
CHAPTER 4

RESEARCH METHODOLOGY

4.1. INTRODUCTION

Chapter four presents the methodology used for the empirical research. This discussion elaborates on the summary of the research methodology set out in chapter one. The main objective of this chapter is to discuss the marketing research process and specifically the process that was applied to this study. Marketing research is defined below, followed by a reflection on the need for marketing research. The chapter will be concluded an overview of the research process.

4.2. MARKETING RESEARCH DEFINED

The American Marketing Association defines marketing research as the function that links the consumer, customer, and public to the marketer through information; specifically information that is used to identify and define marketing opportunities and problems and to generate, refine and evaluate marketing as a process (McDaniel & Gates, 2010:7). Also, marketing research is concerned with the information required to address these issues as well as methodological designs for collecting information. Marketing research, furthermore, is concerned with managing and implementing the collection process, analysis of results, and communication of the findings and their implications (McDaniel & Gates, 2010:7).

McDaniel and Gates (2010:7) note their preferred definition of marketing research as the planning, collection, and analysis of data relevant to marketing decision-making and the communication of the results of this analysis to management.

Marketing research is further defined by Malhotra (2010:39) as the systematic and objective identification and use of information for the purpose of improving decision-making related to the identification and solution of problems and opportunities in marketing. The author further asserts that this definition points to noteworthy aspects that need to be considered, such as the notion that marketing research is systematic, which means that systematic planning is required at all stages of the marketing

research process. Zikmund and Babin (2010a:5) note that marketing research is the application of the scientific method in searching for the truth about marketing phenomena. The authors elaborate that research applications include defining marketing opportunities and problems, generating and evaluating marketing ideas, monitoring performance, and generally understanding the marketing process.

Malhotra and Birks (2006:6) argue that the definition of marketing research indicates that marketing research entails a process. These authors note that this means that research aims and objectives need to be defined as a first step. Malhotra (2010:39) asserts that marketing research involves the identification, collection, analysis, dissemination, and use of information. The author argues that all phases of this marketing research process are equally important.

4.3. ESTABLISHING THE NEED FOR MARKETING RESEARCH

Marketing research attempts to provide accurate information that reflects a true state of affairs (Malhotra, 2010:46). Although research is always influenced by the researcher's philosophy, it should be free from the personal or political biases of the researcher or the management (Malhotra, 2010:46).

The main goal of marketing research is to identify and then satisfy the needs of various customer groups (e.g. consumers, employees, channel members, suppliers) (Malhotra, 2010:39). The author notes that marketing managers will need information about various customer groups, which can be achieved by conducting marketing research. This is because marketing managers are not always able to make meaningful and accurate decisions with the available data (Wiid & Diggines, 2009:31). Zikmund and Babin (2010a:19) propose that the need to make intelligent, informed decisions ultimately motivates marketing research.

The need for marketing research arises in particular when managers need to make decisions but have inadequate information at their disposal (Burns & Bush, 2010:51). These authors continue that because research takes time and costs money, not all decisions will require research. Managers must weigh the value that may possibly be

derived from conducting research and having information at hand against the cost of obtaining such information (Burns & Bush, 2010:51).

Company policy toward marketing research and the role that management wants to allocate to marketing research in the business affects whether and how much research is conducted (Burns & Bush, 2010:52). Marketing research is not needed when the information is already available, if the timing is wrong, if funds are not available or if the costs outweigh the value of the marketing research (Burns & Bush, 2010:53). Zikmund and Babin (2010a:18) further assert that when a manager is confronted with a key decision, he or she must initially decide whether or not to conduct marketing research. The authors further note that determining the need for marketing research centres on time constraints, the availability of data, the nature of the decision to be made and the value the research information in relation to costs.

Burns and Bush (2010:55) concurrently state that marketing research will be more likely to be considered when it is believed that such research will help the brand gain a competitive advantage, or when research will be able to help marketing managers identify changes in the marketplace, or if the research will provide the best alternative to pursue among a set of proposed alternatives. Once management has decided that research is indeed required, the problem or opportunity must be clearly defined; as noted, this is considered to be the first step of the marketing research process (Burns & Bush, 2010:55). Hair *et al.* (2010:31) concur that defining the problem is an important first step also in determining if research is indeed necessary.

4.4. THE MARKETING RESEARCH PROCESS

Wiid and Diggines (2009:31) suggest that marketing research is used to collect and process data, which is then presented in a usable and relevant way for the purpose of making decisions. The authors further add that the key characteristic of marketing research is that it is a systematic process used for collecting, analysing and interpreting information. This implies that the marketing research process is an orderly and systematic procedure that provides reliable information (Wiid & Diggines, 2009:31).

According to Malhotra (2010:41), the marketing research process consists of six broad stages. Shui *et al.* (2009:51) divide the marketing research process into four phases, whereas Burns and Bush (2010:50) propose an elaborate 11-step marketing research process. Hair *et al.* (2010:31) propose a four-phase research process, which contains 11 steps, while Zikmund and Babin (2010a:57) propose a six-step marketing research process. All the above-mentioned authors discuss similar concepts, but in different ways.

For the purpose of this study, the research process described by Hair *et al.* (2010:31) will be used for the framework of the discussion as seen in table 4.1.

Churchill *et al.* (2010:37) assert that all research projects require their own special emphases and approaches, because the problems and opportunities they address are different. The authors indicate that as a result of this, research procedures are custom-made and tailored to the situation. Burns and Bush (2010:51) point out that it is important to remember that not all research projects follow an orderly, step-by-step process, and some can even skip or add a number of steps to the basic marketing research process.

Hair *et al.* (2010:31) concur that most researchers will follow the four phases in order, but many may choose to shift or omit some individual steps. According to Wiid and Diggins (2009:32), it is important to remember that the word 'process' implies that the successive steps or phases should not be seen in isolation, but as an integrated and interdependent whole.

Table 4.1 depicts the 11 steps or 4 phases of the marketing research process used in this study, namely determining the research problem, selecting the research design, executing the research design and communicating the research results. Each step in the marketing research process is discussed below with specific reference to the manner in which each was applied during this study.

Table 4.1 The marketing research process

Phase 1:	Determine the research problem
	Step 1: Identify and clarify information needs
	Step 2: Define the research problem and questions
	Step 3: Specify research objectives and confirm the information value
Phase 2:	Select the research design
	Step 4: Determine the research design and data sources
	Step 5: Develop the sampling design and selecting the sample
	Step 6: Examine measurement issues and scales
	Step 7: Design and present the questionnaire
Phase 3:	Execute the research design
	Step 8: Collect and prepare data
	Step 9: Analyse data
	Step 10: Interpret data to create knowledge
Phase 4:	Communicate the research results
	Step 11: Prepare and present final report

Source: Adapted from Hair *et al.* (2010:31)

4.4.1. Step 1: Identify and clarify information needs

According to Hair *et al.* (2010:31), decision-makers generally prepare a statement of the problem before the researcher becomes involved. These authors continue that the researcher assists the decision-makers with a view to ensure that the problem or opportunity has been correctly defined and the information requirements are known. Wiid and Diggins (2009:33) argue that when marketing managers are confronted with a problem or opportunity for the first time, it is certainly not clearly defined; they just know something is wrong or have a vague feeling, that some aspect requires further investigation.

Hair *et al.* (2010:32) argue that it is important for the researcher to understand the problem clearly; therefore a problem definition process must take place. The authors further note that the researcher and the decision-makers must agree on the decision-makers' purpose for undertaking the research; the need to understand the complete problem, identify measurable symptoms and distinguish them from the root problem, select the unit of analysis, and determine the relevant variables.

4.4.2. Step 2: Define the research problem and questions

In step two, the researcher must redefine the problem as a research question (Hair *et al.*, 2010:34). After having investigated the actual situation and demarcating the marketing problem or opportunity, the problem must therefore be reformulated as a clearly defined research problem (Wiid & Diggines, 2009:33). Defining the problem as clearly as possible constitutes the most important step in the marketing research process (Burns & Bush, 2010:55). The authors continue that if the problem is incorrectly defined, all else is a wasted effort. Defining the problem is not only very important; it is often also difficult (Burns & Bush, 2010:56).

In order to provide background regarding similar problems, a literature review needs to be conducted by the researcher (Hair *et al.*, 2010:34). These authors continue that the literature review may uncover relevant theory and variables to include in the research.

Problems stem from two primary sources: firstly, from gaps between what is supposed to happen and what did happen; and secondly, from gaps between what did happen and what could have happened (Burns & Bush, 2010:56). The authors further explain that when there is a gap between what is supposed to happen and what did happen, one normally refers to this as a failure to meet the objectives or as a problem. When a gap between what did happen and what could have happened, this is normally referred to as an opportunity (Burns & Bush, 2010:56). In both instances, a need for information arises to make the right decision (Burns & Bush, 2010:56). Finally, the researcher must determine whether the information being requested is necessary (Hair *et al.*, 2010:35).

The literature review presented in the previous chapters provided information regarding the marketing concepts and sponsorship characteristics. As indicated in chapter one, the sport industry of South Africa has begun to show more attraction, but not much research has been done in terms of sponsorship decision-making criteria, the decision-making process followed by the businesses for selecting a sport sponsorship and, ultimately, sponsorship proposals.

The research problem for this study has been discussed in chapter one, where the need for this research project has also been demonstrated. The aim of this study is to provide information to cricket unions that can assist these unions towards gaining a better understanding of the decision-making process their sponsors follow when selecting a sport property to sponsor. The main aim is to develop and improve the cricket union's understanding of sponsorship proposals.

4.4.3. Step 3: Specify research objectives and confirm the information value

According to Hair *et al.* (2010:35), research objectives should be based on the research problem that has been identified in the previous step. Research objectives, although related to and determined by the problem definition, are set in such a manner that when achieved, they would provide the information necessary to solve the problem (Burns & Bush, 2010:56). Research objectives state what the researcher must do in order to provide the information necessary to solve the problem (Burns & Bush, 2010:56).

Research objectives must be very detailed and specific; they spell out exactly what information should be collected, in what format, by what method, and from whom (Burns & Bush, 2010:56). According to Wiid and Diggins (2009:33), marketing research objectives broadly indicate what the marketing research hopes to achieve.

Finally, the expected value of the information must be evaluated by both the researcher and the decision-makers (Hair *et al.*, 2010:35). These authors assert that certain questions need to be answered. Questions such as whether the information be collected at all, whether the information will tell the decision-maker something not already known, whether it will provide significant insights, and questions pertaining to the benefits that will be delivered by this information are examples of these (Hair *et al.*, 2010:36).

The following primary objective and research questions were determined for this study.

4.4.3.1 Primary objective

The primary objective of this study was to determine the degree to which businesses follow the decision-making process when selecting a sponsorship opportunity. In order to answer the primary objective of this study, a number of relevant research questions have been identified and these will be answered during the course of the study.

4.4.3.2 Research questions

In order to address the primary objective of the study, the following research questions were formulated:

1. Which objectives are considered to be more likely, and which are less likely to be set for the sponsorship when making a sponsorship decision?
2. What are the differences between the objectives set for the sponsorship by medium and large sponsors?
3. What are considered to be the most important decision-making criteria that are used when evaluating a sponsorship proposal?
4. What is the degree of involvement of different role-players who are part of the sponsorship decision-making process within a business?
5. Is there a difference regarding the extent to which medium and large sponsors would follow the decision-making process?

4.4.4. Step 4: Determine the research design and data sources

A discussion of the research design used in this study and also the data sources used follow below.

4.4.4.1. The research design

Research design implies research planning (Wiid & Diggines, 2009:33). The research design serves as an overall plan of the methods used to collect and analyse the data (Hair *et al.*, 2010:36). A research design is the framework or plan

for a study used, it details the procedures necessary for obtaining the information needed to structure or solve marketing research problems (Malhotra, 2010:102).

Determining the most appropriate research design is a function of the research objectives and information requirements (Hair *et al.*, 2010:36). These authors assert that the researcher must consider the types of data, the data collection method, sampling method, schedule and the budget. There are three broad categories of research designs, and an individual research project may sometimes require a combination of these techniques in order to achieve the objectives of the study (Hair *et al.*, 2010:36).

Kumar (2000:60) explains that the choice of research approach depends on the nature of the research. According to Burns and Bush (2010:56), almost all research projects are different, but they have enough similarities to categorise them by the methods and procedures used to collect and analyse data. The authors further explain that the different types of research can be classified within three broad categories, exploratory research designs, descriptive research designs and causal (experimental) research designs.

- **Exploratory research**

Zikmund and Babin (2010a:50) define exploratory research as a way of clarifying ambiguous situations or discovering ideas that may be a potential business opportunity. Burns and Bush (2010:57) describe exploratory research as the collection of information in an unstructured and informal manner. These authors continue that it is often used when little is known about a problem. Analysing secondary data in a library or over the internet is one of the most common ways of conducting exploratory research (Burns & Bush, 2010:57).

- **Causal research**

In causal research, the research design is concerned with determining the cause-and-effect relationship between variables (Churchill & Iacobucci, 2005:74; Zikmund

& Babin, 2010b:53). According to Burns and Bush (2010:57), causal research answers the question “why?”. They continue that causal research can be called experimental research, because tests usually need to be done physically in order to determine the outcome.

- **Descriptive research**

Zikmund and Babin (2010b:51) define descriptive research as a study concerned with the frequency with which something occurs or the relationship between two variables. Burns and Bush (2010:57) state that descriptive research addresses the “who, what, when, where and how” questions of a study. Shao (2002:45) argues that this type of study is rigidly guided by the researcher’s hypotheses about the subject or problem. The author further argues that descriptive research involves the collection of structured statistical data that can be verified with statistical testing techniques.

In this study, a descriptive research design was used which describes specific market characteristics; this type of design is used when there is a clear statement of the research problem, specific research questions and detailed information needed (Malhotra, 2010:106). Descriptive research allows for the identification of the most important evaluation criteria and objectives which are considered to be important to the business decision-makers.

4.4.4.2. Data sources

In order for research to provide information that helps to solve problems, researchers must identify types and sources of information they will use (Burns & Bush, 2010:57). There are two methods that can be used towards collecting data, according to Malhotra and Peterson (2006:40): a secondary source involves information that already exists, and primary sources which involve collecting new information first-hand for the specific research problem at hand (Malhotra, 2010:73).

- **Secondary sources**

Secondary information should always be sought first, since it is much cheaper and faster to collect than primary information (Burns & Bush, 2010:57). Wiid and Diggines (2009:34) define secondary data as historical data that has already been gathered, either by the business or by outsiders, for the purpose other than the study currently in question. If a problem or opportunity remains unsolved after collecting the secondary data, a formal marketing research investigation must be conducted, provided it is economical (Wiid & Diggines, 2009:34).

In this study, secondary data was used for the literature review. The literature review were conducted in order to explore and to become familiar with the research problem through the use of textbooks and reliable academic research articles.

- **Primary sources**

During the formal marketing research investigation, primary data is collected (Wiid & Diggines, 2009:34). These authors define primary data as the data that is specifically intended to solve the problem or make use of the opportunity. Malhotra (2010:132) explains that primary data can be collected in either a qualitative or quantitative way.

- **Qualitative research**

Malhotra (2010:73) further define qualitative research as research exploratory in nature, based on small samples like focus groups and in-depth interviews. Qualitative research is designed to reveal audience's range of behaviour and the perceptions that drive it with reference to specific topics or issues (Burns & Bush, 2010:233). These authors continue that small groups of people (from two to 10 participants) are used and the results are descriptive rather than predictive in nature.

- **Quantitative research**

Quantitative research involves a large sample of people which is representative of the total population (Malhotra & Peterson, 2006:40). These authors further assert that quantitative research is characterised by structure and larger respondent samples. According to Kent (2007:117), quantitative data is derived from numerical records. The purpose of quantitative research is very specific, and therefore the researcher and the business need to know exactly what information is needed (Burns & Bush, 2010:235).

For the purpose of this study, primary data was collected by means of a quantitative research approach.

4.4.5. Step 5: Develop the sampling design and selecting the sample

According to Hair *et al.* (2010:37), during the process of conducting primary research, attention must be paid to the sampling design. These authors continue that if secondary research is conducted, the researcher must still determine that the population represented by the secondary data is relevant to the current research problem. Wiid and Diggins (2009:35) explain that the researcher must identify the individuals (or respondents) participating in the research at hand. The population and how the sample was selected are addressed in the next section.

4.4.5.1 The population

Kumar (2000:219) refers to the population as the set of all objects that possess some common set of characteristics with respect to some marketing research problem. Each individual member is referred to as a population element (Zikmund & Babin, 2010b:412). Churchill *et al.* (2010:327) define the target population as that part of the total population (universe) to which the study is directed. This is the group from which the sample will be drawn (Tustin *et al.*, 2005:337).

The idea behind sampling is that by selecting only certain elements of that population, a researcher may draw conclusions about the entire population (Cooper

& Schindler, 2003:179). Hair *et al.* (2010:38) concur that it is important that researchers should use a representative sample of the population if they wish to generalise the findings.

It is, furthermore, imperative that the target population is properly and accurately defined in order to answer the correct research question and also to obtain adequate results (Aaker *et al.*, 2011:380). Wiid and Diggins (2009:35) add that if the target population is too large for a comprehensive survey, a scientific sample must be taken of the population. Hair *et al.* (2010:38) concur that when the target population is large, sampling needs to be done.

The total population can be defined as all sponsors of provincial sports unions in South-Africa; **for this study, the target population** comprises all the current sponsors of the sixteen provincial cricket unions in South-Africa. A list of all the known target population elements was compiled with the help of the cricket unions (see table 1.1 in section 1.5.2.2).

As will be pointed out in chapter six, a limitation of this target population is that the relationship between the cricket union and the sponsor is based on a contractual agreement that prohibits the cricket union from giving information pertaining to the sponsor to anyone. Fullerton (2010:96) states that the contractual agreement for each relationship with a sponsor may vary in the required set of components they want to include in the contract. Some unions only gave the number of sponsors and therefore distributed the questionnaires directly to their sponsors.

4.4.5.2 Selecting the sample

Kumar (2000:219) defines a sample as a chosen subset of elements from the population. The sample is drawn from a list of population elements that often differ somewhat from the defined population; this list from which the sample is drawn is called a sample frame (Zikmund & Babin, 2010b:417). Churchill *et al.* (2010:39) explain that in designing the sample, researchers must specify the sampling frame, which is the list of the population elements from which the sample will be drawn.

Furthermore, the researcher must specify the type of sampling plan to be used and as well as the size of the sample. There are two basic types of sampling plans, namely probability and non-probability sampling (Churchill *et al.*, 2010:39). Table 4.2 portrays some main differences between probability and non-probability sampling.

Table 4.2 Probability and non-probability samples

Probability sample	
Simple random sample	Every member of the population has an equal chance of selection.
Stratified random sample	The population is divided into mutually exclusive groups, if the distribution of population elements believed to be skew in one or more areas, such as age groups or race.
Systematic sample	Using a sample frame that list members of the population, each member has equal chance of being selected, more effective than simple random sampling.
Cluster (area) sample	The population is divided into mutually exclusive groups and the researcher draws a sample of the groups to interview.
Non-probability sample	
Convenience sample	The researcher selects the most accessible population members.
Referral (snowball) sample	Respondents are asked for names or identities of others like themselves who might qualify to participate in the study.
Judgement sample	The researcher selects population members who are good prospects for providing accurate information.
Quota sample	The researcher finds and interviews a prescribed number of people in each of several categories.

Source: Adapted from Burns and Bush (2010:369, 383); Kotler and Keller (2006:110)

- **Probability sampling**

Kumar (2000:222) explains that for probability sampling, each member of the population has a known probability of being selected; however, the researcher needs to have a definite sampling frame of the sampling units. Zikmund and Babin (2010b:417) state that a sampling frame is also called a working population because these units will eventually provide units involved in analysis. They state that a list of members of the target population is thus needed.

Probability sampling is considered to be more accurate than non-probability sampling (Zikmund & Babin, 2010b:426). The authors also describe the different methods of probability sampling as simple random sampling, systematic random sampling and stratified random sampling and cluster sampling.

- **Non-probability sampling**

Non-probability sampling does not require a sample frame, and as a result, sampling efficiency and precision are absent in these methods (Kumar, 2000:224). Hill *et al.* (1999:25) explain that non-probability samples tend to suffer from problems relating to bias; furthermore, there is no way of ensuring that the sample is representative of the total population. Non-probability sampling does not depend upon chance as a selection procedure, and thus the researcher cannot properly control the probability of a sampling unit being included in the sample. The representativeness of the sample and the quality of the parameters estimates must be determined subjectively (Hill *et al.*, 1999:26).

The methods of non-probability sampling are convenience samples, judgment samples and quota samples and referral sampling (Zikmund & Babin, 2010b:426) (see table 4.2 above).

Non-probability, Convenience sampling will be used **in this study**. This type of sampling aims to obtain a sample of convenient elements in a quick and inexpensive manner (Malhotra, 2010:377). This author further state when using convenience sampling, the sampling units are accessible, easy to measure and cooperative.

The reason for this decision is because of the relationship between the sponsor and the cricket unions that contractually binds them to an agreement, which prohibited the cricket unions to give the researcher all of their sponsorships' information. This is supported by Fullerton (2010:96) which states that contractual agreements for the relationships with sponsors may vary in terms of the required set of components they desire to include in the contract.

Therefore only population elements, for which information was available, were reached with the electronic questionnaire. Table 1.1 depicts the target population's size and how each union's sponsors were reached (see section 1.5.2.2).

4.4.6 Step 6: Examine measurement issues and scales

This step involves identifying the concepts to study and measuring the variables related to the research problem (Hair *et al.*, 2010:38). These authors continue that researchers must be able to answer questions such as: "how should a variable such as customer satisfaction or service quality be defined and measured?"

These measurement issues and scales are important for both primary and secondary research; for instance, if database mining is used, the researcher must understand the measurement approach used for creating the database as well as any measurement biases (Hair *et al.*, 2010:38).

Zikmund and Babin (2010a:238) note that while following a recipe may seem easy, understanding the quantities represented and the units of measure can be critical. They further assert that if a mistake is made in measuring something, the dish may be completely ruined – in the same way that marketing and business concepts can often be measured in more than one way.

Measurement is defined as the process of developing methods that are used to characterise or quantify information about persons, events, ideas, or objects of interest in a systematic manner (Hair *et al.*, 2010:150). These authors continue that this measurement process consists of two tasks: construct selection or development and scale measurement.

The goal of the construct development process is to identify and define precisely what is to be measured (Hair *et al.*, 2010:151). The authors further explain that the scale measurement process determines how to measure each construct precisely. For the purpose of this study, only scale measurement will be discussed in detail, because construct development is only the process during which researchers identify




characteristics that define the concept being studied by the researcher (Hair *et al.*, 2010:152).

4.4.6.1 Scale measurement

Scale measurement involves assigning a set of scale descriptors to present the range of possible responses to a question about a particular object or construct (Hair *et al.*, 2010:153). The authors explain that the scale descriptors are a combination of labels, such as “strongly agree” or “strongly disagree” and numbers, such as 1-7, that are assigned using a set of rules.

All scale measurements can be classified as one of four basic scale levels: nominal, ordinal, interval and ratio (Hair *et al.*, 2010:153). Each will subsequently be discussed briefly in order to provide more insight into how the questionnaire used in the current study was developed. Figure 4.1 indicates the main differences in measurement for these four scales.

Figure 4.1 Scale measurement

Scales				
Nominal	Numbers assigned to runners	17	21	13
Ordinal	Rank order of winners	Third place	Second place	First place
Interval	Performance rating on a 0 to 100 scale	74	90	97
Ratio	Time to finish in seconds	16.1	14.0	13.2

Source: Adapted from Malhotra (2010:248)

- **Nominal scales**

A nominal scale is the most basic of the four types of scale designs (Hair *et al.*, 2000:381). These authors further argue that in this type of scale, the questions require respondents to provide only some type of descriptor as the raw response. Malhotra (2010:285) explains that nominal scales use numbers as labels or tags for identifying and classifying objectives. The author further explains that the number assigned in a nominal scale does not reflect the relative amounts of the characteristics being measured. Figure 4.2 indicates examples of nominal scales.

Figure 4.2 **Examples of nominal scales**

Example 1:
Please indicate your marital status.
 Married Single Separated Divorced Widowed

Example 2:
Do you like or dislike chocolate ice cream?
 Like Dislike

Example 3:
Which of the following supermarkets have you shopped at in the last 30 days? Check all that apply.
 Pick 'n Pay Woolworths Spar Checkers

Source: Hair *et al.* (2010:155).

- **Ordinal scales**

An ordinal scale is a ranking scale (Malhotra, 2010:286). Ordinal scales enable respondents to express the relative magnitude between answers to a question, and responses can be rank-ordered in a hierarchical pattern (Hair *et al.*, 2010:153; Shui *et al.*, 2009:392). Ordinal scales are used to measure relative attitudes, opinions, perceptions and preferences (Malhotra, 2010:287). Shui *et al.* (2009:421) explain that there are several attitudinal scales that proved to be useful in many different situations including the Likert scale, semantic differential scales and behaviour intention scales.

A **Likert scale** was mainly used in this study in order to answer the research questions. Aaker *et al.* (2011:259) explain that when using a Likert scale, each

respondent is required to indicate the degree of agreement or disagreement with a range of statements related to a subject. The authors continue that the Likert scale usually consists of two parts, the item part and the evaluative part. The item is the statement about a certain product, event or attitude (Aaker *et al.*, 2011:259). These authors further explain that the evaluative part is a list of response categories ranging from “strongly agree” to “strongly disagree” or similar categories.

Hair *et al.* (2010:163) propose that the Likert scale is balanced between agreement and disagreement scale descriptors. Similarly, the authors state that the Likert scale initially had five scale descriptors, from which descriptor number three is the turning point towards a positive or negative response.

Figure 4.3 Examples of ordinal scales

Example 1:
Which category best describes your knowledge about the services offered by your local government? (Please check just one category.)

Complete knowledge of services
 Good knowledge of services
 Basic knowledge of services
 Little knowledge of services
 No knowledge of services

Example 2: (Likert scale)
The following list of library services, activities and resources may or may not be important to you when using a local public library. Using the scale provided below, for each listed item please check the response that best expresses how important you feel it is.

Services, activities, resources	Extremely Important	Definitely important	Uncertain	Somewhat important	Not at all important
Variety of books that can be borrowed	1	2	3	4	5
Availability of current magazines	1	2	3	4	5
Availability of a designated area for children	1	2	3	4	5
Constant arrival of new books that can be borrowed	1	2	3	4	5
Computers with online access	1	2	3	4	5

Example 3:
We would like to know your preferences to different banking methods. Among the methods listed below, please indicate your top three preferences using ‘1’ to represent your first choice, ‘2’ for you second preference and ‘3’ for your third choice of methods. (Please write the numbers on the lines next to your selected methods.)

Inside the bank Bank by telephone
 24-hour ATM Online banking
 Bank by mail Banking at a bank-operated vehicle regularly visiting our community

Source: Shui *et al.* (2009:392).

Figure 4.5 Examples of ratio scales

Example 1:
Please circle the number of children under 18 years of age currently living in your household.
0 1 2 3 4 5 6 7
If more than 7, please specify: ____

Example 2:
In the past seven days, how many times did you go shopping at a retail shopping mall? ____#of items

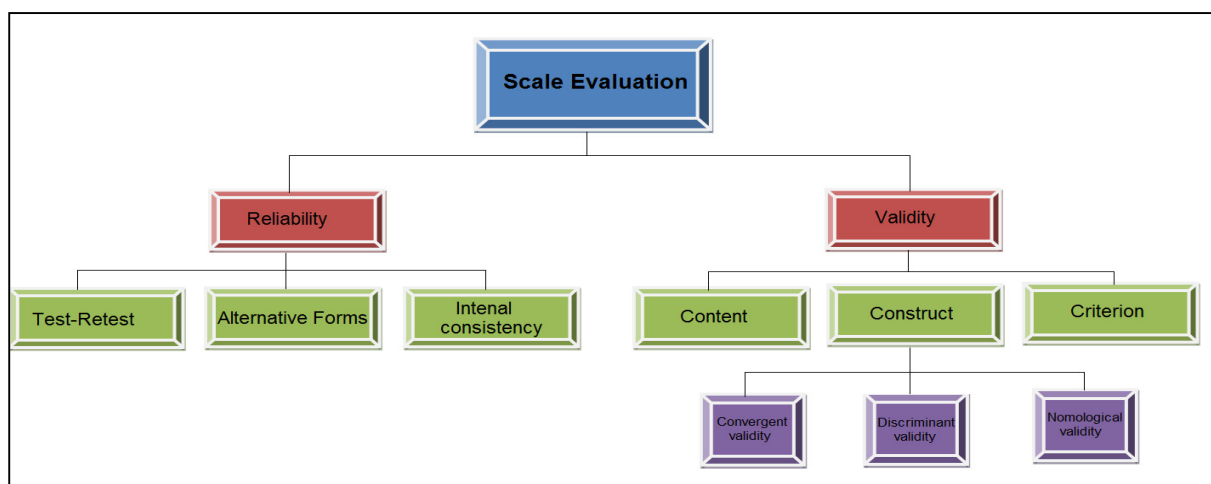
Example 3:
In years, what is your current age?
____# of years old

Source: Hair *et al.* (2010:156).

4.4.6.2 Evaluating measuring scales

Almost nothing in marketing research can be measured without some errors occurring (Churchill *et al.*, 2010:253). All measurement scales should be evaluated for reliability and validity (Hair *et al.*, 2010:156). Scale evaluation methods can be seen in figure 4.6. Malhotra (2010:318) argues that in order to understand scale evaluation, it is useful to think of total measurement error as the sum of systematic error and random error. The author explains that a systematic error affects the measurement in a constant way; that is, in the same way each time the measurement is made. A random error, in contrast, arises from random changes and has a different effect each time the measurement is made (Malhotra, 2010:318).

Figure 4.6 Scale evaluation



Source: Malhotra (2010:317).

It is important to consider key concepts related to scale evaluation, namely reliability and validity (Churchill *et al.*, 2010:257). According to Burns and Bush (2010:319), the measurement used by a researcher should ideally be both reliable and valid.

- **Scale reliability**

Reliability describes research that obtains the same results when the same research is repeated or undertaken by different researchers (Wiid & Diggins, 2009:7). Reliability also refers to the extent to which a scale produces consistent results if repeated measurements are made (Malhotra, 2010:318; Hair *et al.*, 2010:165). Zikmund and Babin (2010a:248) concur that a measure is reliable when different attempts at measuring something converge on the same result.

Hair *et al.* (2010:165) state that reliability is thus a measure of consistency in measurement. Malhotra (2010:318) argues that reliability can be defined as the extent to which measures are free from random error. Popular approaches for assessing reliability are test-retest, alternative forms and internal-consistency (Malhotra, 2010:318).

In **test-retest reliability**, respondents are administered identical scales at two different times under nearly equivalent conditions (as far as possible) (Malhotra, 2010:319). The author explains that the retest follows the original measurement by two to four weeks. Hair *et al.* (2010:165) explain that the idea behind the test-retest reliability is that if random variations are present, these will be revealed by variations in the scores between the two sampled measurements.

In order to test **alternative forms reliability**, two equivalent forms of the scale are constructed; the same respondents are measured using alternative scale forms (Malhotra, 2010:319). The author continues that correlation between the responses to the two equivalent forms of the scale provides measure of reliability.

Internal-consistency reliability is used to assess the reliability of a summated scale (Likert scale), or subscale, where scores for several items are summed to

arrive at a total score for a construct (e.g. attitude) (Malhotra, 2010:319). A construct is compiled of various items within the same question or division (see section 4.4.7).

The simplest measure of internal consistency is **split-half reliability**. When applying this procedure, the scale items are randomly divided into two halves and the resulting half scores are correlated (Malhotra, 2010:319). The authors explain that high correlations between the halves indicate high internal consistency, but the correlation between the halves will be affected by the manner in which the groups have been split.

Malhotra (2010:319) suggests that the **Coefficient alpha**, or Cronbach's alpha coefficient can overcome this problem. The author explains that the Cronbach's alpha coefficient is calculated by averaging the coefficients that result from all possible combinations of split halves. The coefficient varies from 0 to 1, and a value of 0.6 or less generally indicates unsatisfactory internal-consistency reliability (Malhotra, 2010:319). Furthermore, Cronbach alpha values higher than 0.70 indicate good reliability.

In this study, Cronbach's alpha coefficient was used in order to determine the reliability of the data gathered, because a convenience sampling method was applied and Likert scale questions were used.

- **Validity**

Hair *et al.* (2010:157) explain that scale validity assesses whether a scale measures what it is supposed to measure. The validity of a scale can be defined as the extent to which differences in observed scale scores reflect true differences in what is being measured, rather than systematic or random error (Malhotra, 2010:320). The author asserts that a scale that reflects a perfect validity would contain no measurement error.

Zikmund and Babin (2010a:250) explain that validity is the accuracy of a measure or the extent to which a score truthfully represents a concept. There are three ways by

means of which validity can be assessed: criterion validity, construct validity and content validity (Malhotra, 2010:320).

Criterion validity reflects whether a scale performs as expected given other variables considered relevant to the construct (Malhotra, 2010:320). The author explains that these variables may include demographic and psychographic characteristics, attitudinal and behavioural measures, or scores obtained from other scales. Zikmund and Babin (2010b:336) explain that criterion validity may be classified as either concurrent validity or predictive validity depending on the time sequence in which the new measurement scale and the criterion measure are correlated.

Construct validity addresses the question as to which construct or characteristic the scale is, in fact, measuring (Malhotra, 2010:320). Zikmund and Babin (2010a:251) argue that a factor analysis can be used to establish construct validity. Factor analysis will be further discussed later in this chapter.

Content validity involves a systematic but subjective assessment of how well a scale measures the construct or variable of interest (Malhotra, 2010:320). According to McDaniel and Gates (2010:318), content validity is the representativeness, or sampling adequacy, of the content of the measurement instrument. In other words, content validity indicates whether the scale provides adequate coverage of the topic under study. Determining content validity is not an easy task, and ultimately becomes a matter of judgement (McDaniel & Gates, 2010:318).

Content validity is based on the researcher's evaluation of a scale's ability to measure what it is supposed to measure (Hair *et al.*, 2010:158). The authors elaborate that the researcher uses his or her expert judgement to determine validity.

In this study, content validity was used by compiling the constructs with items gleaned from existing research and from previously tested questionnaires. Other forms of validity could not be used for the current study, because the population was not large enough.

4.4.7 Step 7: Design and present the questionnaire

There are two main approaches towards gathering data (Hair *et al.*, 2010:39), namely interviews or self-administered questionnaires; another option is to observe individuals or market phenomena. Self-administered surveys, personal interviews, computer simulations, telephone interviews, and focus groups are some of the tools that researchers use to collect data (Hair *et al.*, 2010:39).

Mouthino and Evans (1992:56) explain that the relationship between data collection methods and research instruments is inevitably close. A major advantage of questioning over observation is that questioning enables the researcher to collect a wider array of data (Hair *et al.*, 2010:39). Questioning approaches can collect information about attitudes, intentions, motivations, and past behaviour – these aspects are usually invisible in observational research (Hair *et al.*, 2010:39).

The research instrument used for this study was a web-based questionnaire. According to Kumar (2000:62), surveys are a popular means of collecting primary data and are conducted using questionnaires. McDaniel and Gates (2010b:216) state that web survey software is a popular means of conducting online surveys. The authors assert that the advantages of online surveys far outweigh the disadvantages. Aaker *et al.* (2011:230) concurrently state that web-based surveys have many advantages over traditional methods: they can be high quality, fast, and inexpensive.

When developing a questionnaire, researchers must select the right type of questions, consider the sequence and format, and pre-test the questionnaire (Hair *et al.*, 2010:38). During a pre-test, people representative from those who will be questioned are asked to complete the questionnaire and to comment on issues such as clarity of instructions and questions, sequence of the topics and questions, and anything that may be potentially difficult or confusing (Hair *et al.*, 2010:38). For this study, a pre-test was undertaken and distributed to the cricket unions, and not to the sponsors of the cricket unions. The cricket unions were able to also provide feedback and check for any issues regarding the clarity of the questions and the concepts used in the questionnaire.

The questionnaire is attached as appendix A. A brief summary of the questionnaire will be provided, where the type of questions and terminology that was used throughout the study are described. The summary will also relate the research questions to the specific questions or divisions in the questionnaire that aim to answer the respective research questions.

Table 4.3 Questionnaire summary

Question/ Division	Subject related	Type of question	Research question
Section A	Sample profile		
Question/Division 1 – 5	Sample profile / Demographic information	Nominal scale	2 & 5
Section B	Marketing communication tool		
Question/Division 6	Specific sponsorship	Nominal scale	-
Question/Division 7	Benefits received	Nominal scale	-
Question/Division 8	Marketing communication activities	Ordinal scale (Likert scale)	-
Section C	Objectives and criteria		
Question/Division 9	Objectives	Ordinal scale (Likert scale)	1 & 2
Question/Division 10	Criteria	Ordinal scale (Likert scale)	3
Section D	Decision-making		
Question/Division 11	Decision-making unit	Ordinal scale (Likert scale)	4
Question/Division 12	Decision-making process	Ordinal scale (Likert scale)	5
Question/Division 13	Evaluate	Nominal scale	-
Question/Division 14	Success	Nominal scale	-
Question/Division 15	Continue	Nominal scale	-

Table 4.3 presents important information relating to the questionnaire used in this study. In further discussions, the questions in the questionnaire will be referred to as divisions. The main reason for this is that some divisions, specifically referring to the Likert scale questions, which consist of more than one question. These individual statements within each question will be referred to as items. For example, 9.1.1. and 9.1.2. are items of construct 9.1 which is labelled 'broad corporate objectives'.

Similarly, 9.2.1 to 9.2.11. are items of construct 9.2 which is labelled 'product/brand/service-related objectives (see appendix A for the questionnaire).

In the last column of table 4.3 the specific questions relating to the research questions are depicted. The questions in the questionnaire that did not relate to any of the research questions were included for thoroughness and for use in further research. These extra questions will not be further discussed in the current study.

4.4.8 Step 8: Collect and prepare data

When data is collected, researchers must perform several activities before data analysis can take place. Firstly, a numerical value must be assigned to all response categories so that data can be entered into an electronic data file (Hair *et al.*, 2010:39). This step will be incorporated into the next step for the use of this study.

4.4.9 Step 9: Analyse data

At this stage, the researcher is faced with a large amount of raw data which needs to be analysed and converted into meaningful information (Wiid & Diggines, 2009:239). It is the researcher's responsibility to study the processed data and convert it into relevant information for decision-makers (Wiid & Diggines, 2009:36). These authors further assert that it is important to remember that analysis needs to be anticipated during previous phases of the project; otherwise the data may be inappropriate or insufficient.

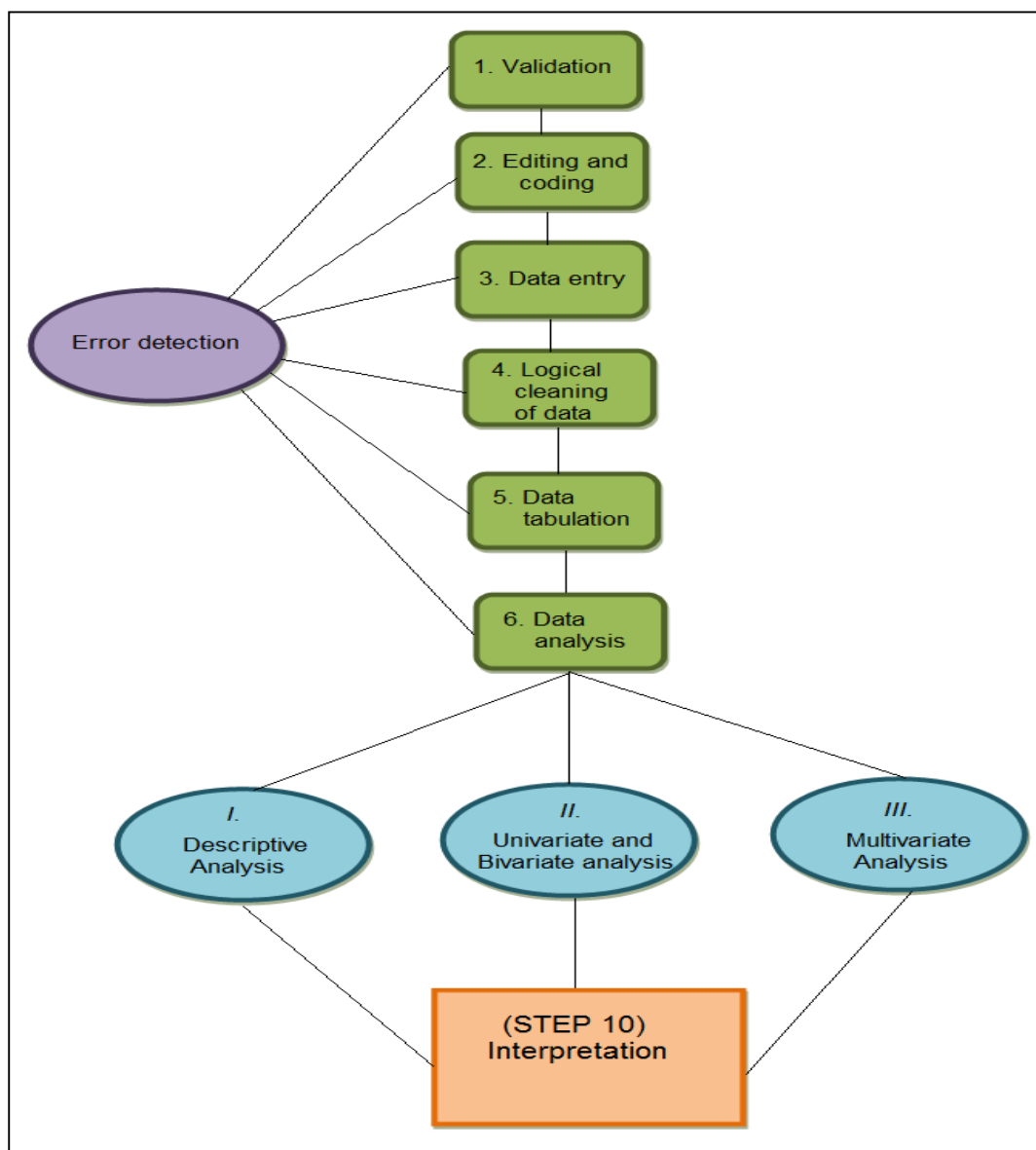
Aaker *et al.* (2011:381) note that the raw data obtained from questionnaires must undergo preliminary preparation before it can be analysed using statistical techniques. Analysis procedures vary widely in terms of sophistication and complexity, from simple frequency distributions (percentages) to summary statistics (means, median and mode) and multivariate data analysis (Hair *et al.*, 2010:39).

For the purpose of this study, statistical analysis in terms of reliability and validity as well as descriptive analysis was conducted through the statistical consultation

services of the North-West University (Potchefstroom Campus). The data was analysed using SAS, a widely accepted statistical program.

McDaniel and Gates (2010b:478) propose a five-step procedure for data analysis. These procedures will be addressed shortly. Shui *et al.* (2009:495) accordingly illustrate the stage of data preparation and analysis, as seen in figure 4.7. **In this study** all the steps were not followed, but will be addressed for the thoroughness of the discussion.

Figure 4.7 Overview of the stages of data preparation and analysis



Source: Adapted from Shui *et al.* (2009:495) and Hair *et al.* (2010:39).

4.4.9.1 Validity and editing

Validation is defined as the process of ascertaining that interviews was conducted as specified (McDaniel & Gates, 2010b:478). These authors assert that the goal of validation is to detect interviewer fraud or failure to follow key instructions.

Editing involves checking for interviewer and respondent mistakes (McDaniel & Gates, 2010b:481). These authors assert that the editing of paper surveys involves manual checking for a number of problems. The role of editing as described by Aaker *et al.* (2011:381) is to identify omissions, ambiguities and errors in the responses. A few solutions to such problems are to contact the respondent again, to throw out the entire questionnaire, or to leave out the question for all the respondents, if necessary (Aaker *et al.*, 2011:381).

4.4.9.2 Coding

Coding refers to the process of grouping and assigning numeric codes to the various responses to a particular question (McDaniel & Gates, 2010b:486). These authors further explain that most questions in a survey are close-ended and pre-coded, meaning that numeric codes have been assigned to the various responses on the questionnaire.

In the case of internet surveys, which are the type of survey used in this study, coding is completely eliminated (McDaniel & Gates, 2010b:489). The authors note that for open-ended questions, however, a coding process is still required. Aaker *et al.* (2011:382) assert that the difficulty of coding and analysing open-ended responses provides a reason for avoiding them in a questionnaire whenever possible.

4.4.9.3 Data entry

Data entry refers to the process of converting data to a form that can be read by a computer (McDaniel & Gates, 2010b:478); for electronic surveys this step is eliminated. The survey program, Survey Monkey which was used for this study

presents the data in an Excel file, which makes it easy to export to SAS, which is the program used to analyse the data from the collected responses.

4.4.9.4 Logical cleaning of data

This step is necessary in order to perform final error checking before proceeding to statistical analysis (McDaniel & Gates, 2010b:491); the authors further note that this computerised error checking of the data is referred to as logical or machine cleaning of data. This is done by error checking routines and/or marginal reports (McDaniel & Gates, 2010b:492).

4.4.9.5 Data tabulation

Tabulation is the process of counting the number of respondents who are classified into each different category of a variable (Shui *et al.*, 2009:509). These authors continue that only those variables which are categorical or have been categorised can be used for tabulation purposes. According to Aaker *et al.* (2010:385) the primary use of data tabulation is to determine the empirical distribution (frequency distribution) of the variables in question and calculating the descriptive statistics, mainly the mean and percentages.

Tabulation assumes two common forms: one-way tabulation and cross-tabulation (Shui *et al.*, 2009:509). The authors further explain that **one-way tabulation** is the categorisation of only one selected variable at a time, and it shows the number of respondents who belong to each one of the different categories of the selected variable. **In this study** data are tabulated only using one-way tabulation. Cross-tabulation is discussed for a better understanding of the different techniques that can be used in marketing research.

Cross-tabulation compares two or more variables in a study simultaneously; it categorises the number of respondents based on their responses (Shui *et al.*, 2009:509). According Malhotra (2010:493), cross-tabulation is used to describe two or more variables simultaneously. Aaker *et al.* (2010:389) explain that cross-

tabulation study the relationship between two nominal variables, and also serve as the basis of several other statistical techniques such as chi-square and log-linear analysis.

4.4.9.6 Data analysis

Statistical analysis can be used to analyse data in three ways, namely to describe data, to measure significance and to indicate the relationship between sets of data (Wiid & Diggines, 2009:242).

I. Descriptive statistics

Descriptive statistics is the most efficient means of summarising the characteristics of large sets of data (McDaniel & Gates, 2010b:505); the authors note that in statistical analysis, the analyst calculates one number or a few numbers that reveal something about the characteristics of large sets of data. Wiid and Diggines (2009:242) explain that descriptive statistics can be used to show how the data is distributed, to group the data characteristics and to indicate how the data varies. These authors continue that in simple tabulation, a variety of statistical techniques can be used frequency distribution, percentage, measures of central tendency and measures of dispersion.

For this study, data was only analysed through descriptive statistics. The different techniques will be addressed accordingly.

- Frequency distribution

The frequency is the number of times a number (raw response) is in a data set (Shui *et al.*, 2009:514). Tustin *et al.* (2005:523) indicate that frequencies entail the construction of a table that shows in absolute and relative terms (in percentages) how often the different values of the variable are encountered in a sample. The authors further explain that, in other words, a frequency distribution indicates how popular the different values of the variable are among the units of analysis.

-
- Percentage

The percentage distribution is the result of converting a frequency distribution into percentages (Shui *et al.*, 2009:514). These authors elaborate that in order to develop a percentage distribution, one should divide each frequency count for each rating by the total count.

- Measures of central tendency

According to Tustin *et al.* (2005:538), there are three measures of central tendency, namely the mean, the median and the mode. Each of these measures will be discussed below.

The **mean**, also called the average, is defined as the sum of a set of values divided by their number (Tustin *et al.*, 2005:538). Aaker *et al.* (2011:387) define the mean as the average number obtained by dividing the sum of the responses to a question by the sample size (the number of respondents to that question).

The **median** is defined as the value above or below which one half of the observations fall; in other words, the median is the value of the middle case when all individual observations have been arranged in rank order (Tustin *et al.*, 2005:540). Wiid and Diggines (2009:243) explain that if the sample consists of an equal number of respondents, the median is calculated by adding the two middle values and dividing the total by two.

The simplest form of central location is the **mode**, which is defined as the most frequently occurring value (Tustin *et al.*, 2005:544). Wiid and Diggines (2009:243) add that in a graph, the mode will always be represented by the highest point.

-
- Measures of dispersion

The **range** is a statistic that represents the spread of the data and is the distance between the largest and the smallest values of a frequency distribution (Shui *et al.*, 2009:515).

The variance and standard deviation are the most widely used and highly regarded measures of variance (Tustin *et al.*, 2005:550). **Variance** involves the following: subtracting the mean from each individual value, squaring the deviations, summing them and taking their average.

The standard deviation is the measure of the average dispersion of the values in a set of responses about their mean; it provides an indication of how similar or dissimilar the values are in the set of responses (Shui *et al.*, 2009:515). Zikmund and Babin (2010a:332) explain that the standard deviation is an index of a distribution's variability; it provides a formula used to determine the standard deviation:

$$S = \sqrt{S^2} = \sqrt{\frac{\sum(X_i - \bar{X})^2}{n-1}}, \text{ where}$$

X = each score

\bar{X} = the mean or average

n = the number of values, and

\sum = means one sums across the values

II. **Measuring significance**

Significance is a statistical term that indicates how sure one is that a difference or relations exists (Wiid & Diggins, 2009:245). These authors continue that various statistical tests can be used to determine significance, for example the Z- and t-test, chi-square analysis, variance analysis and the U-test. According to Bradley (2010:326) there are two different types of significance namely statistical significance

and practical significance. **In this study** only practical significance were measured, and will be discussed in more detail.

- Practical significance

Practical significance indicates that the manager may need to take action and that decisions must be made to make changes (Bradley, 2010:327). The authors continue that it is important to determine the size of the effect. Ellis and Steyn (2003:51) posit that by using effect sizes for difference between means, researchers can observe whether the effect is practically significant. Cohen (1988:20-27) represents the effect size for the difference between means as a d-value, which is calculated by using the following formula:

$$d = \frac{|\bar{X}_1 - \bar{X}_2|}{S_{\max}}$$

where:

d = effect size;

$\bar{X}_1 - \bar{X}_2$ is the difference between means of two compared groups; and
 S_{\max} is the maximum standard deviation of the two compared groups.

The effect sizes for the difference between means were interpreted as follows (Cohen, 1988:20-27):

d≈0.2 small effect with no significance

d≈0.5 medium effect size, and

d≈ 0.8 large effect size indicating that a practically significant difference exist between variables.

For this study Cohen's effect sizes were used to determine practical significance (see section 5.4.2).

III. Measuring statistical relationships

The researcher is often interested in determining whether there is a relationship or association between two or more variables (Wiid & Diggines, 2009:248). These authors elaborate that in such cases, the association is measured and the strength and functional structure of the relationship between the variables is determined.

In this study there were no relations measured for any of the data gathered. The following discussion provides an overview of the statistical techniques that can be used in marketing research to investigate associations and relationships.

- Methods for determining relationships

The researcher must often determine whether there is a relationship between a set of dependent and a set of independent variables (Wiid & Diggines, 2009:248). These authors mention two ways that are used to measure the relationship between two or more interval variables: correlation- and regression analysis.

Correlation methods are concerned with the simultaneous occurrence between variables (Wiid & Diggines, 2009:248). These authors note that this measuring method is designed to provide information about the degree and association between the variables. Aaker *et al.* (2010:440) state that Pearson correlation coefficient measures the degree to which there is a linear association between two variables.

Regression methods, on the other hand, are used to explore cause-and-effect relationships between the variables (Wiid & Diggines, 2009:249).

- Methods for determining a structure in multivariate data

According to Wiid and Diggines (2009:249), analytical techniques are used to systematise, summarise and simplify complex multivariate data. The authors continue that these techniques represent a number of interdependent statistical

analytical techniques, including factor analysis, cluster analysis and multidimensional scaling. This method of statistical analysis was not used **in the current study**, because the study population was not large enough.

4.4.10 Step 10: Interpret data to create knowledge

Knowledge is created by means of engaged and careful interpretation of the results (Hair *et al.*, 2010:39). The authors continue that interpretation is more than a narrative description of the results; it involves integrating several aspects of findings into conclusions that can be used to answer the research questions. The success of the research process is determined by the interpretation of the results and the conclusions drawn. The interpretations and conclusions of this study are presented in chapter 6.

4.4.11 Step 11: Prepare and present the final report

There are a number of sections that should be included in any research report: the executive summary, introduction, problem definition and objectives, methodology, results and findings, and limitations of the study (Hair *et al.*, 2010:40). The research report must be comprehensive so that meaningful decisions can be made about the marketing problem or opportunity (Wiid & Diggines, 2009:36). These authors assert that the results must be interpreted and explained, as oppose to simply providing a summary of the findings. In some cases, the researcher not only submits a written report, but also makes an oral presentation of the major findings (Hair *et al.*, 2010:40).

Iacobucci and Churchill (2010:32) note that it is imperative that the research report must be clear and accurate, because no matter how well the previous steps have been completed, the project will be no more successful than the report.

After having completed **this research project**, a formal presentation will be given to all the cricket unions involved. The date of the meeting will be finalised after completion of the project.

4.5 Conclusion

This chapter presented a discussion on the marketing research process, and described the methodology followed during this study. After the literature review and the purpose of the study have been addressed, the preparation for the empirical research started. The study population was identified as all the current sponsors of any of the sixteen cricket unions in South Africa. A convenience sample design was used, and all the available population elements received the web-based questionnaire. The questionnaire was designed to answer the specific research questions for this study, but also included additional questions that will be used for other research purposes.

The data gathered from the questionnaire was analysed with the help of North-West University's statistical consultation services. The data was already electronically available because of the web-based questionnaire which was used.

The necessary analytical tests were performed to be able to answer each research question. The results of the analyses will be shown in chapter five and further discussed in chapter six.