused compared to other quantitative research reports. Consequently, clients usually require the additional data / information in another format for reference purposes. For this reason, participants said that their marketing research firm supplies clients with both a full databook / appendix comprising all the data and a shortened version of the "story" report. Here are three supporting verbatim quotations in this regard:

- **Participant 6:** "...clients love the fact that they say 'is that in my deck?'...I'm giving the twenty charts that can allow them to navigate through a deck of three hundred things."
- **Participant 11:** "...instead of sitting through a presentation that is an hour-and-a-half long we are actually sitting 30 minutes, 45 minutes...we have that data, it is in the appendix but it is not offering value to the story."
- **Participant 16:** "...actual (storytelling) reporting kind of less is more...And then you know so the client gets all the data afterwards."

Therefore, the major theme evident from the empirical study for this subcategory is:

- **Theme 1:** Storytelling is a focal point of quantitative reporting (refer to Figure 6.11).

Figure 6.11: Interpretation subcategory 3(b) research results – Theme 1



6.2.5 Research results summary of the main study

Table 6.3 summarises the themes identified in the empirical research results for each interpretation category and subcategory. It also notes the overall finding of each interpretation category.

Table 6.3: Summary of interpretation categories' research results

Interpretation category 1: The use of quantitative reporting		
Subcategory	1(a) Marketing research firms' quantitative reporting philosophy	1(b) Clients' expectations of quantitative research reports
Themes	<ul style="list-style-type: none"> Quantitative research reports are aimed to be actionable for clients. 	<ul style="list-style-type: none"> Poor reputation of quantitative research reports.
		<ul style="list-style-type: none"> Clients have diverse reporting needs but most demand actionability.
Main finding	<p>Participants felt that quantitative reports have a poor reputation. Nonetheless, participants stated that the marketing research firm where they work aims to deliver actionable quantitative research reports, which are aligned with what they believe clients expect from quantitative research reports. Actionability means that marketing research firms focus on finding the answering to the “so what” of the research so as to impact the clients' business and decision-making.</p>	
Interpretation category 2: The use of data visualisation in quantitative research reports		
Subcategory	2(a) The use of traditional data visualisation techniques	2(b) The use of non-traditional data visualisation techniques
Themes	<ul style="list-style-type: none"> Traditional data visualisation techniques are extensively used. Most evaluated traditional data visualisation techniques are used regularly. 	<ul style="list-style-type: none"> The use of non-traditional data visualisation techniques is limited by a number of barriers.
		<ul style="list-style-type: none"> Most evaluated non-traditional data visualisation techniques are used occasionally or not at all.
		<ul style="list-style-type: none"> Non-traditional data visualisation techniques are considered less important compared to other advancements in quantitative reporting.
Main finding	<p>Participants indicated that the marketing research firm where they work extensively uses traditional data visualisation techniques because of ease of accessibility and use. Non-traditional data visualisation techniques on the other hand reflect occasional use by marketing research firms due to many barriers that impede adoption, with time and complexity being the biggest amongst these, together with the low perceived importance of the inclusion thereof in quantitative research reports.</p>	

Table 6.3: Summary of interpretation categories' research results (continued)

Interpretation category 3: The use of storytelling in quantitative research reports		
Subcategory	3(a) The use and understanding of storytelling in quantitative research reports	3(b) The perceived importance of storytelling in quantitative research reports
Themes	<ul style="list-style-type: none"> • Storytelling is used in quantitative reporting by all except one participant. • Storytelling is used as an approach to give order to research results and is a way of answering clients' business questions. • Barriers in applying storytelling are varied. The highest mentions amongst participants include: it requires researcher skill and that it is time intensive. 	<ul style="list-style-type: none"> • Storytelling is a focal point of quantitative reporting.
Main finding	<p>Participants use storytelling. Participants indicated that the marketing research firm where they work considers storytelling as a focal point of quantitative reporting as it focuses on the delivery of actionable research results in a logical format. A variety of barriers impede adoption thereof with the biggest being researcher skill and time intensity.</p>	

The next section provides the research results of the small-scale complementary study (quantitative phase).

6.3 SMALL-SCALE COMPLEMENTARY STUDY: RESEARCH RESULTS

This section considers the results of the small-scale complementary study, which evaluates clients' perception of quantitative reports delivered by marketing research firms. Similar to the results of the main study this section first details the aims of the survey questions and their relation to the research objectives, literature and propositions (refer to section 5.3, Table 5.1). It then details the sample demographics whereafter it reports the survey results amongst marketing research firms' clients.

6.3.1 Aims of survey questions and relation to literature and propositions

Table 6.4 indicates the relation between the survey questions, the aim of each survey question, its relation to the research objectives and the research propositions (if applicable).

Table 6.4: Survey questions' aims and relation to literature and propositions

Survey question: 1. In the last three months, how many times did you receive quantitative reports / presentations from (a) marketing research firm(s)?	
Aim	To ensure that only qualifying respondents answered the survey – it is a screener that ensures all respondents received a quantitative research report in the last three months.
Research objective	Not applicable
Literature	
Proposition	
Survey question: 2. Please indicate the industry of the company you represent:	
Aim	To describe the type of client who participated in the survey.
Research objective	Not applicable
Literature	
Proposition	
Survey question: 3. Please rate each of the following aspects relating to marketing research firms' quantitative research reports / presentations on a scale of 1-5 where 1 means "strongly disagree" and 5 means "strongly agree":	
Aim	To evaluate clients' perception of quantitative research reports received from marketing research firms.
Research objective	Secondary research objective E
Literature	Chapters 2, 3 and 4.
Proposition	E
Survey question: 4. On a scale of 1-5, where 1 means "not at all" and 5 means "a great deal", please indicate to what extent you personally feel quantitative reporting / presentations provided by marketing research firms need improvement? 5. Please give a reason for your answer above (question 4).	
Aim	To determine clients' evaluation of quantitative research reports and to establish needs.
Research objective	Secondary research objective E
Literature	Chapters 2, 3, and 4.
Proposition	E
Survey question: 6. Do you have any additional comments about quantitative research reports / presentations that you receive from marketing research firms that you would like to share?	
Aim	To give respondents the opportunity to record any other concerns or compliments about the quantitative research reports they receive from marketing research firms.
Research objective	Secondary research objective E
Literature	Chapters 2, 3, and 4.
Proposition	E

The results of the small-scale complementary survey are discussed next.

6.3.2 Demographic profile of respondents

In terms of a demographic profile, the frequency that respondents receive quantitative research reports from marketing research firms was determined (Table 6.5), as well as the industry that respondents find themselves in (Figure 6.12)

Table 6.5: Frequency of receiving quantitative research reports in the past three months

Response categories	Percentage	Count
None	0.0%	0
1-2 times	33.0%	10
3-4 times	35.0%	11
4-5 times	6.0%	2
More than 6 times	26.0%	8
Total	100.0%	31

From Table 6.5, it can be seen that a total of 31 respondents completed the survey. All respondents have received a quantitative research report from a marketing research firm in the past three months (screening criteria – refer to section 5.6.2.1, Table 5.7). Just over two-thirds (68%) of respondents received between 1 and 4 quantitative research reports in the past three months and close to a third (32%) received 5 or more.

Figure 6.12: Industry representation amongst respondents

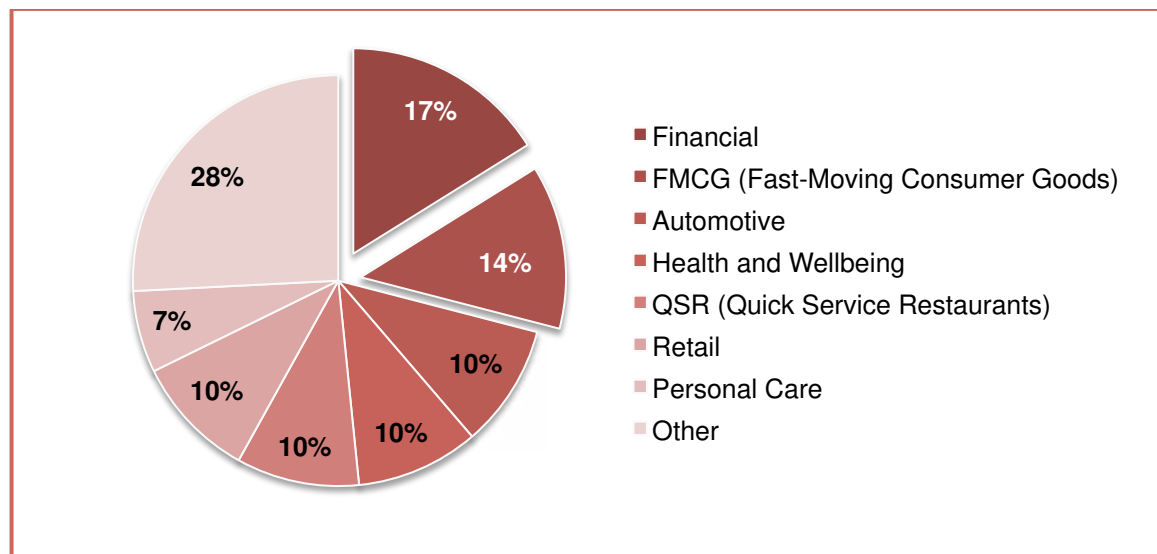


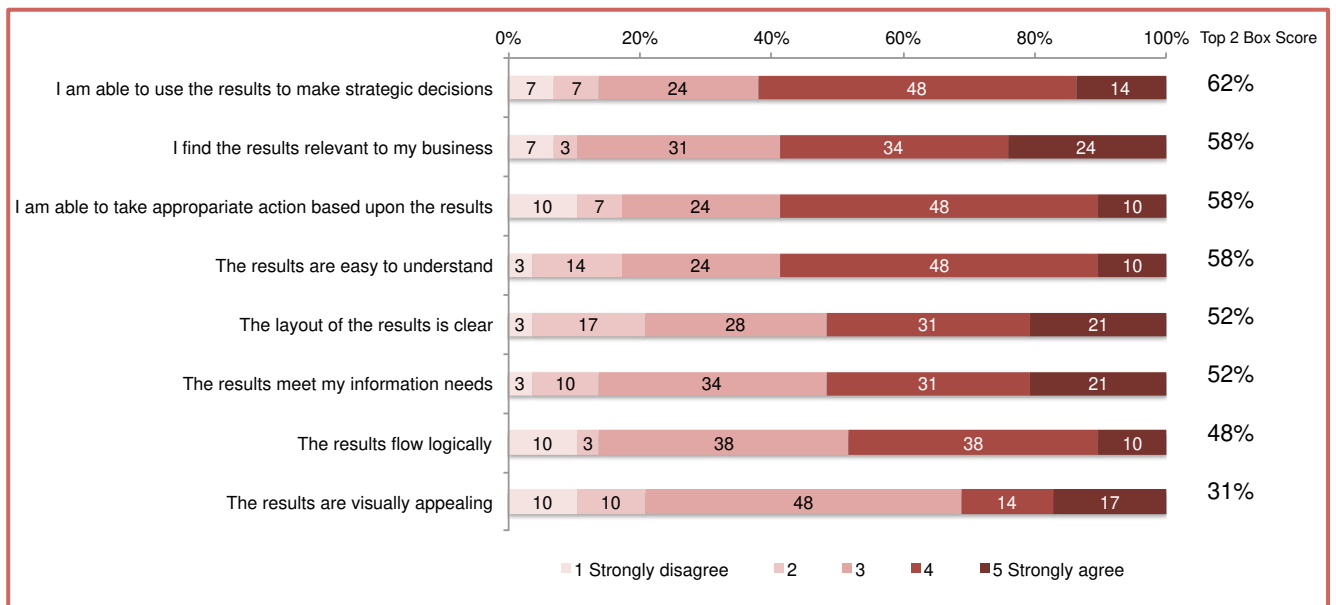
Figure 6.12 indicates that the sample is spread across various industries with the majority of respondents representing the financial (17%) and fast-moving consumer goods (14%) industries. Some of the industries classified as “other” (28%) include: pharmaceutical, entertainment, media and transport. The subsequent section details clients’ perceptions of quantitative research reports.

6.3.3 Respondents’ perceptions of quantitative research reports delivered by marketing research firms

This section considers respondents’ perceptions of quantitative research reports delivered by marketing research firms. Firstly, it reports respondents’ general perceptions of quantitative research reports based on a list of predefined criteria. It then details whether respondents’ feel there is a need for marketing research firms to improve quantitative research reports received and the reasons therefor. It ends with a summary of additional comments made by respondents regarding the quantitative research reports they receive from marketing research firms.

Figure 6.13 illustrates respondents’ perceptions of quantitative research reports. For each predefined criteria statement the percentage of responses for each point on the scale is indicated and a summary of the top 2 box scores (point 4 and 5 on the response scale) are reported to the right of the figure. The results are presented in descending order based upon the top 2 box scores.

Figure 6.13: Respondents' perceptions of quantitative research reports



The following observations can be made from Figure 6.13. Respondents indicated agreement with the following statements:

- Almost two-thirds (62%) of the respondents agree that the research results of quantitative reports could be used to make strategic decisions.
- 58% of the respondents agree that research results are relevant to their business, that they can take action based on the research results and that it is easy to understand.

Respondents indicated varied agreement with the following statements:

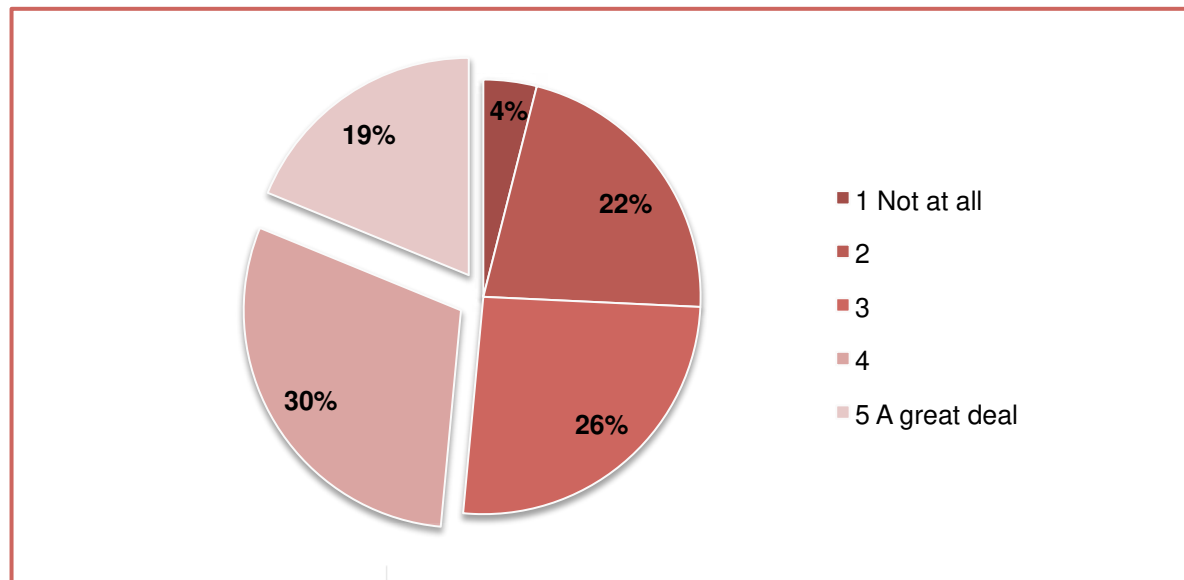
- Just over half (52%) of the respondents agree that the layout of research results is clear and that it meets their information needs (note that 20% of the respondents disagreed).
- Nearly half (48%) of the respondents agree that the research results followed a logical layout.

Respondents indicated disagreement with the following statements:

- Close to a third (31%) feel that research results are reported in a visually appealing way, (20%) of the respondents disagree – the bottom 2 box score of points 1 and 2 on the scale – that research results are reported in a visually appealing way and 48% responded with a 3 (neutral).

Next the results of whether respondents felt that quantitative research reports need improvement or not are presented in Figure 6.14.

Figure 6.14: Respondents' perception on whether or not quantitative research reports need improvement



Around a fifth (19%) of the respondents indicated that quantitative research reports delivered by marketing research firms need “a great deal” of improvement. The top 2 box scores (point 4 and 5 on the response scale) indicate that almost half (49%) of the respondents suggest that quantitative research reports need improvement. Each respondent was asked to indicate a reason for the chosen response for whether quantitative research reports need improvement or not. These verbatim responses were categorised and are reported in Table 6.6 (please note that some respondents had **multiple reasons** for their rating; also note that out of the 31 respondents, 29 respondents answered the question, two respondents failed to answer this question).

Table 6.6: Reasons why quantitative research reports need or do not need improvement

Response categories	Percentage	Count
Need improvement (scores 4 or 5)		
Quantitative research reports should be more strategic and actionable	31%	9
Poor understanding of research results (unclear)	10%	3
Quantitative research report needs to be shorter	3%	1
Poor understanding of client's business	7%	2
Other (for example poor quality, visually unappealing, not creative)	17%	5
Mediocre (score 3)		
Poor understanding of research results (unclear)	10%	3
Quantitative research reports should be more strategic and actionable	7%	2
Quantitative research report needs to be shorter	3%	1
Other (for example too standardised, inconsistent storytelling)	10%	3
Don't need improvement (scores 1 or 2)		
Clear and easy to understand (usable)	10%	3
Firms are good at what they do	10%	3

Most respondents (39%) indicated that quantitative research reports need improvement in the area of strategic relevance – i.e. the actionability of research reports. Some of the verbatim quotes, in support of this, are listed below:

- **Respondent 1:** “They need to be more strategic and take the objectives of the company into account when formulating the 'way forward'.”
- **Respondent 6:** “Market research companies tend to just dump data and do not offer insights into the story the data tells.”
- **Respondent 7:** “I need actionable recommendations that are applicable to my company and strategy.”
- **Respondent 11:** “(there should be) more focus on linking responses to strategic questions and potential actions.”
- **Respondent 18:** “The reports are very flat and don't really give business solutions for the way forward.”

As for the last question in the survey, most respondents did not have any additional information to add to the evaluation of quantitative research reports received from marketing research firms (74%). Of those who did respond, five respondents (16%) said that marketing research firms should spend more time on ensuring that quantitative research reports have an impact on their business i.e., be actionable (verbatim quotes: “too many numbers, too little impact” and “less charts and more actions”). The other three respondents (10%) indicated aspects **not** related to quantitative research reporting (e.g. the design and methodology used to do quantitative research).

6.2.6 Research results summary of the small-scale complementary study

Table 6.7 summarises the main findings of the empirical research results regarding the small-scale complementary study. It also notes the overall finding.

Table 6.7: Summary of small-scale complementary study’s research results

	Research results
Subcategory	Client demographics
Findings	68% of the respondents received between 1 and 4 quantitative research reports in the past three months and 32% received 5 or more. The sample is spread across various industries with the majority of respondents representing the financial (17%) and fast-moving consumer goods (14%) industries.
Subcategory	Perceptions of quantitative research reports delivered by marketing research firms
Findings	62% of the respondents agreed that the research results of quantitative reports could be used to make strategic decisions, and 58% of the respondents agree that research results are relevant to their business, that they could take action based on the research results and that it is easy to understand. However 31% indicated the reporting of research results are visually appealing. A further 49% indicated that quantitative research reports needed improvement – most respondents specified that these reports lack strategic use and actionability.
Main finding	Respondents positively agreed with most of the predefined criteria that measured quantitative research reports delivered by marketing research firms. However, it is evident that close to half of respondents felt that quantitative research reports needed some level of improvement – it was indicated that there is a lack of strategic application and actionability.

6.4 CONCLUSION

This chapter reports the empirical research results of both the main study (qualitative phase) and the small-scale complementary study (quantitative phase). For both studies, a review of the interview / survey questions, propositions and literature is presented as introduction to the research results. For the main study, it provides a detailed account of themes identified in each of the defined interpretation categories as specified in Chapter 5. The chapter concludes with the results of the complementary study.

Chapter 7 focuses on how the empirical research results tie in with the literature presented in Chapters 2 to 4 in an attempt to answer the research objectives of the study. Conclusions and recommendations are provided for each one of the four secondary research objectives to ultimately answer the primary research objective.



CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS



7.1 INTRODUCTION

The purpose of this chapter is to answer the specified research objectives of the study as outlined in Chapter 1 and 5 (refer to sections 1.5. and 5.2). It commences with an overview of the study as background to the rest of the chapter. The conclusions and recommendation discussion is structured according to the secondary and primary research objectives set for the study. The chapter furthermore provides an account of how the empirical research results relate back to the literature discussed in Chapters 2, 3 and 4 in order to make concluding remarks and recommendations for each research objective. Furthermore, the limitations of the study are presented and the chapter concludes with suggestions for further research.

7.2 OVERVIEW OF THE STUDY

As background to the conclusions and recommendations of each research objective discussed in section 7.3, this section reflects on the study's objective,

the key aspects addressed in each literature chapter (Chapters 2, 3 and 4), and the chosen research methodology (Chapter 5).

This study was undertaken to address the primary research objective of uncovering the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports. This significance of this primary research objective is contained in the problem statement (refer to section 1.4): *marketing research firms' traditional quantitative reporting to clients commonly results in large amounts of user-unfriendly information that does not often add value to their clients' businesses. If alternative methods to data visualisation or storytelling are not adopted, marketing research firms run the risk of becoming strategically irrelevant; providing only data services and being replaced by independent consultants. These developments may result in lower revenues, weakened and non-strategic relationships with clients, and a loss of a competitive advantage for marketing research firms. From an academic perspective, it is important for marketing research as discipline to develop and present innovative ways of presenting research results in both the academic and industry environment.*

A literature review regarding concepts of the research objectives and problem statement was presented in Chapters 2, 3 and 4. These concepts included:

- The marketing research industry (Chapter 2)
- Marketing research firms' positioning (Chapter 3)
- Data visualisation and storytelling (Chapter 4)

Chapter 2 provided an overview of the marketing research industry both globally and locally (refer to literature overview in Table 7.1). From Chapter 2 it was identified that the marketing research industry faces a number of challenges, one of which is that marketing research firms fail to position themselves strategically. Chapter 3 then explored this challenge in depth and detailed why marketing research firms should consider becoming strategic thought partners as opposed to data suppliers, and also presented guidelines to facilitate this transformation (refer to literature overview in Table 7.1). Amongst others, the provision of actionable research and the communication thereof were identified in Chapter 3

as methods to increase the strategic value marketing research firms could offer (refer to section 3.4.7). Chapter 4 then thoroughly detailed that actionable research fits into the last step of the research process, namely reporting of research results. Several aspects of the research report were presented (including a definition, the importance and problems thereof). Thereafter, various methods to compile actionable research reports were presented and data visualisation and storytelling were identified as two methods that could facilitate actionability (refer to section 4.3.4 and key aspects of the literature overview in Table 7.1). As indicated, the key aspects from each chapter are detailed in Table 7.1.

Table 7.1: Literature overview Chapters 2, 3 and 4

Key aspects	Reference
Chapter 2 – Marketing research industry	
Marketing research was defined and classified according to literature into two broad categories namely internal versus external services delivered to the client.	Section 2.3.1, Figure 2.1
The marketing research industry is a highly competitive environment and it is increasingly difficult for marketing research firms to remain successful due to a number of challenges. One of the key challenges concerns positioning – marketing research firms are seen as data suppliers rather than strategic thought partners.	Section 2.5
Chapter 3 – Rethinking marketing research firms as strategic thought partners	
Marketing research firms focus on becoming strategic thought partners (as opposed to data suppliers) due to a number of reasons which include: client demand for actionable research with strategic impact, increased competition, commoditisation of data and data overload.	Section 3.3
A few guidelines for marketing research firms in becoming strategic thought partners were presented. Amongst these, the provision of actionable research and the communication (reporting) thereof were identified.	Sections 3.4 and 3.4.7

Table 7.1: Literature overview Chapters 2, 3 and 4 (continued)

Key aspects	Reference
Chapter 4 – Actionable reporting in the marketing research process: data visualisation and storytelling	
The success of the last step of the marketing research process, compiling research reports, is of critical value and importance to the performance of marketing research firms.	Sections 4.2 and 4.3.2
Clients consider research reports as being too long, technical and confusing, which negatively impacts the actionability and strategic impact of research results. Data visualisation and storytelling were identified and explored as two methods that could be used strategically in quantitative research reports by encouraging actionable research.	Sections 4.3.3, 4.3.4.2, 4.4 and 4.5

Nonetheless, to answer the primary research objective, the study accordingly made use of secondary research, where data was gathered for the literature review, and primary research where data was gathered for the empirical study. To address the research objectives, the empirical study was conducted in two phases: the main study addressed the key research objectives from the **marketing research firm's** perspective, and the small-scale complementary study addressed the **client's** overall perception of marketing research firms' quantitative research reports. The following research methodologies were chosen for each phase of the empirical study:

- **Main study (qualitative phase):** A qualitative research design was chosen and data was collected by means of in-depth interviews amongst 26 client service directors / managers who oversee or work with quantitative reporting processes within marketing research firms. These sampling elements were chosen by means of non-probability purposive sampling (refer to section 5.5.2.1, Table 5.3).
- **Small-scale complementary study (quantitative phase):** A quantitative research design was chosen and data was collected by means of a computer-administered, Internet-based survey amongst 31 South African firms which commission quantitative research and receive quantitative reports from marketing research firms at least once every three months. These sampling elements were chosen by means of non-probability referral (snowball) sampling (refer to section 5.6.2.1 and Table 5.7).

The data gathered for both the main and small-scale complementary studies (qualitative and quantitative phases) was analysed and the results obtained were presented in Chapter 6. Next, the primary and secondary research objectives were addressed to draw conclusions from the main findings of the empirical research results and literature review. The recommendations regarding each objective were also presented.

7.3 ANSWERING THE RESEARCH OBJECTIVES

This section aims to answer each research objective identified for the study. It considers the five secondary research objectives first so as to ultimately address the primary research objective of the study. The research objectives and propositions applicable to this study (formulated in sections 1.5, 1.6 5.2 and 5.3) are listed in the following Table. In addition Table 7.2 provides an indication of how the study's objectives and propositions are linked with the literature review and empirical study.

Table 7.2: Summary of the linkages between the research objectives, propositions, literature overview and empirical study

Research objectives	Research propositions	Literature review and empirical study
Primary research objective		
To uncover the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports.	Proposition A: Data visualisation and storytelling are not strategically used by marketing research firms in quantitative research reports.	Literature: Chapters 3 and 4 (sections 3.4.7, 4.4 and 4.5). Empirical study: in-depth interview questions 1, 3, 7, 9.
Secondary research objectives		
A: To provide a literature overview of data visualisation and storytelling, and the use thereof by marketing research firms in quantitative research reports.	A proposition has not been formulated for the literature review.	Literature: Chapters 1, 3 and 4 (sections 1.8, 3.4.7, 4.3.1, 4.4.1, 4.5.1 and 4.5.4).

Table 7.2: Summary of the linkages between the research objectives, propositions, literature overview and empirical study (continued)

Research objectives	Research propositions	Literature review and empirical study
B: To determine the current approaches marketing research firms follow in quantitative research reporting.	Proposition B: Marketing research firms have a traditional approach to quantitative research reporting.	Literature: Chapters 1, 2, 3 and 4 (sections 1.2, 1.4, 1.8, 2.5.1.1, 2.5.1.5, 2.5.2.1, 2.5.2.2, 3.2, 3.3.1, 3.4.7 and 4.3.3). Empirical study: in-depth interview questions 1, 2, 3, 7.
C: To investigate the use of data visualisation by marketing research firms in quantitative research reports.	Proposition C: Marketing research firms do not use non-traditional data visualisation techniques in quantitative research reports.	Literature: Chapter 4 (sections 4.4.2.2, 4.4.2.7, 4.4.2.8, 4.4.3, 4.4.4, 4.4.5 and 4.4.7). Empirical study: in-depth interview questions 5a, 5b, 5c, 6, 7.
D: To investigate the use of storytelling by marketing research firms in quantitative research reports.	Proposition D: Marketing research firms do not use storytelling in quantitative research reports.	Literature: Chapters 3 and 4 (sections 3.4.7 and 4.5.7). Empirical study: in-depth interview questions 8a, 8b, 9.
E: To determine the perceptions of clients regarding quantitative research reports prepared by marketing research firms.	Proposition E: Clients have a negative perception of quantitative research reports prepared by marketing research firms.	Literature: Chapters 2, 3 and 4 (sections 2.5.1.1, 2.5.2.1, 3.3.1 and 4.3.3). Empirical study: in-depth interview questions 4, 5c, 8b(iii); survey questions 3, 4 and 5.

The first secondary research objective is theoretical in nature and was therefore answered by drawing conclusions and a recommendation from the literature review presented in Chapters 3 and 4. As for the remaining secondary research objectives, conclusions and recommendations were drawn based upon the empirical results of the study presented in Chapter 6 as well as the literature review presented in Chapters 2, 3 and 4. First, secondary research objective A is presented.

7.3.1 Conclusions and recommendations: Secondary research objective A

Secondary research objective A states that the researcher wanted *to provide a literature overview of data visualisation and storytelling, and the use thereof by marketing research firms in quantitative research reports*. Table 7.3 gives account of the literature findings, a conclusion and subsequent recommendations.

Table 7.3: Conclusions and recommendations: Secondary research objective A

LITERATURE FINDINGS SECONDARY RESEARCH OBJECTIVE A
<p>As background to the two concepts of data visualisation and storytelling, it should first be noted that:</p> <ul style="list-style-type: none">• Research reports were defined as the final deliverable of the research process that interprets the information gathered and that notes key research findings for client decision-making (refer to sections 1.8 and 4.3.1).• Quantitative research reports provide the opportunity for marketing research firms to become strategic thought partners as opposed to data suppliers by being the “vehicle” in providing actionable research and communicating that effectively (refer to section 3.4.7).• Data visualisation and storytelling were identified as two methods that could be used by marketing research firms to become strategic in their approach to quantitative research reports by focusing on the delivery of actionable research results (refer to section 4.3.4.2). <p>Against this backdrop:</p> <ul style="list-style-type: none">• The use of data visualisation: Data visualisation is used to convert complex quantitative data into understandable and intuitive visual presentations that could enable actionable research (refer to sections 1.8 and 4.4.1).• The use of storytelling: Storytelling is used to focus the marketing researchers’ effort in reporting research results coherently and in an order that is easy for clients to follow (refer to sections 1.8 and 4.5.1).• Respectively data visualisation techniques are used in the writing of the quantitative research report, while storytelling is used in both the writing and oral presentation thereof (refer to the summary of section 4.4.7 and section 4.5.4).

Table 7.3: Conclusions and recommendations: Secondary research objective A (continued)

CONCLUSION SECONDARY RESEARCH OBJECTIVE A
<p>Both data visualisation and storytelling were identified as methods that could facilitate actionable research i.e. methods to help marketing research firms to become more strategic in their approach.</p> <p>Data visualisation is used to represent data, while storytelling is used to give order to the research results that are reported. While data visualisation relates to the written representation of data in the quantitative research report, storytelling includes both the written and oral components of quantitative reporting.</p>
RECOMMENDATION SECONDARY RESEARCH OBJECTIVE A
<p>Marketing research firms could become more strategic in the delivery of quantitative research reports by using data visualisation and / or storytelling as methods to enable actionable research results. These two methods imply that marketing research firms should change quantitative research reports to focus on:</p> <ul style="list-style-type: none"> • Business impact: Instead of delivering research results isolated to the study, bring the results in context with the client's business – i.e. do not just report the research results, show an understanding of the client's business and show how the results impact their business (refer to sections 3.4.1 and 4.3.4.1). • Two-way communication: Instead of communicating research results one-way (only the marketing research firm communication), communicate with clients through an interactive dialogue (between the marketing research firm and the client) concerning all aspects of the research process, especially when delivering research results (refer to section 4.3.4.1). • Emotional connection: Instead of delivering research results with lots of numbers, focus on connecting emotionally with the client. Whilst data speaks to the analytical left-brain, storytelling (and creative data visualisation) speaks to the creative right-brain which enables an emotional connect between clients and the research results because it follows a whole-brain approach (refer to section 4.5.6). • Creative / well thought-through research report: Instead of delivering uncreative research results created with minimal thinking, deliver creative research results created with deliberate thinking (refer to section 3.2.2, Table 3.1 – research deliverables and section 4.3.4.2) (for example: data visualisations presented in tables, pie charts, histograms versus treemaps, infographics; research results should be concise, include catchy titles, use different multimedia – like pictures and videos, anecdotes, engaging metaphors, quotations and even jokes; research results presented following the questionnaire's order versus presenting it in a logical format telling a story that impacts clients' business). • Training: Marketing research firms should focus on developing internal skills to create data visualisations and telling stories that portray the listed attributes (business impact, two-way communication, emotional connection and creative / well thought-through results).

7.3.2 Conclusions and recommendations: secondary research objective B

Secondary research objective B states that the researcher wanted *to determine the current approaches marketing research firms follow in quantitative research reporting*. Table 7.4 gives account of the literature and empirical research results in relation to the particular research proposition. Based on this, it then presents a conclusion so as to support or not support the research proposition and closes with a recommendation.

Table 7.4: Conclusions and recommendations: secondary research objective B

PROPOSITION SECONDARY RESEARCH OBJECTIVE B
Marketing research firms have a traditional approach to quantitative research reporting.
LITERATURE FINDINGS SECONDARY RESEARCH OBJECTIVE B
<p>The literature discussed in Chapters 2 to 4 did not directly address marketing research firms' current approaches to quantitative reporting. The literature does however suggest that marketing research firms have a traditional approach to quantitative reporting – i.e. there is little focus on the strategic value / impact of research results even though client demand reflects the need for the opposite. The strategic value / impact is also referred to as actionability:</p> <ul style="list-style-type: none">• Marketing research firms recognise that they lack strategic value/ impact because they are often too narrowly focused, operating in silos and too tool-orientated and therefore fail to deliver actionable research (refer to sections 2.5.2.1 and 3.2.1.2).• Actionable research was defined as research that aids clients' decision-making and that leads to workable actions within the clients' business and therefore offers marketing research firms a strategic focus (refer to sections 1.8 and 3.2.1.2).• Clients evaluate research reports delivered by marketing research firms as being too long, technical and confusing, which decrease the actionability thereof (refer to section 4.3.3).• Clients highlight that marketing research firms do not deliver actionable research reports (refer to section 2.5.1.1 – clients demand strategic / actionable recommendations and section 3.3.1 – clients demand actionable research with strategic impact).• Most marketing research firms are still considered traditional by positioning themselves as data suppliers and do not choose to move up the information value chain and position themselves as strategic thought partners on the relationship continuum (refer to sections 1.2, 1.4, 2.5.1.5, 2.5.2.2, 3.2 and Figure 3.2),• It's because of marketing research firms' realisation and client demand that there is a renewed focus to ensure the delivery of actionable research in the quest to become strategic thought partners (refer to section 3.2.1.2, Figure 3.2 and section 3.4.7).

Table 7.4: Conclusions and recommendations: secondary research objective B (continued)

EMPIRICAL RESULTS SECONDARY RESEARCH OBJECTIVE B
<p>Participants indicated that the marketing research firms where they work aim to deliver actionable quantitative research reports, which are aligned with what they believe clients expect thereof (refer to section 6.2.2, Figure 6.1, Figure 6.3 and Table 6.3). To participants, actionability means that the marketing research firms focus on finding the answering to the “so what” of the research so as to strategically impact the clients’ business and decision-making (refer to section 6.2.2.1, Figure 6.1 and Table 6.3).</p>
CONCLUSION SECONDARY RESEARCH OBJECTIVE B
<p>The literature aligns with what the empirical research results suggested. Both the literature and empirical study suggest that there is a need for marketing research firms and a demand from clients for research results to be more actionable i.e. more strategic. The literature and empirical definitions of actionable research also align. Participants claim that the marketing research firms where they work are <i>not</i> traditional in their approach (i.e. focusing on data supply), but rather desire to focus on actionable research reporting due to the increasing client demand for marketing research firms to deliver actionable research reports.</p> <p>Based on the concluding finding, proposition B is not supported since participants claim that the marketing research firm they work for focuses on providing actionable research. This means that there is no primary focus on the traditional supply of data, but rather a focus on the strategic value that they add to the clients’ business by providing actionable research that helps clients with decision-making.</p>
RECOMMENDATION SECONDARY RESEARCH OBJECTIVE B
<p>Marketing research firms should continue and strengthen the focus on actionable research as client demand thereof will continue. However, since participants recognise and focus on actionable quantitative reporting, marketing research firms should consider how to set themselves apart from competitors who are most likely to also deliver actionable research (otherwise the possibility exists that actionable research could also become a commodity like data, and not a strategic asset). In this regard, literature suggests that actionable research should be combined with any of the following, depending on the marketing research firm’s desired competitive advantage (refer to section 3.4):</p> <ul style="list-style-type: none"> • A focus on understanding the client’s business: The client’s business can be understood if marketing research firms focus on building long-term relationships with clients and on collaborating with clients on insight generation in research reports (refer to section 4.3.4.1). (Note: this suggestion however seems to be imperative for all marketing research firms which desire a strategic positioning and will not necessarily provide a competitive advantage).

Table 7.4: Conclusions and recommendations: secondary research objective B (continued)

- Demonstrating thought leadership: Marketing research firms should focus on shaping clients' thinking and delivering knowledge that impacts clients' business strategy instead of delivering mere research results.
- Being the "human link" between the client and its customers: Marketing research firms should focus on holistically portraying the client's customers to them by being the "voice" of the customer.
- Being future focused: Marketing research firms should prove that they are not focused on the delivery of results only for a "snapshot" in time, but rather focus on the long-term impact and future of the research results on the client's business.
- Demonstrating commitment to professional standards: Marketing research firms should prioritise alliance with professional governing bodies across the world and locally. Examples include: MRS, ESOMAR, SAMRA and SAARF.
- Being agents of change: Marketing research firms should work with clients (preferably senior management and employees who are enablers of change within the client organisation) in implementing the research results presented in the quantitative research report.

Moreover, marketing research firms could also decide to learn from the consultancy positioning space by focusing on aspects like (refer to section 3.3.2):

- Being interpreters and not data suppliers: This means that marketing research firms have to give meaning to the research and answer the clients' questions of "so what?" and "now what?" (refer to sections 3.4.1 and Table 6.3).
- Being solution focused and not tool-focused: This means that marketing research firms should not focus on their products and methodologies but rather on solving the client's business issue (refer to sections 2.5.2.1, 3.2.1.2, Table 3.1).

Being fun and exciting and not boring: This means that marketing research firms should move away from the traditional positioning of delivering what clients expect, marketing research firms should rather challenge the status quo and execute creative deliverables (refer to section 2.5.2.1 and information related earlier).

7.3.3 Conclusions and recommendations: secondary research objective C

Secondary research objective C states that the researcher wanted *to investigate the use of data visualisation by marketing research firms in quantitative research reports*. Table 7.5 gives an account of the literature and empirical research results in relation to the particular research proposition. Based on this, it then presents a conclusion so as to support or not support the research proposition and closes with a recommendation.

Table 7.5: Conclusions and recommendations: secondary research objective C

PROPOSITION SECONDARY RESEARCH OBJECTIVE C
Marketing research firms do not use non-traditional data visualisation techniques in quantitative research reports.
LITERATURE FINDINGS SECONDARY RESEARCH OBJECTIVE C
<p>The literature presented data visualisation from an explanatory viewpoint as opposed to marketing research firms' usage thereof (to the researcher's knowledge, no secondary information to this extent was available). Data visualisation was classified into two categories, namely traditional- and non-traditional data visualisations (refer to sections 4.4.3 and 4.4.4). Literature suggests that traditional data visualisation techniques are used more extensively than non-traditional data visualisation techniques, due to the following reasons:</p> <ul style="list-style-type: none"> • Marketing research firms are sticking to more traditional ways of visualising data (refer to section 4.4.5 and 4.4.2.8). • Traditional data visualisation techniques have been around since the 18th century and are widely used since the late 1900s due to the power of computers' supply and automatisation thereof (refer to sections 4.4.2.2 and 4.4.2.7). • Traditional data visualisation techniques are more commonly used, easily generated and accessible compared to their non-traditional counterparts (refer to the summary of section 4.4.2.8). • Eight barriers were identified in adopting non-traditional data visualisation techniques and included that: it requires more thinking from the marketing research firm, a lack of skills exists and multilevel skills are needed in the marketing research firm, it could lead to increased costs for the marketing research firm if outsourced, it requires investments in new systems, poor implementation by the marketing research firm leads to unsatisfied clients, inflexible marketing research firms – even though clients demand change, they often resist it (refer to section 4.4.7).
EMPIRICAL RESULTS SECONDARY RESEARCH OBJECTIVE C
Participants indicated extensive use of traditional data visualisation techniques on a regular basis because of easy accessibility and use. On the other hand, non-traditional data visualisation techniques are used irregularly by marketing research firms due to various barriers that impede adoption, with time and complexity being the biggest amongst these, together with the low perceived importance of its use (refer to section 6.2.3, Figures 6.4 to 6.8 and Table 6.3). In addition, participants who used non-traditional data visualisation techniques indicated that these should be balanced with traditional data visualisation techniques meaning that they should be used complementary to each other (refer to section 6.2.3.2, Figure 6.8).

Table 7.5: Conclusions and recommendations: secondary research objective C (continued)

CONCLUSION SECONDARY RESEARCH OBJECTIVE C
<p>Participants regularly use traditional data visualisation techniques in quantitative research reports. As found in both the literature and empirical study, these data visualisation techniques are easy to implement and accessible. Non-traditional data visualisations on the other hand are occasionally used, but more difficult to include in quantitative research reports due to a number of identified barriers. It was however found in the empirical study that the barriers of time intensity and complexity, associated with these techniques, impede the practical application thereof. These two barriers were not identified in the literature and contribute to the understanding of why these techniques are not used extensively. Participants did not mention the barriers (as identified in the literature) of additional / multilevel skills and resources (financial backing) that are required.</p> <p>Based on the concluding finding proposition C is not supported – marketing research firms use non-traditional data visualisation techniques, but only to a limited extent because of a variety of barriers that impede the implementation thereof.</p>
RECOMMENDATION SECONDARY RESEARCH OBJECTIVE C
<p>Marketing research firms should continue to use traditional data visualisations due to their ease of understanding and application (by both marketing researchers and clients). The use of non-traditional data visualisations offers various benefits, which justify their inclusion in quantitative research reports. However, ultimately a balance should be achieved between the use of traditional and non-traditional data visualisation techniques in quantitative reporting. Marketing research firms therefore need to decide whether they believe the use of non-traditional data visualisation techniques could enable / encourage actionable research. If marketing research firms believe that value could be added to the quantitative research report by using non-traditional data visualisation techniques for actionable research, they should consider investing resources (time, financial and skills) in developing these capabilities. Therefore, it is suggested for marketing research firms that want to include non-traditional data visualisation techniques to consider the following recommendations:</p> <ul style="list-style-type: none"> • Build all data visualisations on the four success pillars. This means that the information (research results) presented should be characterised by integrity and interestingness and the design thereof should simultaneously have an appealing form and function (refer to section 4.4.5, Figure 4.4). • Partner with a graphic design individual / organisation to increase the overall appeal of research reports and to design non-traditional data visualisations (refer to sections 4.4.2.8 and 6.2.3.2). • Partner with IT (information technology) specialists who are assigned the responsibility to develop software capabilities like interactive dashboards and automatisations of other non-traditional data visualisation techniques like tree maps and coxcombs.

Table 7.5: Conclusions and recommendations: secondary research objective C (continued)

- Allocate finances / budget to develop the application of these techniques.
- Provide specialised training to employees on non-traditional data visualisation techniques to familiarise them with these.
Encourage employees to use non-traditional data visualisations in parts of the research report where impact is desired.

7.3.4 Conclusions and recommendations: secondary research objective D

Secondary research objective D states that the researcher wanted *to investigate the use of storytelling by marketing research firms in quantitative research reports*. Table 7.6 gives account of the literature and empirical research results in relation to the particular research proposition. Based on this, it then presents a conclusion so as to support or not support the research proposition and closes with a recommendation.

Table 7.6: Conclusions and recommendations: secondary research objective D

PROPOSITION SECONDARY RESEARCH OBJECTIVE D
Marketing research firms do not use storytelling in quantitative research reports.
LITERATURE FINDINGS SECONDARY RESEARCH OBJECTIVE D
The literature presented storytelling from an explanatory viewpoint and did not directly address whether marketing research firms made use thereof or not (to the researcher’s knowledge, no secondary information to this extent was available).
<ul style="list-style-type: none"> • Some literature suggested that storytelling is the most powerful way to deliver actionable research - there’s a general belief that storytelling is essential when delivering research reports (refer to section 3.4.7). • The main barriers in adopting storytelling in quantitative research reports include: the lack of appropriate skills, requiring specific skill and experience, the poor perception of the role and function of stories, difficulty of telling stories when advanced scientific and statistical methods are present (refer to section 4.5.7).

Table 7.6: Conclusions and recommendations: secondary research objective D (continued)

EMPIRICAL RESULTS SECONDARY RESEARCH OBJECTIVE D
<p>All participants were aware of storytelling and only one did not place emphasis on the use of storytelling in quantitative research reports (refer to section 6.2.4.1).</p> <p>Participants consider storytelling as critical to quantitative reporting as it focuses on the delivery of actionable research results in a logical format. Few barriers impede adoption thereof with the biggest being researcher skill and time intensity (refer to section 6.2.4, Figures 6.9 to 6.11 and Table 6.3).</p>
CONCLUSION SECONDARY RESEARCH OBJECTIVE D
<p>Literature acknowledged the importance of storytelling in quantitative reporting, but not to the extent that the empirical main study has indicated. Results indicate that participants place a higher priority on storytelling to enable / encourage actionable research compared to data visualisation. In addition, the empirical study's barriers to adopting storytelling mainly reflected skills shortages (inexperience) and the time it requires to compile stories. The time intensity barrier was not identified in the literature.</p> <p>Based on the concluding finding, proposition D is not supported. All participants were aware of storytelling and only one participant did not place emphasis on using storytelling in quantitative research reports.</p>
RECOMMENDATION SECONDARY RESEARCH OBJECTIVE D
<p>Marketing research firms should continue to focus on and grow their storytelling capabilities. Various actions could be taken to decrease the time needed to compile stories, while simultaneously growing researcher skills and experience. It is suggested that marketing research firms consider any of the following recommendations:</p> <ul style="list-style-type: none"> • Implement the pillars of successful storytelling: Stories should help clients understand complex data in a simple way, it should be engaging and interactive, it should be tailored to the client audience, it should create a context against which the data can be interpreted, it should be supported by data visualisation and should not be cluttered i.e. single-minded (refer to section 4.5.5, Table 4.7). • Develop models / formulas to guide employees in finding and telling the stories (refer to section 6.2.4.2). • Train employees on the elements and techniques applicable to storytelling. • Provide junior employees the opportunity to observe senior employees in storytelling – so as to pick up on any “tips or tricks”. • Provide junior employees enough opportunity to tell stories (with the necessary guidance) in order to gain experience. • Share good examples (benchmark) stories in the marketing research firm so as to teach employees about best practice examples.

7.3.5 Conclusions and recommendations: secondary research objective E

Secondary research objective E states that the researcher wanted *to determine the perceptions of clients regarding quantitative research reports prepared by marketing research firms*. Table 7.7 gives account of the literature and empirical research results in relation to the particular research proposition. Based on this, it then presents a conclusion so as to support or not support the research proposition and closes with a recommendation.

Table 7.7: Conclusions and recommendations: secondary research objective E

PROPOSITION SECONDARY RESEARCH OBJECTIVE E
Clients have a negative perception of quantitative research reports prepared by marketing research firms.
LITERATURE FINDINGS SECONDARY RESEARCH OBJECTIVE E
<ul style="list-style-type: none">• Clients continually criticise marketing research firms for not delivering actionable research that impacts their businesses (refer to sections 2.5.1.1 and 3.3.1).• Clients place marketing research firms low on the information value chain since they believe marketing research firms' tendency is to only supply data in research reports, with no or limited strategic impact (refer to section 3.3.1 and Figure 3.2).• Clients feel that marketing research firms are too focused on the actual research and not focused on getting a real understanding of the client's problems and delivering that in research reports (refer to section 2.5.2.1).• Clients indicate that research reports lack creativity / visual appeal and have rising expectations of how research reports should be presented visually (refer to Table 3.1 – research deliverables and section 4.3.3).
EMPIRICAL RESULTS SECONDARY RESEARCH OBJECTIVE E
<p>Main study (qualitative phase):</p> <p>Participants indicated that quantitative reporting has a poor reputation and negative association amongst clients. When appropriate data visualisation techniques and / or storytelling are used, clients' feedback was evaluated as more positive and / or repeat business followed in some instances (refer to section 6.2.2.2, Figure 6.2 and Table 6.3).</p> <p>Small-scale supportive study (quantitative phase):</p> <p>Respondents' top 2 box scores of six of the eight predefined criteria relating to quantitative research reports were above 50% (in agreement). Almost two-thirds (62%) of respondents indicated that current quantitative research reports can be used to make strategic decisions and close to 6 out of 10 respondents (59%) indicated that they can action the research results (refer to section 6.3.3, Figure 6.13 and Table 6.6).</p>

Table 7.7: Conclusions and recommendations: secondary research objective E (continued)

When the improvement of quantitative research reports is considered, almost half of respondents (49%) indicated that a need for improvement exists. Respondents specified that they need marketing research firms to follow a more strategic and actionable approach in the report of research findings and recommendations (refer to section 6.3.3, Figure 6.14 and Table 6.6).

CONCLUSION SECONDARY RESEARCH OBJECTIVE E

Participants (representing the marketing research firm) have a more negative perception of what they believe clients think of the industry's quantitative research reports compared to respondents (representing the client) who positively agreed with most of the predefined criteria. The literature is aligned with marketing research firms' evaluation of client perceptions – a poor reputation of marketing research firms exists among clients.

Nonetheless, respondents still indicated that quantitative reporting needs improvement – predominantly in the area of actionability / strategic business impact. Marketing research firms' philosophy of actionable research in quantitative reporting seems to be therefore not yet totally achieved. This aligns with the literature findings that indicated that the most prominent client need is for research reports to be actionable and therefore strategic. Participants believe that the marketing research firm they work for focuses on actionable research, and clients still demand it - hence a mismatch exists between what is delivered and what is expected.

Based on the concluding finding, proposition E is partially supported. Participants indicated negative client perceptions whilst respondents claimed a less negative perception of quantitative research reports, but some indicated that improvement is needed regarding the actionability of research results (i.e the strategic value thereof).

RECOMMENDATION SECONDARY RESEARCH OBJECTIVE E

It is clear that clients' feedback on quantitative research reports will be more positive the more marketing research firms focus on the strategic value / impact and actionability of their research reports. It is recommended that marketing research firms:

- Put "first things first" – first align the marketing research firms' interpretation of actionability with what clients expect from marketing research firms when they demand actionable research. This requires marketing research firms to invest time and human resources in developing knowledge about the clients' business and reporting needs.
- Only after the alignment has taken place (explained above) should marketing research firms focus on choosing and applying methods of actionable research (such as data visualisation and storytelling).

7.3.6 Conclusions and recommendations: primary research objective

The primary research objective states that the researcher wanted *to uncover the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports*. Table 7.8 gives account of the literature and empirical research results in relation to the particular research proposition. Based on this, it then presents a conclusion so as to support or not support the research proposition and closes with a recommendation.

Table 7.8: Conclusions and recommendations: primary research objective

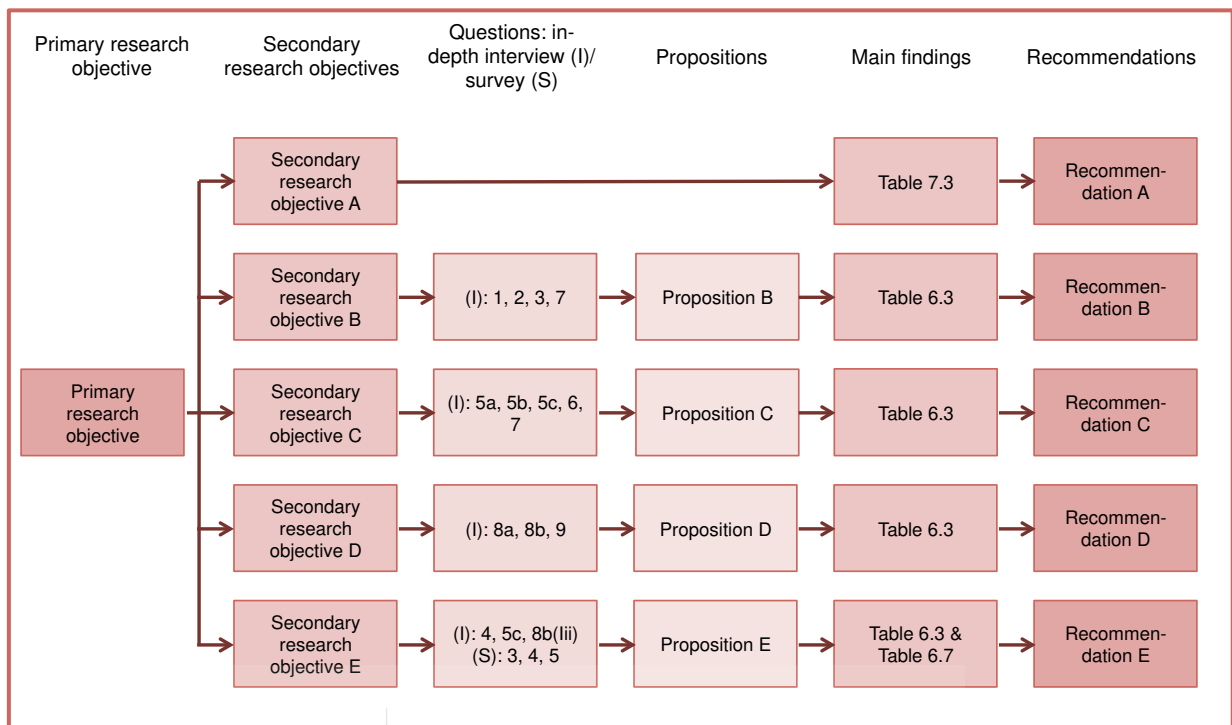
PROPOSITION PRIMARY RESEARCH OBJECTIVE
Data visualisation and storytelling are not strategically used by marketing research firms in quantitative research reports.
LITERATURE FINDINGS PRIMARY RESEARCH OBJECTIVE
To the researcher's knowledge, limited secondary information is available on how marketing research firms use these specific methods. However: <ul style="list-style-type: none"> • Both data visualisation and storytelling could provide marketing research firms with strategic focus through the delivery of actionable research reports (refer to section 3.4.7). • Both data visualisation and storytelling could assist marketing research firms in the transformation from data suppliers to strategic thought partners (refer to section 3.4.7).
EMPIRICAL RESULTS PRIMARY RESEARCH OBJECTIVE
The focus of quantitative research reporting is on delivering actionable research – aligned with what clients expect thereof (refer to section 6.2.2, Figure 6.1, Figure 6.3 and Table 6.3). However, quantitative research reports are compiled by using data visualisation techniques (mainly traditional data visualisation techniques) and not much thinking goes into the use thereof (refer to section 6.2.3, Figures 6.4 to 6.7 and Table 6.3). Storytelling on the other hand is used to facilitate actionable research and a high emphasis is placed on the value thereof (refer to section 6.2.4.2, Figure 6.11 and Table 6.3).
CONCLUSION PRIMARY RESEARCH OBJECTIVE
Literature suggested that data visualisation and storytelling could be used to enable actionable research so that marketing research firms can become strategic thought partners. The empirical research results suggested that marketing research firms do use storytelling to deliver actionable research so as to increase the strategic value thereof, while data visualisation is not used strategically. Participants did not indicate that data visualisation was used as a method to facilitate actionable research.
Based on the concluding finding, proposition A is only partially supported since the findings indicated that storytelling is used strategically while data visualisation is not.

Table 7.8: Conclusions and recommendations: primary research objective (continued)

RECOMMENDATION PRIMARY RESEARCH OBJECTIVE
<p>To increase the strategic use of data visualisation marketing research firms could:</p> <ul style="list-style-type: none"> • Consider the recommendations presented for secondary research objective C. • Allocate a dedicated human resource (individual) in the marketing research firm who takes responsibility that data visualisation is strategically applied. • Steer away from data visualisations that mislead or confuse clients, that lack insight and that are complex or filled with chartjunk (refer to section 4.4.6, Figure 4.6). • Focus on creating data visualisations that are engaging and interactive, intuitive and aesthetically appealing so as to facilitate understanding and increase recall and impact (refer to section 4.4.6, Figure 4.5). • Encourage researchers (storytellers) to strategically and purposefully think about the data visualisations they choose to include in quantitative research reports. • Offer training in the marketing research firm to inform employees about the availability and use of non-traditional data visualisation techniques. • Find ways to overcome the barriers in adopting non-traditional data visualisation techniques in order to facilitate actionable research (for example, possible software tools for non-traditional data visualisation techniques could be explored to lower the time and complexity in the compilation of these techniques). <p>To increase the strategic use of storytelling, marketing research firms could:</p> <ul style="list-style-type: none"> • Consider the recommendations presented for secondary research objective D. • Like with data visualisation, allocate a dedicated human resource (individual) in the marketing research firm who takes responsibility that storytelling is strategically applied. • Strengthen their focus on storytelling by training employees to be storytellers as opposed to researchers.

In summary, Figure 7.1 provides an indication of how the objectives of the study, the research questions, the propositions, the main findings and the recommendations are linked.

Figure 7.1: Linking all aspects of the study: research objectives, questions, propositions, main findings and recommendations



7.4 LIMITATIONS OF THE STUDY

Although this study was carefully prepared and reached its objectives, there were some unavoidable limitations; this section considers both the literature and empirical limitations of the study. The following limitations regarding the literature review are identified:

- Extensive information is available on the global marketing research industry, but limited information is available on the local, South African marketing research industry (Chapter 2).
- Although much general information is available on the concepts of strategic thought partners, data visualisation and storytelling, limited information is available on the physical use thereof by marketing research firms (Chapters 3 and 4).
- A clear classification for traditional data visualisation techniques exists in literature, but not for non-traditional data visualisation techniques (Chapter 4).
- Limited literature is available on storytelling as applied in marketing research. Much literature is available on storytelling in other disciplines (for example education, sociology and business management) (Chapter 4).

The limitations with regard to the empirical study are as follow:

- Main study: Due to the sensitive and confidential nature of the topic under study, participants might have been reserved in sharing valuable knowledge with the researcher. The practical effect of this was that some information could have been withheld from the researcher, which could have lead to deeper insights and possible recommendations.
- Main study: Smaller revenue contributing marketing research firms were hesitant to partake. This means that these smaller revenue contributing marketing research firms are slightly underrepresented in this study.
- Small-scale complementary study: The limited sample size meant that significant comparisons between industries of South African firms that commission quantitative research could not be made. There could be a possibility that different industries evaluate marketing research firms' quantitative reports differently.

7.5 SUGGESTIONS FOR FUTURE RESEARCH

This study has identified five potential topics for future research:

- Firstly, research could be conducted to discover in-depth what marketing research firms mean by actionable research, versus clients' interpretation of the same aspect. The aim would be to do a gap analysis between the two to find out why many clients are still not satisfied with the quantitative research reports they receive when marketing research firms claim that they focus on delivering actionable research.
- Secondly, research could be conducted in order to do a gap analysis between senior marketing research firm employees (like those interviewed) and junior marketing research firm employees' use of data visualisation and storytelling. The aim would be to determine what (if any) differences exist between senior versus junior employee capabilities and understanding of the concepts of data visualisation and storytelling.
- Thirdly, follow-up research could be conducted on the small-scale complementary study. The aim would be to do an in-depth evaluation of what clients expect from quantitative research reports and their evaluation of data visualisation techniques used, as well as storytelling.

- Fourthly, research can be conducted so as to develop ways of overcoming the barriers in using non-traditional data visualisation techniques. An in-depth study of existing technological tools can be considered together with the development of potential new tools.
- Lastly, research can be conducted to develop ways of overcoming the barriers in using storytelling. A similar approach to the above recommendation can be considered.

7.6 CONCLUSION

This chapter commences with a brief overview of the study and then answers the specified research objectives by considering them from both a literature and empirical perspective. Concluding remarks are made for each objective so as to support or not support the respective research propositions. This is followed by recommendations with respect to each objective. The chapter concludes with the limitations of the study and future research suggestions.

To conclude, the primary research objective was to uncover the strategic use of data visualisation and storytelling by marketing research firms in quantitative research reports. This was achieved by firstly reviewing existing literature on the topic of strategic positioning of marketing research firms through the delivery of actionable research reports (specifically by means of data visualisation and storytelling); and secondly by empirically exploring South African marketing research firms and their clients' views of the use of data visualisation and storytelling in quantitative research reports. The researcher was (upon the study's commencement) of the opinion that the majority of South African marketing research firms failed to focus on the strategic use of data visualisation and storytelling in quantitative research reports (refer to proposition A, Table 7.2). It was however established in the empirical study that this is only partially true – participants claim that the marketing research firm they work for has a strategic philosophy in focusing on actionable research results for clients. However, data visualisation was not seen as a method to facilitate this, while storytelling was.

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APPENDIX A: Main study – interview guide

SECTION A. INTRODUCTION (1 minute)

Thank participant for their participation and shortly introduce the topic: Today we are going to start by briefly discussing the challenges the marketing research industry presents and then move on to an in-depth discussion about the topic at hand, the data visualisation techniques _____ (insert marketing research firm name) uses to compile quantitative research reports for clients.

SECTION B. IMPORTANCE OF, AND GENERAL PERCEPTIONS OF QUANTITATIVE REPORTING IN THE MARKETING RESEARCH INDUSTRY (5 minutes)

1. From your point of view, what are the biggest challenges you face in the marketing research industry?
 2. What are the first three words that come to mind when you think about quantitative reporting in the marketing research industry?
-

SECTION C. MARKETING RESEARCH FIRM'S QUANTITATIVE REPORTING PHILOSOPHY AND CLIENT FEEDBACK (5 minutes)

We are now going to talk about quantitative reporting at _____ (insert marketing research firm name) specifically. I understand that quantitative research reports can differ quite a lot from one client to the next, and between projects, but I would like you to think about your overall quantitative reporting philosophy.

3. In a few words, explain _____'s (insert marketing research firm's name) quantitative reporting philosophy (*if participant is unclear: what is it that you want to give your client at the end of a research project?*). Probe thinking (*focus, actionability, usability, etc.*)
 4. What do clients expect from the quantitative research reports that you deliver to them?
-

SECTION D. USE OF DATA VISUALISATION TECHNIQUES (10 minutes)

We are now going to talk about the specific techniques used to visualise a quantitative research report.

5. Tell me about the data visuals _____ (insert marketing research firm's name) uses to report quantitative research results to clients.
 - a. What, if anything, makes it easy to implement these data visualisation techniques?
 - b. What, if anything, makes it difficult to implement these data visualisation techniques?
 - c. What do your clients say about these data visualisation techniques? Probe likes and dislikes.
6. Show both lists of data visualisation techniques and ask participant to tick the ones that are used at _____ (insert marketing research firm's name). Probe usage frequency.
7. Do you consider the use of non-traditional data visualisation techniques as an important aspect of quantitative reporting? Motivate.

SECTION E. USE OF STORYTELLING (6 minutes)

The last topic is storytelling as applied in marketing research.

8. Have you heard of the concept 'storytelling' in the marketing research industry before?
 - a. If so, how would you describe storytelling? (If the participant is unfamiliar with the concept – define storytelling and discuss further).
 - b. Discuss:
 - i. What, if anything, makes it easy to implement storytelling?
 - ii. What, if anything, makes it difficult to implement storytelling?
 - iii. What do your clients say about storytelling? Probe likes and dislikes.
9. Do you consider storytelling as an important aspect of quantitative reporting? Motivate.

SECTION F. THANK AND CLOSE

APPENDIX B: Main study – interview transcripts

Please refer to the CD-ROM included at the back of the dissertation.



APPENDIX C: Main study – researcher field notes

Please refer to the CD-ROM included at the back of the dissertation.



APPENDIX D: Small-scale complementary study – Internet-based survey questionnaire


SECTION A. INTRODUCTION

Dear client / user of marketing research.

Thank you for your willingness to participate in this survey about the quantitative research reports / presentations delivered by marketing research firms this year.

Please note that all responses will be treated as strictly confidential and will only be used for research purposes of my Master's degree.

SECTION B. SCREENING QUESTIONS

1. In the last three months, how many times did you receive quantitative research reports / presentations from (a) marketing research firm(s)?
 - a. None
 - b. 1 – 2 times
 - c. 3 – 4 times
 - d. 5 – 6 times
 - e. More than 6 times
- 

SECTION C. TYPE OF INDUSTRY RESPONDENT REPRESENTS

2. Please indicate the industry of the company you represent:
 - a. Automotive
 - b. Cosmetics and Beauty
 - c. Financial
 - d. FMCG (Fast-Moving Consumer Goods)
 - e. Government
 - f. Health and Wellbeing
 - g. Hospitality
 - h. Personal Care
 - i. QSR (Quick Service Restaurants)
 - j. Retail
 - k. Technology

- I. Telecommunications
- m. Other (please specify)

SECTION D. EVALUATION OF QUANTITATIVE RESEARCH REPORTS RECEIVED

The next few questions all relate to the QUANTITATIVE research reports / presentations you receive from marketing research firms.

3. Please rate each of the following aspects relating to marketing research firms' quantitative research reports / presentations on a scale of 1-5 where 1 means "strongly disagree" and 5 means "strongly agree":
 - a. The results flow logically
 - b. The results meet my information needs
 - c. The results are visually appealing
 - d. I find the results relevant to my business
 - e. The layout of the results is clear
 - f. The results are easy to understand
 - g. I am able to take appropriate action based upon the results
 - h. I am able to use the results to make strategic decisions
4. On a scale of 1-5, where 1 means "not at all" and 5 means "a great deal", please indicate to what extent you personally feel quantitative reporting / presentations provided by marketing research firms need improvement?
5. Please give a reason for your answer above (question 4).
6. Do you have any additional comments about quantitative research reports / presentations that you receive from marketing research firms that you would like to share?

SECTION E. THANK AND CLOSE.

Thank you for your participation!

APPENDIX E: Main study – letter of invitation



4 June 2012

Dear Graham

This is an invitation to participate in a research study focusing on the marketing research industry in South Africa. I am currently doing research towards a Masters degree in Marketing Management at the University of Johannesburg, with specific focus on ***how quantitative research reports are used and applied within marketing research firms to communicate research results to clients.***

Objective:

To establish how South Africa's marketing research firms perceive their current quantitative reporting structures. The study focuses primarily on the use of data visualisation and other innovative methods in compiling quantitative research reports.

Sample and methodology:

The researcher aims to conduct face-to-face in-depth interviews with marketing research professionals overseeing staff who compile quantitative research reports. These interviews will be conducted across a range of different marketing research firms – ranging from full-service firms to those who offer more specialised services. Interviews will take approximately 20 to 30 minutes of your time.

Confidentiality and anonymity:

All results will be reported on an aggregated level and all participants will be assured of their anonymity.

Results:

The research results will be used as empirical research for the written dissertation on the subject. All participants are welcome to request results upon completion of this project.

Participation:

If you are willing to participate in the face-to-face interview would you please provide details of your availability between the 2nd of July 2012 and the 31st of July 2012, per email; two or more alternative dates / times would be appreciated. Please respond by Monday 11 June.

You will receive confirmation of the interview arrangements. If it is not viable for you to meet in person, please contact me to discuss other alternatives. I would also appreciate it if you could notify me if you wish *not* to participate or if you feel another colleague is better suited to be interviewed.

Please accept my thanks, in anticipation of your willingness to participate in this research study. Feel free to contact me directly with any queries.

Yours sincerely,

Vanessa Maritz

| _____

Supervisors: Prof. Danie Petzer (NWU) and Dr. Christine De Meyer (UJ)

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APPENDIX F: Main study – in-depth interviewing memorandum



29 June 2012

Dear Peter and Debbie

I am excited to hear your views on quantitative reporting within South Africa's marketing research industry. In preparation, I thought it worthwhile to give you a list of topics we will cover in our interview.

Topics that will be covered briefly:

- Biggest challenges the South African marketing research industry currently face.
- Stance of overall quantitative reporting in the South African marketing research industry.
- TNS's quantitative reporting philosophy.

Topics that will be covered in-depth:

- Specific quantitative data visualisation techniques TNS use in reports (i.e. how the results section / output is compiled visually).
- New thinking on the visualisation of data.
- New thinking on quantitative reporting in general.

It will be highly beneficial and appreciated if you can have an example at hand of a typical TNS quantitative research report / output (+/- 10 slides showing data visualisation techniques will be sufficient).

I understand that client information is confidential so a dummied up report or "chart pack" will be sufficient. The research report will not be used for any other purposes than to evaluate the types of data visualisation techniques used by your firm. If possible, I would appreciate it if a hard copy of this example report(s) can be shared with me for analysis purposes.

Please feel free to contact me with any queries.

Yours sincerely,
Vanessa Maritz

Supervisors: Prof. Danie Petzer (NWU) and Dr. Christine De Meyer (UJ)

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APPENDIX G: Main study – analysis

Please refer to the CD-ROM included at the back of the dissertation.



APPENDIX H: Main study – peer checking approval letter

L'ORÉAL S O U T H A F R I C A

Elisha Pearce
Research Specialist
L'Oreal SA
Woodmead
Johannesburg

Vanessa Maritz
Masters Student
University of Johannesburg
Auckland Park
Johannesburg

16 October 2012

To Whom It May Concern

Qualitative thematic validation for Vanessa Maritz:

This letter hereby serves to verify that I, Elisha Pearce (Research Specialist, L'Oreal SA), have worked through each of the research agency in-depth interviews, together with the Morse & Field analysis results constructed by Vanessa Maritz, for her dissertation regarding 'data visualisation and the role of story-telling' in the context of South African customised research providers.

To this end, I agree with the themes identified as accurate.

It was a pleasure to participate in this project.

Yours faithfully,



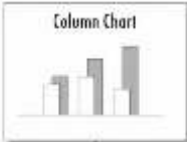
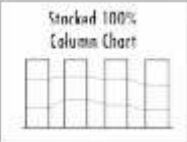




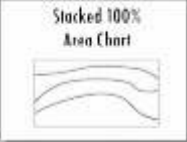




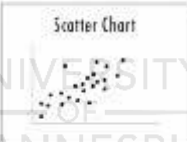


Elisha Pearce



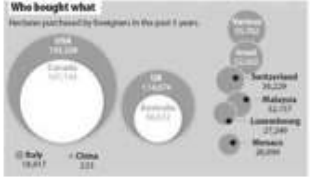
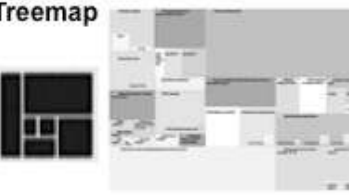

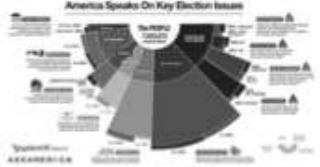


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B.P.M. Wirth*, N.S. Liphoko

APPENDIX I: Main study – traditional data visualisation techniques stimulus

APPENDIX J: Main study – non-traditional data visualisation techniques stimulus

<p>Infographic</p> 	<p>Bubble chart (nested)</p>  	
<p>Treemap</p> 	<p>Coxcomb</p>  	
<p>Spiral</p> 	<p>Interactive dashboard</p> 	<p>Geomaps</p> 