

CHAPTER 4 RESEARCH METHODOLOGY



4.1 INTRODUCTION

Research is a vital part of the business decision-making process. Good research generates dependable data, which is derived through practices that are conducted professionally and that can be used and relied upon. Welman, Kruger and Mitchell (2005:2) define research as a process that involves obtaining scientific knowledge by means of various objective methods and procedures. Objective means that methods and procedures do not rely on personal feelings and that each research method is used at each stage of the research process. Research, in marketing, refers to the systematic and objective collection, analysis and interpretation of information for decision making on marketing problems of all kinds by recognizing systematic methods (Tustin, Lighthelm, Martins & Van Wyk 2005:7). Research is therefore designed to solve particular existing problems and the results can have an impact on decision making. According to McDaniel and Gates (2002:11), basic research is conducted to validate an existing theory or learn more about a concept or phenomenon, as is the case in this research.

The purpose of this chapter is therefore to describe the research methodology used to address the research problem. This chapter describes the research design, the research methodology, the sampling procedure, data collection methods and questionnaire design relevant to the study.

4.2 RESEARCH DESIGN

Research design involves a series of rational decision-making choices. It is the specification of procedures for collecting and analysing data necessary to help identify a problem or opportunity (Tull & Hawkins 1987:26). Churchill and Brown (2007:37) point out that a research design is chosen depending on how much knowledge exists regarding a research problem.

Marketing research studies can be classified into three broad categories: programmatic, selective and evaluative. Programmatic research is done to develop marketing options through market segmentation, market opportunities analysis or consumer attitude and product usage studies. Selective research is used to test decision alternatives including testing concepts for new products, advertising copy testing and test marketing. Evaluative research is done so assess program performance. It includes tracking advertising recall, doing organisation image studies and examining attitudes (McDaniel & Gates 2002:11). This study is based on programmatic research.

4.3 RESEARCH METHODOLOGY

Research methodology explains the logic behind research methods and techniques. The method selected should focus on solving the identified problem. Two methodological paradigms of data collections mentioned and explained below are normally used in research.

4.3.1 Qualitative research

Qualitative research is an approach involving the use of structured questions in which the response options have been pre-determined and a large number of respondents are involved. It is also known as ethnographic research, because it uses descriptive terms to measure or classify something of interest (Donnelly 2004:18). Its purpose is very specific, and data formats as well as sources are clearly defined and the compilation and formatting of the data gathered follows an orderly procedure (Burns & Bush 2006:202).

A qualitative study begins with observation of the phenomenon followed by the recording and classification of data (Taylor 2000:164). This method can also be used to study facts, observations and experiences that can be used as empirical indicators when developing an instrument (Pett, Lackey & Sullivan 2003:25).

Patton (2000:40-41) outlines the following characteristics of qualitative research:

- Conditions: naturalistic inquiry – to study real-world situations as they unfold naturally.
- Purpose: understanding – seeks to understand people's interpretations.

- Instrumentation: human – the human is the primary collection instrument.
- Data: subject – data are precipitations of people in the environment.
- Results: valid – the focus is on design procedure to gain real, rich and deep data.

Therefore qualitative research deals with subjective data produced in the minds of respondents (Welman *et al.* 2005:8).

4.3.2 Quantitative research

The quantitative approach is a form of conclusive research involving a large representative sample (Struwig & Stead 2004:4). It is used to determine relationships between two or more variables and can be used to test hypotheses or answer research questions. Quantitative data uses numerical values to describe something of interest (Donnelly 2004:18). It is a system of subjecting data or information to empirical analysis to assist a researcher in reaching a decision (Edem & Lawal 1997:53). This method introduces an approach through which a researcher could systematically and logically construct a methodology to resolve results.

In this study, to obtain a deeper understanding of how the resort segments its tourists, a quantitative methodological paradigm was used. The rationale for selecting a quantitative study is that it is cost effective, flexible and objective, given the budgetary and time limitations (Dhurup & Surujlal 2008:19).

4.4 RESEARCH METHOD

The study is based on a literature and quantitative survey, to be discussed in the next section.

4.4.1 Literature review

The importance of a literature review is to assess and analyse previous research studies focusing on the current theme to thoroughly understand what market segmentation is and how it can be applied to a tourist area or destination. Therefore, literature on the field of study was analysed with a view to address market segmentation and marketing analysis. Information was obtained by searching electronic databases, namely, Emerald, EBSCOhost and Science Direct on the Vaal University of Technology library website. Books, articles and other information sources (research

reports) from the Vaal University of Technology Library were also used as well as previous postgraduate studies. The Internet was also searched for relevant and reliable literature. No similar research projects were found on the Nexus Database System of the Human Sciences Research Council's website. All the results of the literature study are reported on in Chapters two and three.

4.4.2 Quantitative study

As indicated, quantitative research is used to find statistically significant differences between various responses and/or groups by means of mathematical analyses. A quantitative methodology was used to gain a broader scope of understanding of the market segments visiting Abrahamsrust Resort in the Vaal Region.

4.4.2.1 Target Population

The target population can be defined in terms of sample units, elements as well as the extent and time of conducting a survey (Hair, Bush & Ortinau 2000:328). The researcher should clearly specify which terms and elements are of interest in the study and those that are to be eliminated from the study. According to Taylor-Powell (1998:328), this process includes three aspects, namely:

- Identifying the group of interests
- Naming the geographic area where the group is found
- Indicating the necessary time period of interest.

The target population was defined as visitors to the Abrahamsrust Resort during March-September 2011 (mostly during the weekends). The anticipated sample consisted of 400 black visitors at Abrahamsrust Resort visiting the Resort. Respondents visiting the Resort were selected and requested to complete the questionnaire under the supervision of fieldworkers. The *inclusion* criteria were as follows:

- Black/ African people
- Residents and non-residents of the Vaal Region.

The *exclusion* criteria:

- Other race groups

4.4.2.2 Sampling and description of sampling

The sampling method is the way according to which the sample units are to be selected (Tull & Hawkins 1993:543). Sampling is used to minimize the number of respondents in the study population, and to select the appropriate way of restricting a set of objects, persons, events from which the actual information will be drawn (Bless, Higson-Smith & Kagee 2006:97). It is mostly impossible to include the entire population in a study – the main reasons being costs and time (Maree & Pietersen 2008:172).

There are two major types of sampling, namely probability and non-probability sampling methods. Probability sampling methods are based on the principles of randomness and probability theory which also allows for the generalisation of the population. Non-probability methods, on the other hand, are not as generalisable as probability methods (Maree & Pietersen 2008:172). As no pre-developed list or document existed with the names of visitors it was thus decided to follow a non-probability sample method.

A non-probability sampling method, namely availability sampling, was used to collect the data from the respondents. Information was gathered by means of a questionnaire that was distributed by fieldworkers among the visitors during March and September 2011 (mostly during weekends). Since this is about the characteristics of individuals, all people in the family (above 18 years and black) were allowed to complete the questionnaire. Sample member inclusion was therefore based on the availability and willingness of respondents to participate in the survey. The sampling procedure was based on the guidelines set by Krejcie and Morgan (1970:608) for general research activities, which recommend a sample size (n) of 384 for a population (N) of 1 000 000. Since the number of visitors to the resort was unknown it was decided to aim for 400 questionnaires completed during the selected period. During that time 318 questionnaires were completed and used in the analyses. The fieldworkers were recruited among the MTech students at Vaal University of Technology.

4.4.2.3 Data collection method

Questionnaires, interviews and rating scale checklists are techniques for gathering survey data (Nieuwenhuis 2007:70). Taylor (2006:6) explains that questionnaires involve asking questions in a written form and having respondents writing down their

answers. Questionnaires have the advantage of being convenient and potentially anonymous. Questionnaires are highly versatile collection procedure with a wide range of applications. Bogdan and Biklen (1982:154) explain that the analysis of data specifically deals with organising data and breaking it down, searching for patterns and discovering what is important to be learned and deciding what to tell others. Welman *et al.* (2005:174) state that the decision to conduct a survey should be the culmination of a careful process of thoughts and discussion, involving consideration of all possible techniques. A questionnaire was designed with a view to clarify the concepts and variables to be investigated and considered the most appropriate means of data collection.

Therefore, considering the above information as well as the purpose of this study, it was decided that a questionnaire would be the most appropriate instrument for data collection.

Questionnaire design

When designing a questionnaire, it is important to ensure that the instrument will enable the collection of relevant data, comparable data, minimize database and motivate a respondent to participate in the survey (Tustin *et al.* 2005:387). The validity and reliability of the data collected and the response rate achieved largely depend on the design of the questions – the structure of the questionnaire (Saunders, Lewis & Thornhill 1997:254).

The questionnaire was adapted according to the information gathered in the literature review and pilot testing. The pilot study was conducted at the resort before collecting data. Twenty respondents were selected to participate in the pilot study. The purpose of the pilot study was to ensure that respondents understood the questions, and clarification was provided when needed as well as changes made before having the final questionnaire printed. The pilot study results were not included in the main survey.

The questionnaire was structured and used in this study to gather information of visitors to Abrahamsrust Resort. The questionnaire was divided into three sections: the segmentation information, media preferences and visitors' travel motivations.

Data was captured on Excel by firstly categorising respondents, using demographic data. Demographics allow marketers to segment tourists according to variables such as age, gender, home language, marital status and occupation (Page & Connell 2006:43).

The structure of the questionnaire (Appendix A):

Section A: Segmentation base information

Section A consisted of gender, date of birth, home language, marital status, level of education and occupation. Most of the demographic questions used to determine responses were closed-ended questions.

Respondents were also requested to indicate the number or group size of visitors, number of children and children recreation preference, days spent, town and province of residence, amount of money spent as well as the number of times the Resort was visited in 2010.

Section B: Media preferences

This section included questions on participants' preferences regarding magazines, TV programs, where they had heard about the resort, preferred newspapers as well as radio stations. Open and closed-ended questions were used to capture responses.

Section C: Travel motivations

In this section, visitors were asked to rank the importance of activities chosen, travel motivation, preference regarding the holiday and factors influencing holiday decisions. This part mainly implemented the Likert scale questions. For factors influencing travel decisions, a 5-point Likert-scale was used ranging from not at all important (1) to extremely important (5).

4.5 DATA ANALYSIS

Once the collection of the data was completed it was captured on an Excel spreadsheet by the researcher with a view to facilitate the input of the data. Data was then processed by a statistician of the North-West University (Potchefstroom Campus) and interpreted by the researcher. Descriptive statistics, namely a factor analysis, and

exploratory statistics, also known as cluster analysis, were performed to determine the different market segments.

4.5.1 Frequency figures and tables

Frequency distributions are represented by tables and graphs. The type of table or graph depends on whether the variable is discrete or continuous (Weinberg & Abramowitz 2008:20). The function of descriptive statistics is to describe data and this is done by exploring how the collection of values for each variable is distributed across the array of possible values. This section is thus focused on a univariate distribution.

4.5.2 Cluster analysis

Cluster analysis is used as a multivariate analysis technique in statistics (Bru & Muthén 2009:397). Cluster analysis assists the researcher in identifying natural groups of people even with complex multivariate data. This technique assigns objects to the groups so that there are as many similarities within and differences between groups as possible (Churchill & Dawn 2005:585). Aaker, Kumar and Day (2003:583) explain that cluster analysis should answer a question on how to determine the appropriate number of clusters.

Segmenting markets based on travel motivations has been used extensively in tourism literature, and Schewe (1990:38) stated that segmenting tourists on the basis of motivations is one of the most effective methods. Park and Yoon (2009:99) clustered tourists based on their motivations so as to enable a better understanding of rural tourism in Korea and they identified the following clusters: family togetherness seeker, passive tourist, want-it-all seeker, and learning and excitement seeker. Lee, Lee, Bernhard and Yoon (2006:856) classified Korean casino gamblers based on their motivation, and they explored differences between segments in terms of socio-demographic and behavioural variables. In their case four distinctive segments were identified, namely the 'challenge/winning seekers', the 'only winning seekers', the 'light gambling seekers' and 'multipurpose seekers' (Lee *et al.* 2006:864). Beh and Bruyere (2007:1467) also used motivation as a clustering base to profile visitors to three Kenyan National Reserves and identified three clusters: escapists, learners and spiritualists. A study done by Pan and Ryan (2007:298) identified the market segments as 'active social relaxers', 'enthusiastic visitors', 'nature isolaters', 'relaxers' and 'reluctant visitors'

based on travel motivation. Segmentation by motivation therefore seems to be popular but has not been conducted in the case of a South African resort.

There are several approaches in numbering clusters. Firstly, the analyst can theoretically or logically specify in advance the number of clusters. Secondly, the analyst can specify the level of clustering with respect to the clustering criterion. If the clustering is easily interpreted, such as the average within-cluster similarity, it might be reasonable to establish a certain level that would dictate the number of clusters. A third approach is to determine the number of clusters from the pattern of clusters the program generates. The fourth approach: the ratio of total within group variance to between group variance can be plotted against the number of clusters. The point at which an elbow or sharp bend occurs indicates an appropriate number of clusters. Once clusters are developed they still need to be described.

The main importance of cluster analysis in this study was to identify aggregates of tourists behaving similarly. By determining the area where they live and their demographics, the geo-demographic segment of the population was determined.

4.6 CONCLUSION

The purpose of this chapter was to describe the research methodology used in this study in order to address the research problems. Attention was paid to the way in which the literature study was conducted and how it added value to the study. General approaches were widely recognised: qualitative and quantitative research methods. The quantitative research measurement was used to capture the data by means of questionnaires. The research methods were discussed and the results are presented in the following chapter.